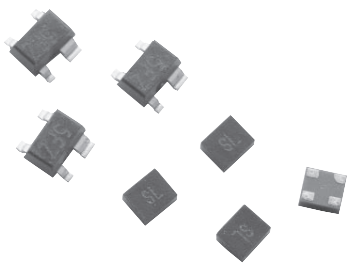
Surface Mount Schottky and PIN Diode

Product Family Overview



Introduction
Avago Technologies Inc., a leading provider of innovative technologies for communications and life sciences, has the broadest product offering of surface mount Schottky and PIN diodes available today. Avago uses a first-in-class wafer fab to ensure repeatability from wafer to wafer.

About the Products
The Avago HSMS-2xxx and HMPS-xxxx series of Schottky-barrier diodes provide the most consistent performance available. These diodes feature low turn-on voltage (as low as 0.34 V at 1 mA).

The Avago HSMP-386x and HMPP-386x series of general purpose PIN diodes are designed for attenuator applications, where current consumption is the most important design consideration; and for RF switching, where low capacitance with no reverse bias is the driving issue for the designer.

The Avago HSMP-389x and HMPP-389x series of RF PIN switch diodes are optimized for switching applications where low resistance at low current combined with low capacitance is required. Low junction capacitance of the PIN diode chip, combined with ultra-low package parasitics, mean that these products may be used at frequencies which are higher than the upper limit for conventional PIN diodes.

Product Performance
- State of the art wafer fab
- Library of models available on the web
- Excellent reliability data

High Volume Manufacturing

Whole Product Offering
- Datasheets
- Application notes & support
- Samples and design tips

Features and Benefits
Features of Avago's diodes include:
- Wide range of surface mount packages
- Available in many different configurations
- Products that cover a broad frequency range
- High-volume manufacturing

Benefits of using Avago's diodes
- Broad market appeal
- Design tools and data on the web

Typical Applications
Schottky-barrier diodes for applications including:
- Mixers
- Detectors
- Clipping and clamping

PIN diodes for applications including:
- Attenuator
- Switches
- Limiters

PIN Diodes

Application	Part Number	C_t (pF) (max/typ)	R_S (Ω) (max)	V_{BR} (V) (min)	T_{rr} (nS) (typ)	Lifetime (nS) (typ)
Low distortion attenuator	**HSMP-381x**	0.35/0.27	3.0	100	300	1500
Low distortion/low inductance attenuator	**HSMP-481x**	0.40/0.35	3.0	100	300	1500
Low inductance limiter	**HSMP-482x**	1.0/0.75	0.6	35	7	70
Low current switch/attenuator	**HMPP/HSMP-386x**	– /0.20	1.5 typ	50	80	500
Low resistance switch	**HMPP/HSMP-389x**	0.30/0.20	2.5	50	—	200
Low resistance/low inductance switch	**HSMP-489x**	0.38/0.33	2.5	50	—	200

Schottky-Barrier Diodes

Application	Part Number	V_{BR} (V) (min)	V_F (mV) (max)	V_F @ I_F (V @ mA) (max)	C_t (pF) (typ)	R_D (Ω) (typ)	Volt. Sens. (γ) (mV/mW) (typ @ 900 MHz)	R_V (KΩ) (typ)
Best overall general purpose	**HMPS/HSMS-282x**	15	340	0.7 @ 30	1.0	12.0	—	—
Clipping/Clamping	**HBAT-540x**	30	800	—	3.0	2.4	—	—
High Current Clipping/Clamping	**HSMS-270x**	15	550	—	6.7	0.65	—	—
Lowest flicker noise	**HSMS-281x**	20	400	1.0 @ 35	1.2	15	—	—
High V_{BR}	**HSMS-280x**	70	400	1.0 @ 15	2.0	35	—	—
Zero bias detector	**HSMS-285x**	—	150	—	0.3	—	40	8
High frequency up to 14 GHz	**HSMS-286x**	5	250	—	0.3	—	50	5

For product information and a complete list of distributors, please go to our web site:
www.avagotech.com

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