

Surface Mount (SOT) PIN Diodes

The traditional quality of Alpha microwave products is available for high volume production operations in the form of low cost SOT 23, SOT 143, and SOD 323 surface mounted packages. These plastic encapsulated devices are small outline devices ideal for high volume production in commercial applications including mobile radios, cellular telephones and test equipment. Similar to other packaged PIN diodes, the SOT version may be used in switching circuits and attenuator applications. The 1300-01 and 1301-05 devices

have switching speeds in the 20 ns range and add little resistance at low signal levels. The 1304 and 1307 series have second and third order intermodulation distortion of -50 dBc to -70 dBc, at 30 Watts CW, 100 MHz. Distortion values measured in series circuit with 100 mA forward bias or in shunt circuit with 100 volts across the diode.



SOT 23



SOT 143

Part Number	V_B @ 10 μ A V (min)	C_T @ 50V pF (max)	R_S @ 0.01 mA Ω (min)	R_S @ 1 mA Ω (max)	R_S @ 10 mA Ω (max)	R_S @ 100 mA Ω (max)	T_L μ sec (typ)	Outline Drawing Number
SMP1300-01	50	0.3	200	6.0	1.5	1.0	0.2	434-043
SMP1301-01	100	0.3	300	8.5	3.0	1.5	0.6	434-043
SMP1301-05	50	1.0	40	1.5	0.5	0.4	0.2	434-043
SMP1302-01	200	0.3	800	20	3.0	1.5	1.0	434-043
SMP1304-01	200	0.3	1000	50	8.0	2.0	3.0	434-043
SMP1304-12 ¹	200	0.3	1000	50	8.0	2.0	3.0	434-012
SMP1307-01	200	0.3	1500	120	15	3.0	4.0	434-043
SMP1310-12 ¹	50	0.3	200	6.0	1.5	1.0	0.2	434-012
SMP1310-13 ²	50	0.3	200	6.0	1.5	1.0	0.2	434-013
SMP1312-12 ¹	50	1.0	40	1.5	0.5	0.4	0.2	434-012
SMP1312-13 ²	50	1.0	40	1.5	0.5	0.4	0.2	434-013

1. Series Tee Configuration
2. Common Cathode Configuration

Surface Mount PIN Diode in SOD 323 Package



SOD 323

Part Number	V_B @ 10 μ A	C_T -10V	R_S @ 1 mA	R_S @ 10 mA	R_S @ 50 mA	T_L ns	Outline Drawing Number
	min	max	max	max	max	Typ	
SMP1350-01	50	0.3	3.5	1.5	1.1	100	546-011