

# Wireless Semiconductor Division Lead-Free Product List.

Date: 05 April 2006

\* Refer to Base Products

| Product Family   | Part Number | Package              | Plastic/ Ceramic/ Glass/<br>Die/ Metal | Current Moisture<br>Sensitivity Level | PbFree Available? | Non PbFree<br>Available? | Lead<br>Finishing | PEIS<br>Available? | RoHS Report | Peak Temp. | Lead<br>Composition |
|------------------|-------------|----------------------|----------------------------------------|---------------------------------------|-------------------|--------------------------|-------------------|--------------------|-------------|------------|---------------------|
| GaAs MMIC        | HMGA-6300   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ALM-1106    | MCOB 2x2x1mm         | Plastic                                | Level 2                               | Yes               | No                       | Ni, Au            | Yes                | Yes         | 260        | No Lead             |
|                  | ALM-1222    | MCOB 5.0 x 6.0 x 1.1 | Plastic                                | Level 2                               | Yes               | No                       | Ni, Au            | Yes                | Yes         | 260        | No Lead             |
|                  | ALM-1322    | MCOB 5.0 x 6.0 x 1.1 | Plastic                                | Level 2                               | Yes               | No                       | Ni, Au            | Yes                | Yes         | 260        | No Lead             |
|                  | IAM-91563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | IAM-92516   | LPCC 3x3             | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | N/A         | 260        | Cu                  |
|                  | IAM-93516   | LPCC (16 lead)       | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | MGA-412P8   | LPCC 2X2             | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | MGA-52543   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-53543   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-545P8   | LPCC                 | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | MGA-855P8   | LPCC                 | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | MGA-81563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-82563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-71543   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-72543   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-725M4   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | N/A         | 260        | Ni, Au              |
|                  | MGA-81563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-82563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-83563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-85563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-855P8   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | MGA-85576   | Package 76           | Ceramic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | N/A         | 260        | Cu                  |
|                  | MGA-87563   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | QMG-0004    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0006    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0007    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0008    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0009    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0010    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0011    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0012    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-0013    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-003H    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QMG-003L    | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
| GaAs Transistors | ATF-33143   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ATF-331M4   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | N/A         | 260        | Ni, Au              |
|                  | ATF-34143   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ATF-35143   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ATF-36077   | Package 77           | Ceramic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | N/A         | 260        | Fe, Ni, Co          |
|                  | ATF-36163   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ATF-38143   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ATF-50189   | SOT-89               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | ATF-501P8   | LPCC                 | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | ATF-511P8   | LPCC                 | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | ATF-521P8   | LPCC                 | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | ATF-531P8   | LPCC                 | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | N/A         | 260        | Cu                  |
|                  | ATF-54143   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ATF-541M4   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | N/A         | 260        | Ni, Au              |
|                  | ATF-55143   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | ATF-551M4   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | N/A         | 260        | Ni, Au              |
|                  | ATF-58143   | SOT-343              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
| PIN Diodes       | IN5719      | Glass Axial          | Glass                                  | Level 1                               | No                | Yes                      | SnPb              | Yes                | No          | 220        | Ni, Fe, Cu          |
|                  | IN5767      | Glass Axial          | Glass                                  | Level 1                               | No                | Yes                      | SnPb              | Yes                | No          | 220        | Ni, Fe, Cu          |
|                  | 5082-3039   | Glass Axial          | Glass                                  | Level 1                               | No                | Yes                      | SnPb              | Yes                | No          | 220        | Ni, Fe, Cu          |
|                  | 5082-3077   | Glass Axial          | Glass                                  | Level 1                               | No                | Yes                      | SnPb              | Yes                | No          | 220        | Ni, Fe, Cu          |
|                  | 5082-3080   | Glass Axial          | Glass                                  | Level 1                               | No                | Yes                      | SnPb              | Yes                | No          | 220        | Ni, Fe, Cu          |
|                  | 5082-3081   | Glass Axial          | Glass                                  | Level 1                               | No                | Yes                      | SnPb              | Yes                | No          | 220        | Ni, Fe, Cu          |
|                  | 5082-3379   | Glass Axial          | Glass                                  | Level 1                               | No                | Yes                      | SnPb              | Yes                | No          | 220        | Ni, Fe, Cu          |
|                  | HMPP-3860   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | No          | 260        | Ni, Au              |
|                  | HMPP-3862   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | No          | 260        | Ni, Au              |
|                  | HMPP-3865   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | No          | 260        | Ni, Au              |
|                  | HMPP-3890   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | No          | 260        | Ni, Au              |
|                  | HMPP-3892   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | No          | 260        | Ni, Au              |
|                  | HMPP-3895   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | No          | 260        | Ni, Au              |
|                  | HMPP-3897   | Minipak              | Plastic                                | Level 1                               | Yes               | No                       | Gold              | Yes                | No          | 260        | Ni, Au              |
|                  | HSMP-3810   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3812   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3813   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3814   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3816   | SOT-25               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-381B   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-381C   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-381E   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-381F   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-381L   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-381Z   | SOD-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | No          | 260        | Cu                  |
|                  | HSMP-3820   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3822   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3823   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3824   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3830   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3832   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3833   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3834   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3839   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3862   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3863   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3864   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3866   | SOT-25               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-386B   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-386C   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-386E   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-386F   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-386Z   | SOD-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | No          | 260        | Cu                  |
|                  | HSMP-3880   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3890   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3892   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3893   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3894   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3895   | SOT-143              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-3898   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389C   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389E   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389F   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389L   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389R   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389T   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389U   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389V   | SOT-363              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-389Z   | SOD-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | No          | 260        | Cu                  |
|                  | HSMP-4810   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-481B   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-4820   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-482B   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | HSMP-4890   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Fe, Ni              |
|                  | HSMP-489B   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | Yes                | Yes         | 260        | Cu                  |
|                  | QSMP-0023   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QSMP-3805   | SOT-23               | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | QSMP-482F   | SOT-323              | Plastic                                | Level 1                               | Yes               | No                       | Sn                | *                  | *           | *          | *                   |
|                  | 5082-0012   | Bare Die             | Die                                    | Not applicable                        | Not applicable    | Not applicable           | -                 | Yes                | N/A         | 260        | Ni, Fe, Cu          |
|                  | HPND-0002   | Beam Lead            | Die                                    | Level 1                               | Yes               | No                       | Gold              | Yes                | Yes         | 260        | Au                  |
|                  | HPND-4005   | Beam Lead            | Die                                    | Level 1                               | Yes               | No                       | Gold              | Yes                | Yes         | 260        | Au                  |
|                  | HPND-4028   | Beam Lead            | Die                                    | Level 1                               | Yes               | No                       | Gold              | Yes                | Yes         | 260        | Au                  |
|                  | HPND-4038   | Beam Lead            | Die                                    | Level 1                               | Yes               | No                       | Gold              | Yes                | Yes         | 260        | Au                  |

| Product Family | Part Number | Package     | Plastic/ Ceramic/ Glass/ Die/ Metal | Current Moisture Sensitivity Level | PbFree Available? | Non PbFree Available? | Lead Finishing | PEIS Available? | Rohs Report | Peak Temp. | Lead Composition |
|----------------|-------------|-------------|-------------------------------------|------------------------------------|-------------------|-----------------------|----------------|-----------------|-------------|------------|------------------|
| Schottky Diode | 1N5711      | Glass Axial | Glass                               | Level1                             | No                | Yes                   | SnPb           | Yes             | Yes         | 220        | Ni, Fe, Cu       |
|                | 1N5712      | Glass Axial | Glass                               | Level 1                            | No                | Yes                   | SnPb           | Yes             | Yes         | 220        | Ni, Fe, Cu       |
|                | 50B2-2800   | Glass Axial | Glass                               | Level 1                            | No                | Yes                   | SnPb           | Yes             | Yes         | 220        | Ni, Fe, Cu       |
|                | 50B2-2810   | Glass Axial | Glass                               | Level 1                            | No                | Yes                   | N/A            | Yes             | N/A         | 220        | Ni, Fe, Cu       |
|                | 50B2-2811   | Glass Axial | Glass                               | Level 1                            | No                | Yes                   | SnPb           | Yes             | N/A         | 220        | Ni, Fe, Cu       |
|                | 50B2-2835   | Glass Axial | Glass                               | Level 1                            | No                | Yes                   | SnPb           | Yes             | N/A         | 220        | Ni, Fe, Cu       |
|                | HBAT-5400   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HBAT-5402   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HBAT-540B   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HBAT-540C   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HMPS-2820   | Minipak     | Plastic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Ni, Au           |
|                | HMPS-2822   | Minipak     | Plastic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Ni, Au           |
|                | HMPS-2825   | Minipak     | Plastic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Ni, Au           |
|                | HSMS-2700   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2702   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-270B   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-270C   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-270L   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-270M   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-270N   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-270P   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-270R   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2802   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2803   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2804   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2805   | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2808   | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-280B   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280C   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280E   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280F   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280K   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280L   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280M   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280N   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280P   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-280R   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-2810   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2812   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2813   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2814   | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2815   | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2817   | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-2818   | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | HSMS-281B   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-281C   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-281E   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-281F   | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-281K   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | HSMS-281L   | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
| HSMS-2820      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2822      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2823      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2824      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2825      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2827      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2828      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2829      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-282B      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282C      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282E      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282F      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282K      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282L      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282M      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282N      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282P      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-282R      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-2822      | SOD-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | No              | 260         | Cu         |                  |
| HSMS-2850      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2852      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2855      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-285B      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-285C      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-285L      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-285P      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-2860      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2862      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2863      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2864      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-2865      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-286B      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-286C      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-286E      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-286F      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-286K      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-286L      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-286R      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-286F      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Cu         |                  |
| HSMS-8101      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-8202      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-8207      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| HSMS-8209      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | Yes            | Yes             | 260         | Fe, Ni     |                  |
| QSMS-2803      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2824      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2829      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2831      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2834      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2843      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2856      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2890      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2903      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2904      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2913      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2914      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2915      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2920      | SOT-143     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2928      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2929      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-2931      | SOT-23      | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-293K      | SOT-363     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-294C      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| QSMS-295C      | SOT-323     | Plastic     | Level 1                             | Yes                                | No                | Sn                    | *              | *               | *           | *          |                  |
| HSCH-5310      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5312      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5314      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5330      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5331      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5332      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5340      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5512      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |
| HSCH-5531      | Beam Lead   | Die         | Level 1                             | Yes                                | No                | Gold                  | Yes            | Yes             | 260         | Au         |                  |

| Product Family | Part Number    | Package     | Plastic/ Ceramic/ Glass/ Die/ Metal | Current Moisture Sensitivity Level | PbFree Available? | Non PbFree Available? | Lead Finishing | PEIS Available? | RoHS Report | Peak Temp. | Lead Composition |
|----------------|----------------|-------------|-------------------------------------|------------------------------------|-------------------|-----------------------|----------------|-----------------|-------------|------------|------------------|
| Si MMIC        | ABA-31563      | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | ABA-32563      | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | ABA-51563      | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | ABA-52563      | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | ABA-53563      | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | ADA-4543       | SOT-343     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | ADA-4643       | SOT-343     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | ADA-4743       | SOT-343     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0236       | Package 36  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0270       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0286       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0300       | Chip        | Plastic                             | Level 1                            | Yes               | No                    | N/A            | No              | N/A         | N/A        | N/A              |
|                | MSA-0311       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0336       | Package 36  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0370       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0386       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0420       | Package 200 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Fe, Ni           |
|                | MSA-0436       | Package 36  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0470       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0486       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0505       | Package 05  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0520       | Package 200 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Fe, Ni, Co       |
|                | MSA-0600       | Chip        | Plastic                             | Level 1                            | Yes               | No                    | N/A            | No              | N/A         | N/A        | N/A              |
|                | MSA-0611       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0636       | Package 36  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0670       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0686       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0711       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0736       | Package 36  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0770       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Fe, Ni           |
|                | MSA-0786       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0836       | Package 36  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0870       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-0886       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-0986       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-1105       | Package 05  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | MSA-1110       | Package 100 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-1120       | Package 200 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | MSA-2011       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-2086       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-2111       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-3111       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-3186       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | MSA-9970       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | QMSA-0310      | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QMSA-0407      | Package 200 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | *               | *           | *          | *                |
|                | QMSA-0408      | Package 84  | Plastic                             | Level 1                            | Yes               | No                    | *              | *               | *           | *          | *                |
|                | QMSA-0602      | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QMSA-0608      | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QMSA-0905      | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QMSA-1115      | Package 05  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QMSA-1116      | Package 05  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | SMA91-2125     | Package 05  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | N/A             | N/A         | 260        | Fe, Ni           |
|                | SMA92-7057     | Package 05  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | N/A             | N/A         | 260        | Fe, Ni           |
|                | QMSA-1117-GP4  | Bare die    | Die                                 | Not applicable                     | Not applicable    | Not applicable        | -              | No              | N/A         | N/A        | N/A              |
| Si Transistors | AT-30511       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-30533       | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-31011       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-31033       | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-32011       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-32032       | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-32033       | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-32063       | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-41411       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-41435       | Package 35  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | AT-41486       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-41500       | Chip        | Plastic                             |                                    | Yes               | No                    |                | No              | N/A         | N/A        | N/A              |
|                | AT-41511       | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-41532       | SOT-323     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-41533       | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-41586       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Cu               |
|                | AT-42010       | Package 100 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Fe, Ni           |
|                | AT-42035       | Package 35  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | AT-42036       | Package 36  | Ceramic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | N/A         | 260        | Fe, Ni           |
|                | AT-42070       | Package 70  | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | Yes         | 260        | Fe, Ni           |
|                | AT-42085       | Package 85  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | AT-42086       | Package 86  | Plastic                             | Level 1                            | Yes               | No                    | Sn             | Yes             | Yes         | 260        | Fe, Ni           |
|                | AT-64020       | Package 200 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | AT-64023       | Package 230 | Ceramic                             | Level 1                            | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Fe, Ni           |
|                | QSBT-0033      | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QSBT-0038      | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QSBT-0040      | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QSBT-0043      | SOT-23      | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QSBT-0044      | SOT-363     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | QSBT-0048      | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | STB91-2146-TR1 | SOT-143     | Plastic                             | Level 1                            | Yes               | No                    | Sn             | *               | *           | *          | *                |
|                | AT-41400-GP4   | Bare die    | Die                                 | Not applicable                     | Not applicable    | Not applicable        | -              | N/A             | N/A         | N/A        | N/A              |
|                | AT-42000-GP4   | Bare die    | Die                                 | Not applicable                     | Not applicable    | Not applicable        | -              | N/A             | N/A         | N/A        | N/A              |

| Product Family | Part Number | Package         | Plastic/ Ceramic/ Glass/ Die/ Metal | Current Moisture Sensitivity Level | PbFree Available? | Non PbFree Available? | Lead Finishing | PEIS Available? | Rohs Report | Peak Temp. | Lead Composition |
|----------------|-------------|-----------------|-------------------------------------|------------------------------------|-------------------|-----------------------|----------------|-----------------|-------------|------------|------------------|
| Duplexer       | HPMD-7904   | LCC             | Ceramic                             | 3                                  | No                | Yes                   | Gold           | Yes             |             |            |                  |
|                | HPMD-7905   | LCC             | Ceramic                             | 3                                  | No                | Yes                   | Gold           | Yes             |             |            |                  |
|                | QPM-0422    | LCC             | Ceramic                             | 3                                  | No                | Yes                   | Gold           | *               | *           | *          | *                |
|                | QPM-0431    | -               | -                                   | 3                                  | No                | Yes                   | Gold           | *               | *           | *          | *                |
|                | QPM-0451    | -               | -                                   | 3                                  | No                | Yes                   | Gold           | *               | *           | *          | *                |
|                | QPM-0443    | -               | -                                   | 3                                  | No                | Yes                   | Gold           | *               | *           | *          | *                |
|                | QPM-0403    | -               | -                                   | 3                                  | No                | Yes                   | Gold           | *               | *           | *          | *                |
|                | QPM-0402    | -               | -                                   | 3                                  | No                | Yes                   | Gold           | *               | *           | *          | *                |
|                | ACMD-7401   | MCOB            | PCB, Mold Compound                  | 3                                  | Yes               | No                    | Gold           | Yes             |             |            |                  |
| Filter         | ACPF-7002   | MCOB            | PCB, Mold Compound                  | 3                                  | Yes               | No                    | Gold           | Yes             | Yes         | 260        | CuNiAu           |
|                | QCPF-0221   | -               | -                                   | -                                  | -                 | -                     | -              | Yes             | Yes         | 260        | CuNiAu           |
|                | ACPF-7003   | MCOB            | PCB, Mold Compound                  | 3                                  | Yes               | No                    | Gold           | Yes             | Yes         | 260        | CuNiAu           |
|                | QCPF-0311   | -               | -                                   | -                                  | -                 | -                     | -              | *               | *           | *          | *                |
| Power Module   | QCPM-8893   | Ceramic air-gap | Ceramic                             | 3                                  | Yes               | No                    | Gold           | Yes             | N/A         | 260        | Ni               |
|                | QCPM-8895   | MCOB            | Plastic                             | 4                                  | Yes               | No                    | Gold           | N/A             | N/A         | 240        | Cu               |
|                | ACPM-7891   | Ceramic air-gap | Ceramic                             | 3                                  | Yes               | No                    | Gold           | N/A             | N/A         | 260        | Ni               |
|                | ACPM-7813   | MCOB            | PCB, Mold Compound                  | 3                                  | Yes               | No                    | Gold           | N/A             | N/A         | 240        | Cu               |
|                | ACPM-7833   | MCOB            | PCB, Mold Compound                  | 3                                  | Yes               | No                    | Gold           | N/A             | N/A         | 240        | Cu               |

| Product Family                            | Part Number | Package             | Plastic/ Ceramic/ Glass/ Die/ Metal | Current Moisture Sensitivity Level | PbFree Available? | Non PbFree Available? | Lead Finishing  | PEIS Available? | Rohs Report | Peak Temp. | Lead Composition |
|-------------------------------------------|-------------|---------------------|-------------------------------------|------------------------------------|-------------------|-----------------------|-----------------|-----------------|-------------|------------|------------------|
| mmW MMIC GaAs Low Noise Amp.              | AMMC-5023   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-6220   | Die Sales           |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | AMMC-6231   | Die Sales           |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | AMMC-6241   | Die Sales           |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | AMMP-6220   | 5x5mm surface mount | PCB, Roger Lid                      | 3                                  | Yes               | No                    | NiPdAu          | Yes             | N/A         | 260        | No Lead          |
| mmW MMIC GaAs Broadband Medium Power Amp. | HMMC-5038   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-5024   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-5026   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-5033   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-5040   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-5618   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-5620   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-6420   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-6425   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-6430   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-6440   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5021   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5022   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5026   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5027   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5025   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5032   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5034   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-5200   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
| mmW MMIC GaAs Broadband Attenuator        | HMMC-1002   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-1015   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
| mmW MMIC GaAs SPDT Switches               | AMMC-2008   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-2007   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
| mmW MMIC GaAs Mixer                       | HMMC-2027   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-3040   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
| mmW MMIC GaAs HBT Prescalers              | AMMC-3041   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-3002   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-3004   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-3008   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-3022   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-3024   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-3028   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | HMMC-3102   | SOIC-8 Plastic      |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | HMMC-3104   | SOIC-8 Plastic      |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | HMMC-3108   | SOIC-8 Plastic      |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | HMMC-3122   | SOIC-8 Plastic      |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | HMMC-3124   | SOIC-8 Plastic      |                                     |                                    |                   |                       |                 |                 |             |            |                  |
| mmW MMIC GaAs                             | HMMC-3128   | SOIC-8 Plastic      |                                     |                                    |                   |                       |                 |                 |             |            |                  |
|                                           | AMMC-6345   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
| mmW MMIC GaAs Freq. Amp.                  | AMMC-6120   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
|                                           | AMMC-6140   | Die Sales           | -                                   | -                                  | -                 | -                     | -               | -               | -           | -          | -                |
| mmW MMIC GaAs General Purpose             | AMMP-5618   | 5x5mm surface mount | PCB, Roger Lid                      | 3                                  | Yes               | No                    | NiPdAu Terminal | Yes             | N/A         | 260        | No Lead          |
| mmW MMIC GaAs Image Reject Mixer          | AMMP-6530   | 5x5mm surface mount | PCB, Roger Lid                      | 3                                  | Yes               | No                    | NiPdAu Terminal | Yes             | N/A         | 260        | No Lead          |