

SILICON MULTIPLIER DIODES

TYPE NUMBER	POWER DISSIPATION P_D (WATTS) @ 25°C	THERMAL RESISTANCE °C/W MAX	INPUT FREQ. F_{IN} MHz	POWER INPUT P_{IN} WATTS	OUTPUT FREQ. F_{OUT} MHz	POWER OUTPUT P_{OUT} (MIN) WATTS	BREAKDOWN VOLTAGE V_B (MIN) @ 10 μ A	SERIES RESISTANCE R_S @ -6V F=50 MHz OHMS	CAPACITANCE (TOTAL) $V_R=6.0V F=1.0$ MHz		PACKAGE OUTLINE
									MIN Pf	MAX Pf	
1N5149	10.0	9.0	500	20.0	1000	11.0	80	0.25	5.0	5.0	20
1N5150	14.0	9.0	500	37.0	1000	24.0	80	0.25	5.0	20.0	20
1N5150A	21.0	6.0	500	37.0	1000	25.1	80	0.25	10.8	13.2	20
1N5151	5.5	23.0	1000	12.0	2000	6.0	75	0.5	5.0	7.5	40
1N5152	5.5	23.0	1000	12.0	2000	6.0	75	0.5	5.0	7.5	51
1N5153	5.5	23.0	1000	12.0	2000	6.0	75	0.5	5.0	7.5	20
1N5152A	8.4	15.0	1000	12.0	2000	7.2	75	0.5	5.4	6.6	51
1N5153A	8.4	15.0	1000	12.0	2000	7.2	75	0.5	5.4	6.6	20
1N5154	3.5	35.0	2000	5.0	6000	2.0	35	0.9	1.0	3.0	40
1N5155	3.5	35.0	2000	5.0	6000	2.0	35	0.9	1.0	3.0	51
1N5155A	6.2	20.0	2000	5.0	6000	2.0	35	0.9	1.71	2.09	51
1N5156	3.3	38.0	5000	2.6	10000	1.0	20	1.0	0.5	1.0	40
1N5157	3.3	38.0	5000	2.6	10000	1.0	20	1.0	0.5	1.0	51

SUPER POWER MULTIPLIER DIODES

TYPE NUMBER	BREAKDOWN ¹ VOLTAGE V_B (MIN) @ 10 μ A (VOLTS)	JUNCTION ² CAPACITANCE @ -6V & 1 MHz (Pf)	MINIMUM ³ CUTOFF FREQUENCY OR MAXIMUM SERIES RESISTANCE (GHz OR OHMS)	TYPICAL MINORITY CARRIER LIFETIME 10mA/6mA (ns)	MAXIMUM TRANSITION TIME -10V/10mA (PS)	OUTPUT ⁴ FREQUENCY RANGE (GHz)	TYPICAL ⁵ EFFICIENCY AS A TRIPLER (%)	TYPICAL ⁶ AVAILABLE OUTPUT POWER (WATTS)	MAXIMUM THERMAL RESISTANCE (°C/W)	PACKAGE OUTLINE
AB810A	140	18-26	0.30 π	450	5000	0.5-1.0	65	40	3	20
AB811A	80	8-10	60	160	2000	1.0-2.5	65	24	7	20
AB812A	80	4-5	90	130	2000	2.0-4.0	55	10	11	20
AB813A	60	2.5-3.5	140	60	700	3.0-5.0	50	6	13	20, 51
AB814A	60	1.5-2.5	140	60	500	5.0-8.0	50	4	15	20, 51
AB824A	45	1.0-1.5	160	30	300	7.0-10.0	50	2.5	25	51

STANDARD POWER MULTIPLIER DIODES

AB800	200	18-26	0.35 π	450	10000	0.3-0.75	70	3-20	3	20
AB810	175	18-26	0.35 π	400	8000	0.5-1.0	65	2-24	3	20
AB820	150	10-20	40	350	5000	0.6-1.2	60	2-16	5	20
AB801	120	8-10	60	210	3000	0.75-1.5	60	1-10	7	20
AB811	100	8-10	60	180	2000	1.0-2.5	65	1-10	7	20
AB802	120	4-5	90	200	3000	1.5-3.0	55	1-8	10	20
AB812	100	4-5	90	170	2000	2.0-4.0	55	1-6	11	20
AB822	80	4-6	110	180	925	2.0	-	2.0	-	20, 51
AB803	80	2.5-3.5	120	100	1000	3.0-5.0	50	0.5-4.0	13	20, 51
AB804	80	1.5-2.5	150	90	750	5.0-7.0	45	0.5-2.5	15	20, 51
AB814	60	1.5-2.5	150	60	400	5.0-8.0	45	0.3-1.5	15	20, 51
AB825	40	1.0-1.5	160	20	150	5.0-8.0	50	2.5	25	20, 51
AB805	40	0.5-0.7	175	18	150	8.0-12.0	40	0.1-0.6	50	51
AB806	30	0.3-0.5	200	10	100	12.0-15.0	30	0.05-0.30	75	51
AB807	6	0.15-0.2	350	3	-	15.0-25.0	15	0.05	300	43, 84

NOTES:

- Breakdown voltage is measured at $I_R = 10\mu A$
- Junction capacitance is measured -6 volts and 1 MHz
- Measured at -6 volts and 3.3 GHz
- Defined as the operable range, not instantaneous bandwidth.
- Typical values when used as a tripler. Useful from 2 to 4 times multiplication.