BROADCOM®

Application Note

Broadcom Optocouplers

UL Table of Maximum Ratings

Electrical Ratings per Channel (at 25°C Ambient)

See the legend that follows this table for data sheet parameter references [a] to [f].

Model[a]	Current (mA)		Power (mW)		Isolation Voltage (AC)	Max. Operating (Case) Temp. (°C)	Max. Junction Temp. (°C)	Max. Storage Temp. (°C)
	Emitter	Sensor	Emitter	Sensor				
M21L	[a]	[b]	14 at 10 MBd	20 at 10 MBd	[e]	120	125	[f]
M43T	[a]	[b]	[c]	[d]	[e]	125	139	[f]
M43U	[a]	[b]	[c]	[d]	[e]	125	139	[f]
M46T	[a]	[b]	35	85	[e]	125	142	[f]
M46U	[a]	[b]	35	85	[e]	125	142	[f]
M49T	[a]	[b]	[c]	[d]	[e]	125	139	[f]
M49U	[a]	[b]	[c]	[d]	4000	125	139	[f]
M50L	[a]	[b]	[c]	[d]	[e]	110	125	[f]
M51L	[a]	[b]	[c]	[d]	[e]	110	125	[f]
M60L	[a]	[b]	37	[d]	[e]	110	125	[f]
M61L	[a]	[b]	[c]	[d]	[e]	120	125	[f]
M61T	[a]	[b]	[c]	[d]	[e]	125	142	[f]
M61U	[a]	[b]	[c]	[d]	[e]	125	142	[f]
M62L	[a]	[b]	[c]	[d]	[e]	120	125	[f]
M71T	[a]	15	30	40	[e]	125	142	142
M71U	[a]	15	30	40	4000	125	142	142
M72T	[a]	15	30	40	[e]	125	142	142
M72U	[a]	15	30	40	4000	125	142	142
M75L	20	[b]	35	55	[e]	110	125	[f]
M225	[a]	[b]	[c]	[d]	[e]	120	125	[f]
M452	[a]	[b]	[c]	[d]	[e]	110	125	[f]
M453	[a]	[b]	[c]	[d]	[e]	110	125	[f]
M454	[a]	[b]	[c]	[d]	[e]	110	125	[f]
M456	[a]	[b]	45	[d]	[e]	110	125	[f]
M483	[a]	[b]	17	85	[e]	110	125	[f]
M484	[a]	[b]	17	85	[e]	110	125	[f]

Model[a]	Current (mA)		Power (mW)		Isolation Voltage (AC)	Max. Operating (Case) Temp. (°C)	Max. Junction Temp. (°C)	Max. Storage Temp. (°C)
	Emitter	Sensor	Emitter	Sensor				
M600	[a]	[b]	37	[d]	[e]	110	125	[f]
M601	[a]	[b]	37	[d]	[e]	110	125	[f]
M611	[a]	[b]	37	[d]	[e]	110	125	[f]
M700	[a]	[b]	70	85	[e]	110	125	[f]
M701	[a]	[b]	70	85	[e]	110	125	[f]
P480	[a]	[b]	15	560	[e]	110	125	[f]
WB3N	[a]	4000	45	70	[e]	125	150	[f]
W21L	[a]	[b]	14	20	[e]	110	125	[f]
W302	[a]	[b]	[c]	[d]	[e]	110	125	[f]
W314	[a]	[b]	105	250	[e]	110	125	[f]
W345	20	2500	36	[d]	[e]	105	125	[f]
W346	20	2500	36	[d]	[e]	105	125	[f]
W454	50	34	16	100	[e]	110	125	[f]
W456	25	15	45	100	[e]	110	125	[f]
W480	[a]	[b]	15	560	[e]	110	125	[f]
W483	[a]	[b]	17	85	[e]	110	125	[f]
W484	[a]	[b]	17	85	[e]	110	125	[f]
W60L	[a]	40	[c]	[d]	[e]	110	125	[f]
W61L	[a]	[b]	[c]	[d]	[e]	110	125	[f]
W611	[a]	[b]	[c]	[d]	[e]	110	125	[f]
ACML-74XX	40	40	240 at 100 MBd	240 at 100 MBd	[e]	125	150	[f]
ACNV2601	[a]	[b]	[c]	[d]	[e]	105	125	[f]
ACNV260E	[a]	[b]	[c]	[d]	7500	105	125	[f]
ACNV3130	[a]	100	45	250	[e]	105	125	[f]
ACNV4506	[a]	[b]	45	[d]	[e]	105	125	[f]
ACNW261L	[a]	[b]	[c]	[d]	[e]	105	125	[f]
ACNW3130	[a]	100	45	[d]	[e]	105	125	[f]
ACNW3190	[a]	100	45	[d]	[e]	105	125	[f]
ACNW3410	[a]	100	45	250	[e]	105	125	[f]
ACNW3430	[a]	100	45	[d]	[e]	105	125	[f]
HCNR200	[a]	1	[c]	30	[e]	85	125	[f]
HCNR201	[a]	1	[c]	30	[e]	85	125	[f]
HCNW135	100	10	250	[d]	[e]	85	125	[f]
HCNW136	100	10	250	[d]	[e]	85	125	[f]
HCNW137	[a]	[b]	200	[d]	[e]	85	125	[f]
HCNW138	100	[b]	250	[d]	[e]	85	125	[f]
HCNW139	100	[b]	250	[d]	[e]	85	125	[f]
HCNW2201	[a]	[b]	40	165	[e]	85	125	[f]
HCNW2211	[a]	[b]	40	165	[e]	85	125	[f]
HCNW2601	[a]	[b]	200	[d]	[e]	85	125	[f]
HCNW2611	[a]	[b]	200	[d]	[e]	85	125	[f]

Model[a]	Current (mA)		Power (mW)		Isolation Voltage (AC)	Max. Operating (Case) Temp. (°C)	Max. Junction Temp. (°C)	Max. Storage Temp. (°C)
	Emitter	Sensor	Emitter	Sensor				
HCNW4502	100	10	250	[d]	[e]	85	125	[f]
HCNW4503	100	10	250	[d]	[e]	85	125	[f]
HCNW4504	[a]	[b]	45	[d]	[e]	85	125	[f]
HCNW4506	[a]	[b]	45	[d]	[e]	85	125	[f]
HCNW4562	100	10	250	[d]	[e]	85	125	[f]
HCNW3120	[a]	100	45	[d]	[e]	85	125	[f]
J312	[a]	2000	45	[d]	5000	110	125	[f]
J313	[a]	2000	45	[d]	5000	110	125	[f]
J314	[a]	[b]	45	250	5000	110	125	[f]
J454	[a]	[b]	45	[d]	5000	110	125	[f]
J456	[a]	[b]	45	[d]	5000	110	125	[f]
7510	16	16	88	88	5000	110	125	[f]
7520	16	16	88	88	5000	110	125	[f]
7800	16	16	88	88	5000	110	125	[f]
7800A	16	16	88	88	5000	110	125	[f]
782T	16	16	83	78	4000	110	125	125
7840	15.5	15.5	85	85	5000	110	125	[f]
7860	15	15	83	83	5000	110	125	[f]
7900	18.5	12	102	66	[e]	105	125	[f]
790A	18.5	12	102	66	[e]	105	125	[f]
790B	18.5	12	102	66	[e]	105	125	[f]
7970	14	8	77	44	[e]	105	125	[f]
7560	20	20	110	110	5000	110	125	[f]
6210	[a]	13	[c]	60	[e]	100	150	[f]
6300	[a]	13	[c]	60	[e]	100	150	[f]
6310	[a]	13	[c]	60	[e]	100	150	[f]
6400	[a]	13	[c]	60	[e]	100	150	[f]
6410	[a]	13	[c]	60	[e]	100	150	[f]
6420	[a]	13	[c]	60	[e]	100	150	[f]
7210	15	6	[c]	[d]	[e]	110	125	150
31JT	[a]	[b]	[c]	[d]	[e]	125	150	[f]
32JT	[a]	[b]	[c]	[d]	[e]	125	150	[f]
33JT	[a]	[b]	[c]	[d]	[e]	125	150	[f]
34JT	[a]	[b]	180	[d]	[e]	125	150	[f]
36JT	33	2000	170	350	[e]	125	150	150
36JV	33	[b]	170	350	5000	105	150	[f]
38JT	33	[b]	170	350	[e]	125	150	[f]
302J	[a]	[b]	150	[d]	[e]	125	150	150
322J	[a]	[b]	45	180	[e]	110	125	[f]
314J	[a]	[b]	45	180	[e]	110	125	[f]
315J	[a]	[b]	45	245	[e]	110	125	[f]
316J	33	[b]	170	350	[e]	110	125	[f]

Model[a]	Current (mA)		Power (mW)		Isolation Voltage (AC)	Max. Operating (Case) Temp. (°C)	Max. Junction Temp. (°C)	Max. Storage Temp. (°C)
	Emitter	Sensor	Emitter	Sensor				
330J	[a]	[b]	45	330	[e]	110	125	[f]
331J	[a]	1000	45	330	[e]	110	125	[f]
332J	[a]	2000	45	330	[e]	110	125	[f]
333J	[a]	2000	45	330	[e]	110	125	[f]
335J	[a]	2500	[c]	[d]	[e]	105	150	150
336J	[a]	2500	180	580	[e]	110	125	[f]
337J	[a]	4000	180	580	[e]	110	125	[f]
339J	[a]	1000	40	315	[e]	110	125	[f]
344JT	[a]	[b]	[c]	[d]	[e]	125	150	[f]
352J	[a]	6000	150	[d]	[e]	110	125	[f]
785J	[a]	[b]	60	110	[e]	110	125	[f]
788J	[a]	[b]	60	110	[e]	110	125	[f]
786J	15	15	60	85	[e]	110	125	[f]
796J	20	[b]	60	55	[e]	110	125	[f]
798J	20	[b]	60	55	[e]	110	125	[f]
ACFJ-3540T	20	2500	280	600	5000	125	150	150
2200	[a]	[b]	17.5	[d]	[e]	85	100	[f]
2201	[a]	[b]	18.5	210	[e]	100	125	[f]
2202	[a]	[b]	18.5	210	[e]	85	100	[f]
2211	[a]	[b]	18.5	210	[e]	100	125	[f]
2212	[a]	[b]	18.5	210	[e]	100	125	[f]
2219	[a]	[b]	17.5	[d]	[e]	100	125	[f]
2231	[a]	[b]	45	35	[e]	100	115	[f]
2232	[a]	[b]	35	100	[e]	100	125	[f]
2300	[a]	[b]	8.25	[d]	[e]	100	125	[f]
2400	[a]	[b]	15.5	[d]	[e]	100	125	[f]
2430	[a]	[b]	16	350	[e]	100	125	[f]
2502	[a]	[b]	[c]	[d]	[e]	100	115	[f]
2503	[a]	[b]	[c]	[d]	[e]	100	115	[f]
250L	[a]	[b]	[c]	[d]	5000	100	115	[f]
2530	[a]	[b]	[c]	[d]	[e]	100	115	[f]
2531	[a]	[b]	[c]	[d]	[e]	100	115	[f]
2533	[a]	[b]	[c]	[d]	[e]	100	115	[f]
253L	[a]	[b]	[c]	[d]	[e]	100	115	[f]
2601	[a]	[b]	[c]	[d]	[e]	100	125	[f]
2602	10	[b]	16.2	[d]	[e]	100	125	[f]
260L	[a]	[b]	36	[d]	5000	100	125	[f]
2611	[a]	[b]	[c]	[d]	[e]	100	125	[f]
2612	10	25	16.2	[d]	[e]	100	125	[f]
261A	[a]	[b]	16	85	[e]	100	125	[f]
261N	[a]	[b]	16	85	[e]	100	125	[f]
2630	[a]	[b]	[c]	[d]	[e]	100	125	[f]
2631	[a]	[b]	[c]	[d]	[e]	100	125	[f]

Model[a]	Current (mA)		Power (mW)		Isolation Voltage (AC)	Max. Operating (Case) Temp. (°C)	Max. Junction Temp. (°C)	Max. Storage Temp. (°C)
	Emitter	Sensor	Emitter	Sensor				
263A	[a]	[b]	18.5	295	[e]	100	125	[f]
263L	[a]	[b]	[c]	[d]	[e]	100	125	[f]
263N	[a]	[b]	18.5	295	[e]	100	125	[f]
270L	[a]	[b]	[c]	[d]	5000	85	100	[f]
2730	[a]	[b]	[c]	[d]	[e]	100	125	[f]
2731	[a]	[b]	[c]	[d]	[e]	100	125	[f]
273L	[a]	[b]	[c]	[d]	[e]	100	125	[f]
3020	25	200	[c]	[d]	[e]	100	115	[f]
3120	[a]	2000	45	[d]	[e]	100	115	[f]
3130	[a]	2500	45	[d]	[e]	100	115	[f]
3140	[a]	400	[c]	[d]	[e]	100	115	[f]
3150	[a]	500	45	100	[e]	100	115	[f]
3180	[a]	2000	105	100	[e]	100	115	[f]
3210	20	[b]	[c]	[d]	[e]	85	125	[f]
3211	20	[b]	[c]	[d]	5000	85	125	[f]
3700	[a]	[b]	[c]	[d]	[e]	100	125	[f]
312T	[a]	2500	30	[d]	[e]	125	150	[f]
3760	[a]	[b]	[c]	[d]	[e]	100	125	[f]
4100	20	[b]	[c]	[d]	[e]	100	125	[f]
4110	20	[b]	[c]	[d]	[e]	85	125	[f]
4111	20	[b]	[c]	360	5000	85	125	[f]
4200	30	[b]	[c]	[d]	[e]	100	125	[f]
4502	[a]	[b]	[c]	[d]	[e]	100	115	[f]
4503	[a]	[b]	[c]	[d]	[e]	100	115	[f]
4504	[a]	[b]	[c]	[d]	[e]	100	115	[f]
4506	[a]	[b]	45	[d]	[e]	100	125	[f]
4534	[a]	[b]	[c]	[d]	[e]	100	115	[f]
4562	[a]	[b]	19	[d]	[e]	100	125	[f]
4661	[a]	[b]	[c]	[d]	[e]	100	125	[f]
4701	[a]	[b]	35	[d]	[e]	70	85	[f]
4731	[a]	[b]	30	[d]	[e]	100	125	[f]
4800	[a]	[b]	15	560	5000	110	125	[f]
7710	[a]	[b]	72	60	[e]	100	115	[f]
7720	10	[b]	72	60	[e]	100	115	[f]
7721	10	[b]	72	60	[e]	100	115	[f]
7723	10	[b]	60	105	[e]	85	115	[f]
T250	[a]	1500	45	100	[e]	100	115	[f]
T251	25	400	45	[d]	[e]	100	115	[f]
T350	[a]	1500	45	100	[e]	100	115	[f]
V454	25	8	45	100	3750/5000	100	115	125
V601	20	50	36	85	3750/5000	100	125	125
V701	20	60	35	100	3750/5000	100	125	125
772L	10	[b]	72	60	5000	105	125	[f]

Model[a]	Current (mA)		Power (mW)		Isolation Voltage (AC)	Max. Operating (Case) Temp. (°C)	Max. Junction Temp. (°C)	Max. Storage Temp. (°C)
	Emitter	Sensor	Emitter	Sensor				
ACPL-736J	22	15	121	82.5	5000	110	125	125
7801	16	16	83	78	5000	110	125	125
7813	16	16	88	88	5000	110	125	125
7841	15.5	15.5	85	85	5000	110	125	125
7847	15.5	15.5	83	85	5000	110	125	125
RB5C	16	16	88	88	5000	110	125	125

a. May prefix with letters ACFL-, ACPL-, ACSL-, ASSR-, or HCPL-.

Refer to the product data sheet section:

[a] Absolute Maximum Ratings, parameter Forward Input Current (I_F).

[b] Absolute Maximum Ratings, parameter Output Current (I_O).

[c] Absolute Maximum Ratings, parameter Input Power Dissipation (P_I).

[d] Absolute Maximum Ratings, parameter Output Power Dissipation (P_O).

[e] Package Characteristics, parameter Input-Output Momentary Withstand Voltage (V_{ISO}).

[f] Absolute Maximum Ratings, parameter Storage Temperature (T_S).

BROADCOM®