BZT52-C2V4S thru BZT52-C39S

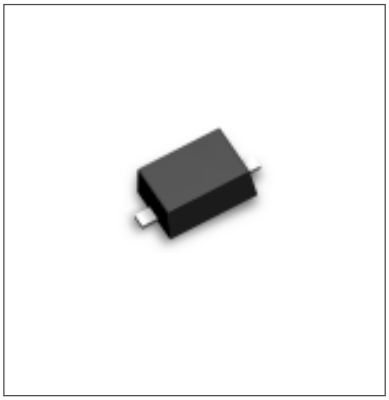
PANJIT SEMI CONDUCTOR

SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE 2.4 - 39 Volts **POWER** 200 mWatts **PACKAGE** SOD-323

FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ideally Suited for Automated Assembly Processes



MECHANICAL DATA

Case: SOD-323, Plastic

Terminals: Solderable per MIL-STD-202, Method 208

Approx. Weight: 0.008 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation (Notes A) at 25°C	P_D	200	mW
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) (Notes B)	I_{FSM}	2.0	Amps
Operating Junction and StorageTemperature Range	T_J	-55 to +150	°C

NOTES:

A. Mounted on 5.0mm2(.013mm thick) land areas.

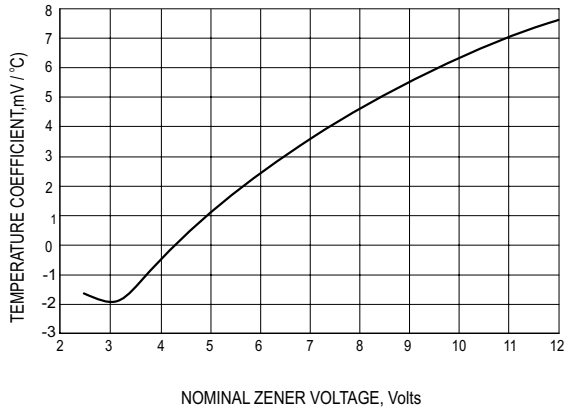
B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted) V_F=1.2V max, I_F=100mA for all types.

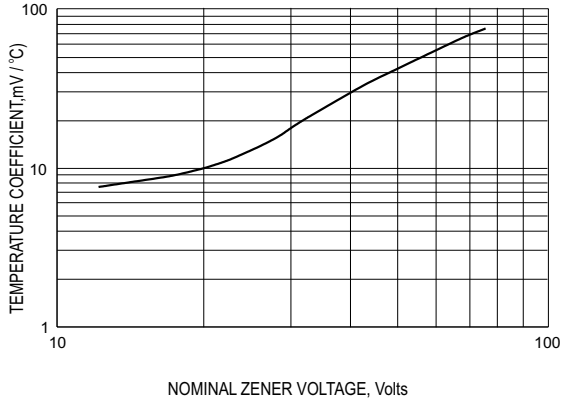
Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Typical Temp. Coefficient	Package
	V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		T_C	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	µA	V		
200 mWatts Zener Diodes											
BZT52-C2V4S	2.4	2.28	2.52	85	5	600	1	100	1	-0.075	SOD-323
BZT52-C2V7S	2.7	2.5	2.9	83	5	500	1	75	1	-0.065	SOD-323
BZT52-C3S	3	2.8	3.2	95	5	500	1	50	1	-0.060	SOD-323
BZT52-C3V3S	3.3	3.1	3.5	95	5	500	1	25	1	-0.055	SOD-323
BZT52-C3V6S	3.6	3.4	3.8	95	5	500	1	15	1	-0.055	SOD-323
BZT52-C3V9S	3.9	3.7	4.1	95	5	500	1	10	1	-0.050	SOD-323
BZT52-C4V3S	4.3	4	4.6	95	5	500	1	5.0	1	-0.035	SOD-323
BZT52-C4V7S	4.7	4.4	5	78	5	500	1	5.0	2	-0.015	SOD-323
BZT52-C5V1S	5.1	4.8	5.4	60	5	480	1	0.1	0.8	0.005	SOD-323
BZT52-C5V6S	5.6	5.2	6	40	5	400	1	0.1	1	0.020	SOD-323
BZT52-C6V2S	6.2	5.8	6.6	10	5	200	1	0.1	2	0.030	SOD-323
BZT52-C6V8S	6.8	6.4	7.2	8	5	150	1	0.1	3	0.045	SOD-323
BZT52-C7V5S	7.5	7	7.9	7	5	50	1	0.1	5	0.050	SOD-323
BZT52-C8V2S	8.2	7.7	8.7	7	5	50	1	0.1	6	0.055	SOD-323
BZT52-C9V1S	9.1	8.5	9.6	10	5	50	1	0.1	7	0.065	SOD-323
BZT52-C10S	10	9.4	10.6	15	5	70	1	0.1	7.5	0.070	SOD-323
BZT52-C11S	11	10.4	11.6	20	5	70	1	0.1	8.5	0.075	SOD-323
BZT52-C12S	12	11.4	12.7	20	5	90	1	0.1	9	0.080	SOD-323
BZT52-C13S	13	12.4	14.1	25	5	110	1	0.1	10	0.080	SOD-323
BZT52-C15S	15	13.8	15.6	30	5	110	1	0.1	11	0.090	SOD-323
BZT52-C16S	16	15.3	17.1	40	5	170	1	0.1	12	0.090	SOD-323
BZT52-C18S	18	16.8	19.1	50	5	170	1	0.1	14	0.090	SOD-323
BZT52-C20S	20	18.8	21.2	50	5	220	1	0.1	15	0.090	SOD-323
BZT52-C22S	22	20.8	23.3	55	5	220	1	0.1	17	0.090	SOD-323
BZT52-C24S	24	22.8	25.6	80	5	220	1	0.1	18	0.090	SOD-323
BZT52-C27S	27	25.1	28.9	80	5	250	1	0.1	20	0.090	SOD-323
BZT52-C30S	30	28	32	80	5	250	1	0.1	22.5	0.090	SOD-323
BZT52-C33S	33	31	35	80	5	250	1	0.1	25	0.090	SOD-323
BZT52-C36S	36	34	38	90	5	250	1	0.1	27	0.090	SOD-323
BZT52-C39S	39	37	41	90	5	300	1	0.1	29	0.110	SOD-323

NOTE:

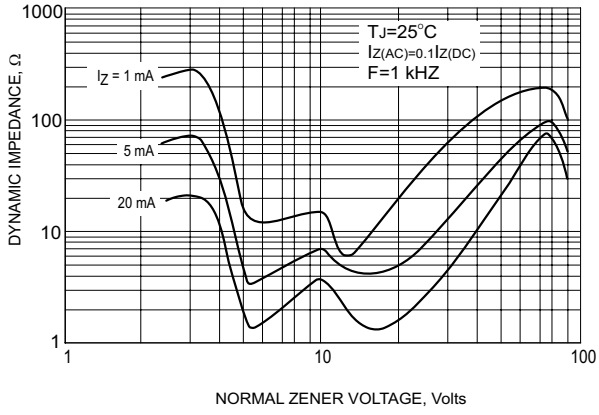
1. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
2. Specials Available Include:
   A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
   B. Matched sets.
3. Zener Voltage (V_Z) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at 30°C, from the diode body.
4. Zener Impedance (Z_Z) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.
5. Surge Current (I_R) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I_{ZT}, per JEDEC registration; however, actual device capability is as described in Figure 5.



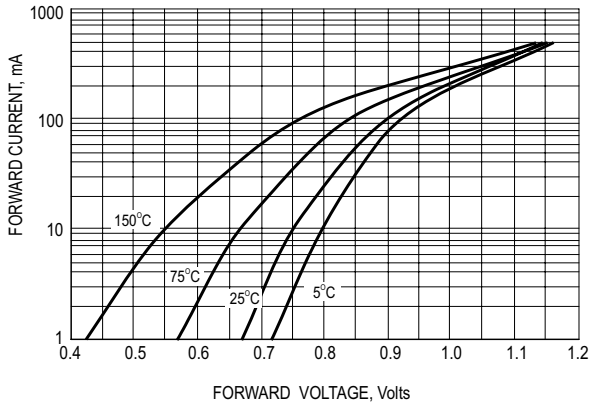
TYPICAL REVERSE CURRENT



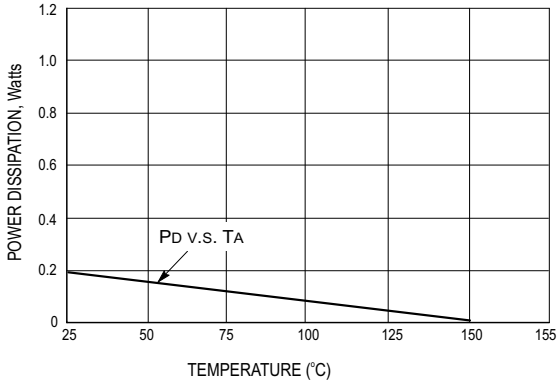
STEADY STATE POWER DERATING



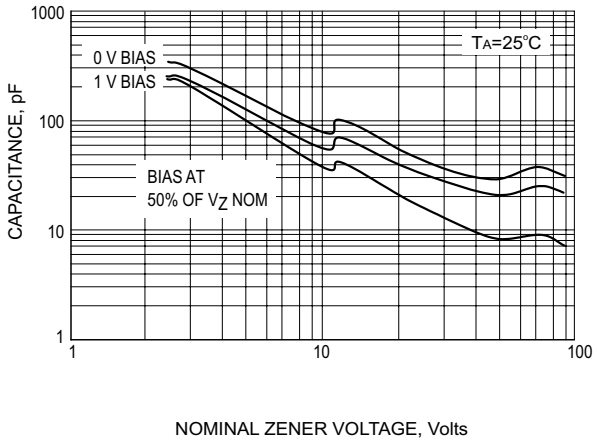
EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE



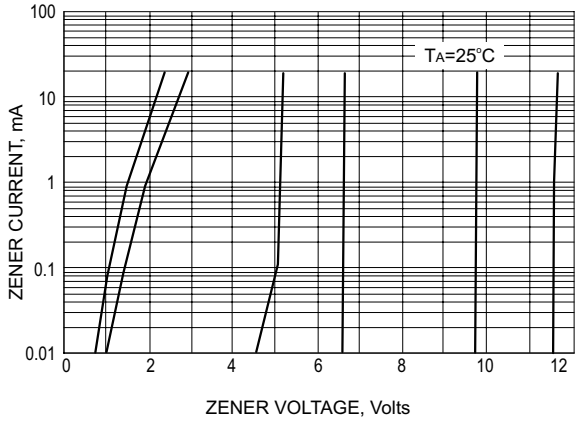
TYPICAL FORWARD VOLTAGE



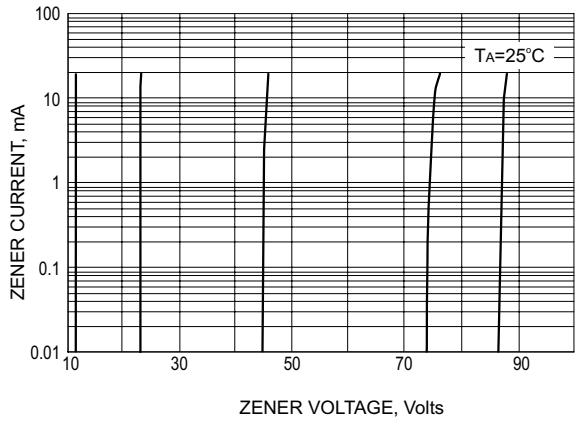
STEADY STATE POWER DERATING



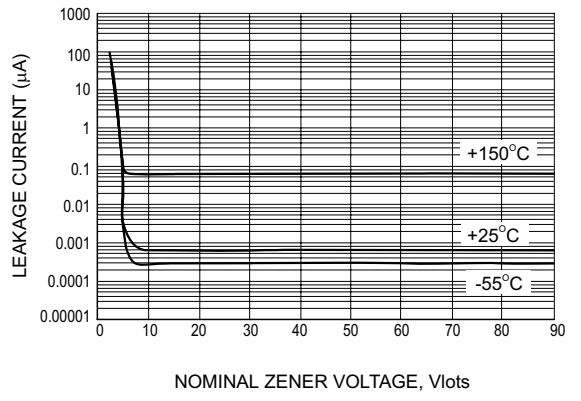
TYPICAL CAPACITANCE



ZENER VOLTAGE V.S. ZENER CURRENT

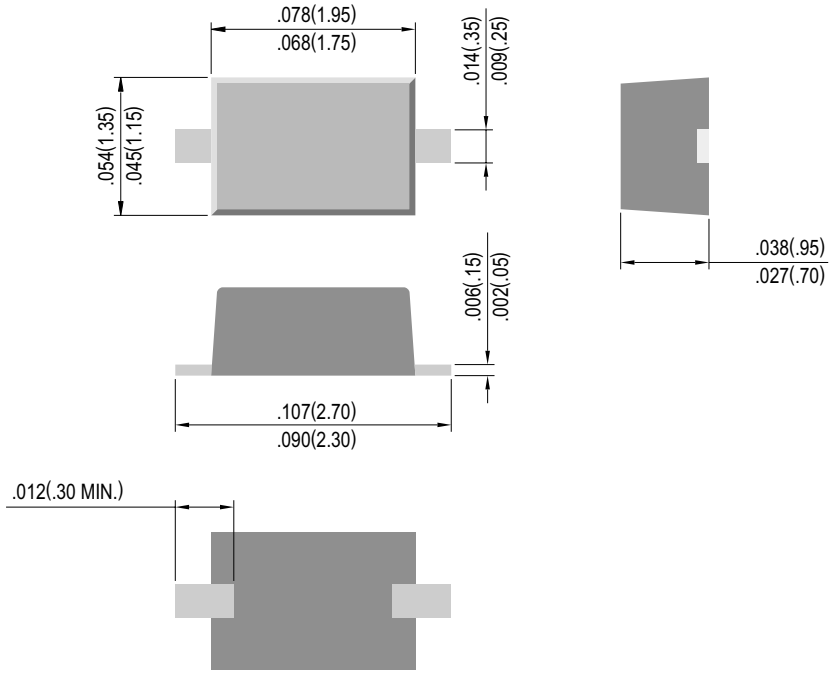


ZENER VOLTAGE V.S. ZENER CURRENT



TYPICAL LEAKGE CURRENT

SOD-323



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