PANJIT SEMI CONDUCTOR

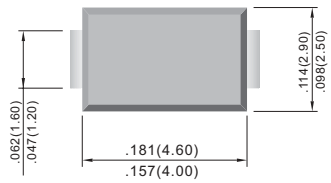
DATA SHEET

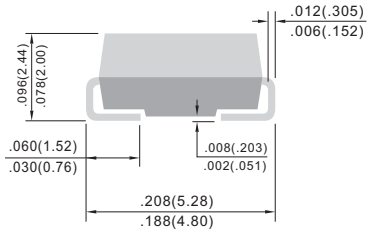
1SMA4729~1SMA4764

SURFACE MOUNT SILICON ZENER DIODE

VOLTAGE 3.6 to 100 Volts **POWER** 1.0 Watts

SMA/DO-214AC Unit: inch (mm)





FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Built-in strain relief
- Low inductance
- Typical I_R less than 5.0μA above 11V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product are available : 99% Sn above can meet RoHS environment substance directive request

MECHANICALDATA

Case: JEDEC DO-214AC,Molded plastic over passivated junction.
Terminals: Solder plated,solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes positive end (cathode)
Standard Packaging:12mm tape (EIA-481)
Weight: 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Pwak Pulse Power Dissipation on TA=50°C (Notes A) Derate above 50°C	P_D	1.0 6.67	Watts mW/°C
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	10	Amps
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150	°C

NOTES:
A. Mounted on 5.0mm2 (.013mm thick) land areas.
B. Measured on8.3ms, and single half sine-wave or equivalent square wave ,duty cycle=4 pulses per minute maximum.
C. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of ± 5%.

Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Leakage Current		Marking Code	Package
	V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}	I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @V_R			
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	µA	V		
1.0 Watt ZENER											
1SMA4729	3.6	3.42	3.78	10.00	69.00	400	1.00	100.00	1.00	729B	SMA
1SMA4730	3.9	3.71	4.10	9.00	64.00	400	1.00	50.00	1.00	730B	SMA
1SMA4731	4.3	4.09	4.52	9.00	58.00	400	1.00	10.00	1.00	731B	SMA
1SMA4732	4.7	4.47	4.94	8.00	53.00	500	1.00	10.00	1.00	732B	SMA
1SMA4733	5.1	4.85	5.36	7.00	49.00	550	1.00	10.00	1.00	733B	SMA
1SMA4734	5.6	5.32	5.88	5.00	45.00	600	1.00	10.00	2.00	734B	SMA
1SMA4735	6.2	5.89	6.51	2.00	41.00	700	1.00	10.00	3.00	735B	SMA
1SMA4736	6.8	6.46	7.14	3.50	37.00	700	0.50	5.00	4.00	736B	SMA
1SMA4737	7.5	7.13	7.88	4.00	34.00	700	0.50	5.00	5.00	737B	SMA
1SMA4738	8.2	7.79	8.61	4.50	31.00	700	0.50	0.50	6.00	738B	SMA
1SMA4739	9.1	8.65	9.56	5.00	28.00	700	0.25	0.50	7.00	739B	SMA
1SMA4740	10	9.50	10.50	7.00	25.00	700	0.25	0.10	7.60	740B	SMA
1SMA4741	11	10.45	11.55	8.00	23.00	700	0.25	0.10	8.40	741B	SMA
1SMA4742	12	11.40	12.60	9.00	21.00	700	0.25	0.10	9.10	742B	SMA
1SMA4743	13	12.35	13.65	10.00	19.00	700	0.25	0.10	9.90	743B	SMA
1SMA4744	15	14.25	15.75	14.00	17.00	700	0.25	0.10	11.40	744B	SMA
1SMA4745	16	15.20	16.80	16.00	15.50	700	0.25	0.10	12.20	745B	SMA
1SMA4746	18	17.10	18.90	20.00	14.00	750	0.25	0.10	13.70	746B	SMA
1SMA4747	20	19.00	21.00	22.00	12.50	750	0.25	0.10	15.20	747B	SMA
1SMA4748	22	20.90	23.10	23.00	11.50	750	0.25	0.10	16.70	748B	SMA
1SMA4749	24	22.80	25.20	25.00	10.50	750	0.25	0.10	18.20	749B	SMA
1SMA4750	27	25.65	28.35	35.00	9.50	750	0.25	0.10	20.60	750B	SMA
1SMA4751	30	28.50	31.50	40.00	8.50	1000	0.25	0.10	22.80	751B	SMA
1SMA4752	33	31.35	34.65	45.00	7.50	1000	0.25	0.10	25.10	752B	SMA
1SMA4753	36	34.20	37.80	50.00	7.00	1000	0.25	0.10	27.40	753B	SMA
1SMA4754	39	37.05	40.95	60.00	6.50	1000	0.25	0.10	29.70	754B	SMA
1SMA4755	43	40.85	45.15	70.00	6.00	1500	0.25	0.10	32.70	755B	SMA
1SMA4756	47	44.65	49.35	80.00	5.50	1500	0.25	0.10	35.80	756B	SMA
1SMA4757	51	48.45	53.55	95.00	5.00	1500	0.25	0.10	38.80	757B	SMA
1SMA4758	56	53.20	58.80	110.00	4.50	2000	0.25	0.10	42.60	758B	SMA
1SMA4759	62	58.90	65.10	125.00	4.00	2000	0.25	0.10	47.10	759B	SMA
1SMA4760	68	64.60	71.40	150.00	3.70	2000	0.25	0.10	51.70	760B	SMA
1SMA4761	75	71.25	78.75	175.00	3.30	2000	0.25	0.10	56.00	761B	SMA
1SMA4762	82	77.90	86.10	200.00	3.00	3000	0.25	0.10	62.20	762B	SMA
1SMA4763	91	86.45	95.55	250.00	2.80	3000	0.25	0.10	69.20	763B	SMA
1SMA4764	100	95.00	105.00	350.00	2.50	3000	0.25	0.10	76.00	764B	SMA

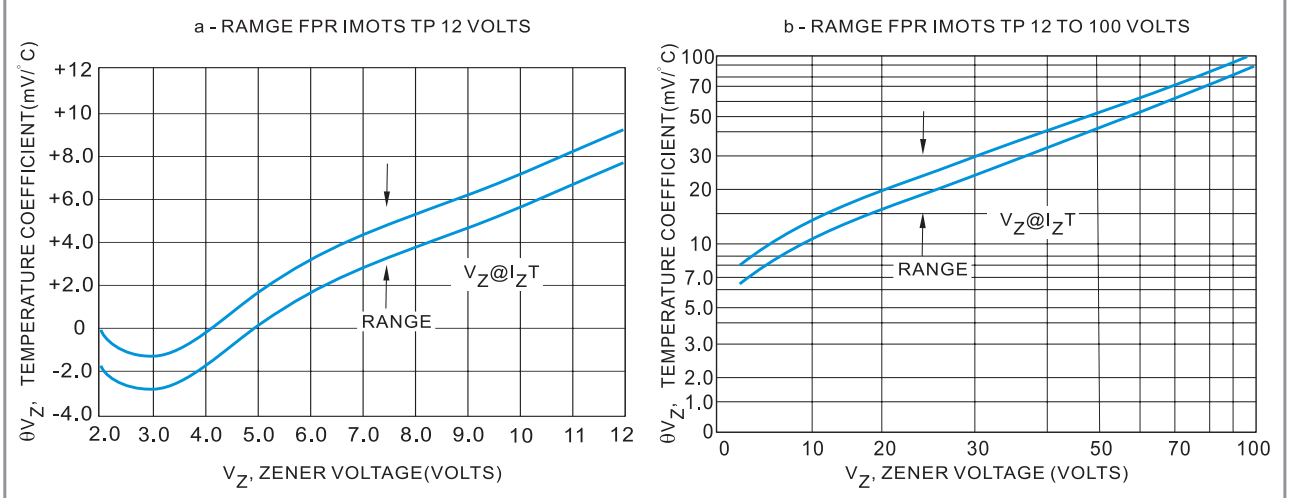


FIGURE 2 - TEMPERATURE COEFICIENTS
(-55° C TO +150° C TEMPERATURE RANGE; 90% OF THE UNITS ARE IN THE RANGES INDICATED.)

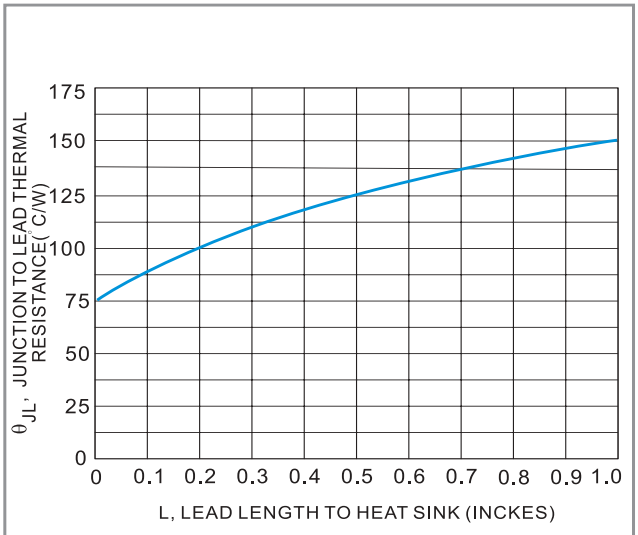


FIGURE 3 - TYPICAL THERMAL RESISTANCE versus LEAD LENGTH

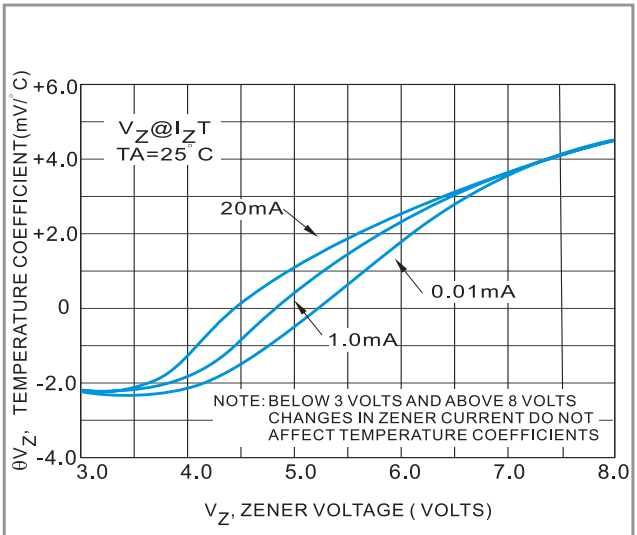
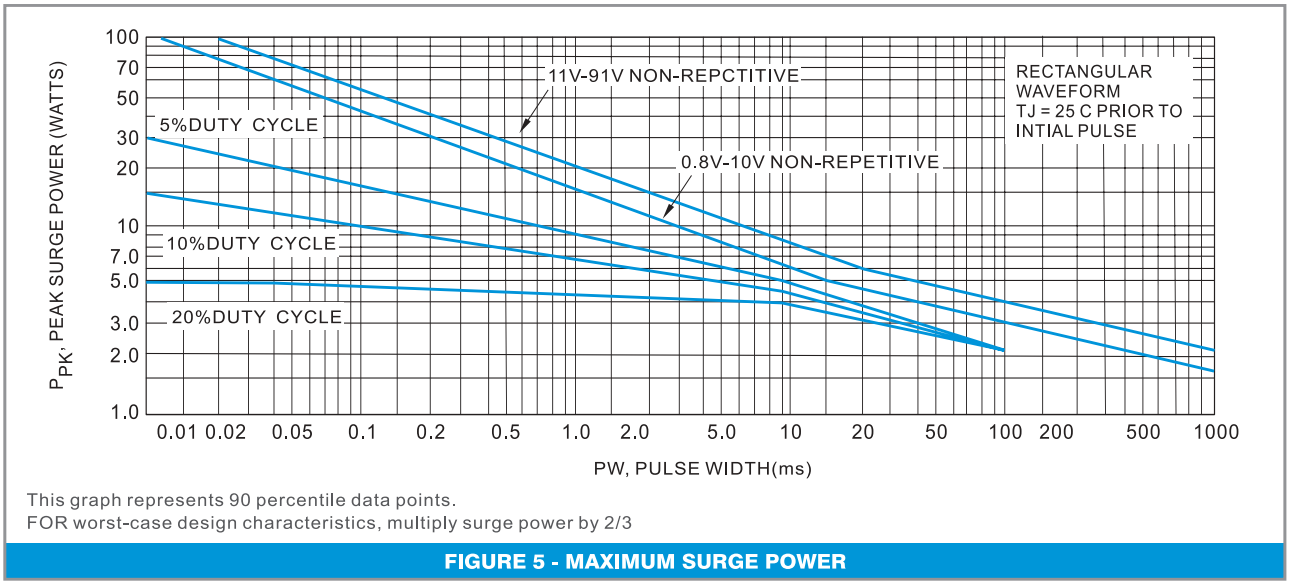


FIGURE 4 - EFFECT OF ZENER CURRENT



This graph represents 90 percentile data points.
FOR worst-case design characteristics, multiply surge power by 2/3

FIGURE 5 - MAXIMUM SURGE POWER

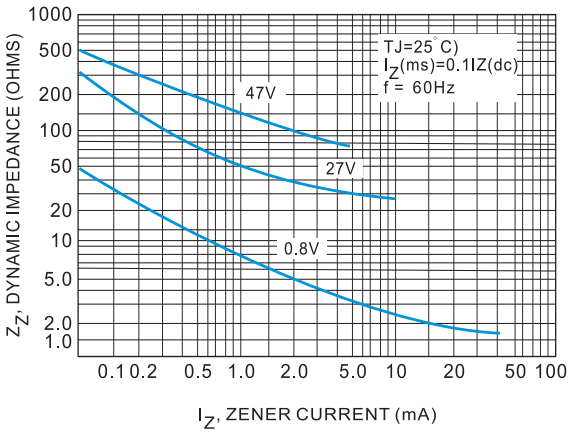


FIGURE 6 - EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

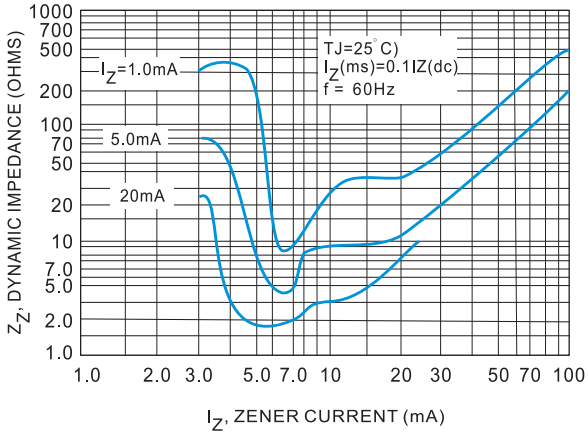


FIGURE 7 - EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

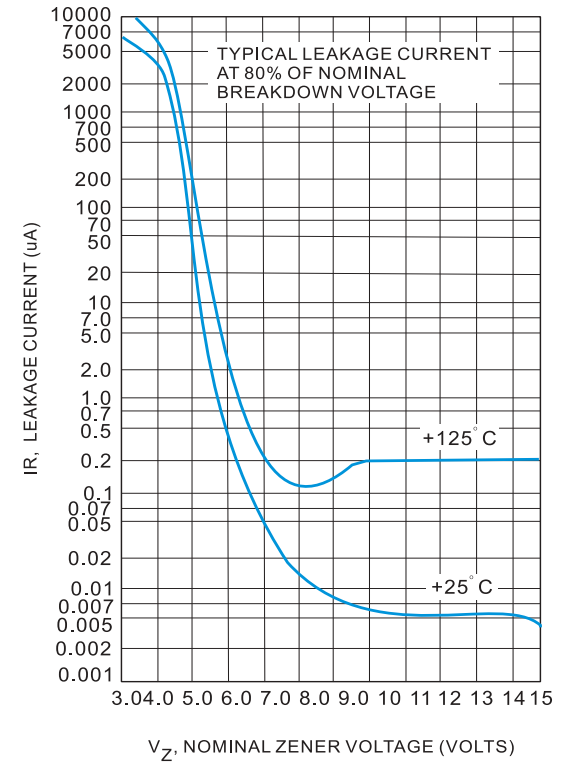


FIGURE 8 - TYPICAL LEAKAGE CURRENT

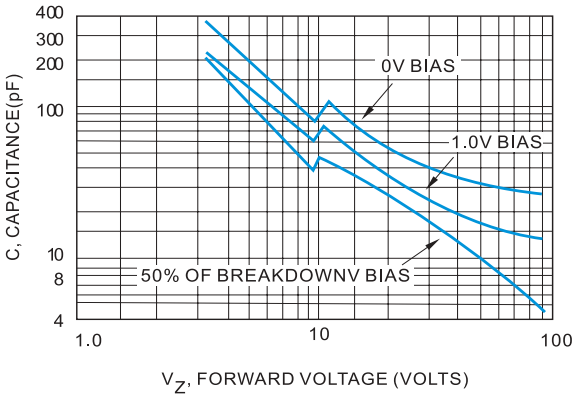


FIGURE 9 - TYPICAL CAPACITANCE versus V_Z

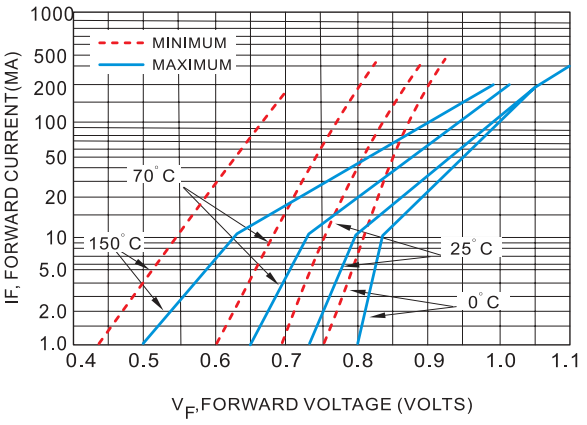


FIGURE 10 - TYPICAL FORWARD CHARACTERISTICS