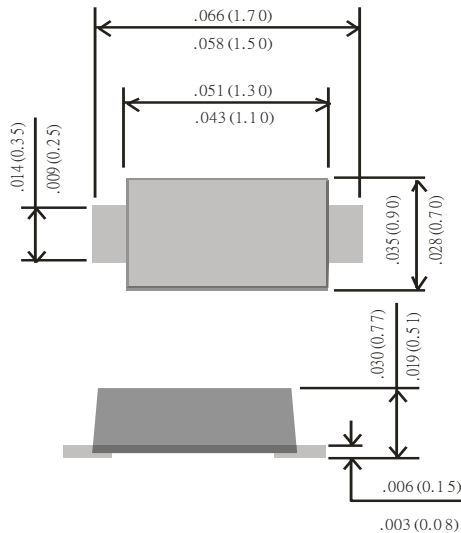


300mW SURFACE MOUNT ZENER DIODES



CASE : SOD-523

DIMENSIONS IN INCHES AND (MILLIMETERS)

FEATURES

- WIDE ZENER REVERSE VOLTAGE RANGE : 2.4V TO 75V
- 300 mW RATING ON FR-4 OR FR-5 BOARD
- PACKAGE DESIGNED FOR OPTIMAL AUTOMATED BOARD ASSEMBLY
- SMALL PACKAGE SIZE FOR HIGH DENSITY APPLICATIONS
- ESD RATING OF CLASS 3 (>16kV) PER HUMAN BODY MODEL
- BOTH PB FREE AND HALOGEN FREE ARE AVAILABLE

MECHANICAL DATA

- CASE: VOID-FREE, TRANSFER-MOLDED, THERMOSETTING PLASTIC CASE
- MAXIMUM CASE TEMPERATURE FOR SOLDERING PURPOSES: 260°C FOR 10 SECONDS
- POLARITY: CATHODE INDICATED BY POLARITY BAND
- FINISH: CORROSION RESISTANT TF FINISH, EASILY SOLDERABLE
- FLAMMABILITY RATING: UL 94 V-0

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED				
PARAMETER		SYMBOL	VALUE	UNITS
MAXIMUM FORWARD VOLTAGE DROP	$I_F=10\text{mA}$	V_F	0.90	V
POWER DISSIPATION		$P_D^{(1)}$	300	mW
THERMAL RESISTANCE, JUNCTION-TO-AMBIENT		$R_{\theta JA}$	417	°C/W
JUNCTION TEMPERATURE STORAGE TEMPERATURE RANGE		$T_J; T_{STG}$	-65 TO +150	°C

1. Device mounted on an FR4 Printed-Circuit Board (PCB) with approximately 35 mm² Cu area at cathode tab.

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current	
	V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
300 mWatts Zener Diodes									
BZX585B2V4G	2.4	2.352	2.448	100	5.0	600	1.00	120	1.0
BZX585B2V7G	2.7	2.646	2.754	110	5.0	600	1.00	120	1.0
BZX585B3V0G	3.0	2.940	3.060	120	5.0	600	1.00	50	1.0
BZX585B3V3G	3.3	3.234	3.366	130	5.0	600	1.00	20	1.0
BZX585B3V6G	3.6	3.528	3.672	130	5.0	600	1.00	10	1.0
BZX585B3V9G	3.9	3.822	3.978	130	5.0	600	1.00	5.0	1.0
BZX585B4V3G	4.3	4.214	4.386	130	5.0	600	1.00	5.0	1.0
BZX585B4V7G	4.7	4.606	4.794	130	5.0	500	1.00	2.0	1.0
BZX585B5V1G	5.1	4.998	5.202	130	5.0	480	1.00	2.0	1.5
BZX585B5V6G	5.6	5.488	5.712	80	5.0	400	1.00	1.0	2.5
BZX585B6V2G	6.2	6.076	6.324	50	5.0	150	1.00	1.0	3.0
BZX585B6V8G	6.8	6.664	6.936	30	5.0	80	1.00	0.5	3.5
BZX585B7V5G	7.5	7.350	7.650	30	5.0	80	1.00	0.5	4.0
BZX585B8V2G	8.2	8.036	8.364	30	5.0	80	1.00	0.5	5.0
BZX585B9V1G	9.1	8.918	9.282	30	5.0	100	1.00	0.5	6.0
BZX585B10G	10	9.800	10.200	30	5.0	150	1.00	0.1	7.0
BZX585B11G	11	10.780	11.220	30	5.0	150	1.00	0.1	8.0
BZX585B12G	12	11.760	12.240	35	5.0	150	1.00	0.1	9.0
BZX585B13G	13	12.740	13.260	35	5.0	170	1.00	0.1	10.0
BZX585B15G	15	14.700	15.300	40	5.0	200	1.00	0.1	11.0
BZX585B16G	16	15.680	16.320	40	5.0	200	1.00	0.1	12.0
BZX585B18G	18	17.640	18.360	45	5.0	225	1.00	0.1	13.0
BZX585B20G	20	19.600	20.400	50	5.0	225	1.00	0.1	15.0
BZX585B22G	22	21.560	22.440	55	5.0	250	1.00	0.1	17.0
BZX585B24G	24	23.520	24.480	60	5.0	250	1.00	0.1	19.0
BZX585B27G	27	26.460	27.540	70	2.0	300	0.50	0.1	21.0
BZX585B30G	30	29.400	30.600	80	2.0	300	0.50	0.1	23.0
BZX585B33G	33	32.340	33.660	80	2.0	325	0.50	0.1	25.0
BZX585B36G	36	35.280	36.720	90	2.0	350	0.50	0.1	27.0
BZX585B39G	39	38.220	39.780	100	2.0	350	0.50	2.0	30.0
BZX585B43G	43.0	42.140	43.860	130	2.0	500	0.50	2.0	33.0
BZX585B47G	47.0	46.060	47.940	150	2.0	500	0.50	2.0	36.0
BZX585B51G	51.0	49.980	52.020	180	2.0	500	0.50	1.0	39.0

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current	
	V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
300 mWatts Zener Diodes									
BZX585B56G	56.0	54.880	57.120	180	2.0	500	0.50	1.0	43.0
BZX585B62G	62.0	60.760	63.240	200	2.0	500	0.50	0.2	47.0
BZX585B68G	68.0	66.640	69.360	250	2.0	500	0.50	0.2	52.0
BZX585B75G	75.0	73.500	76.500	300	2.0	500	0.50	0.2	57.0

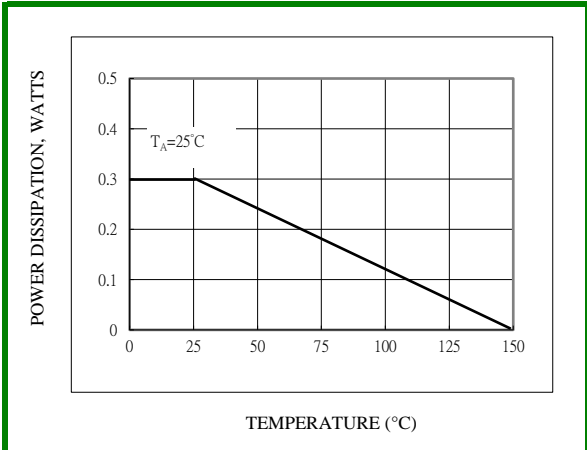


Fig.1- STEADY STATE POWER DERATING

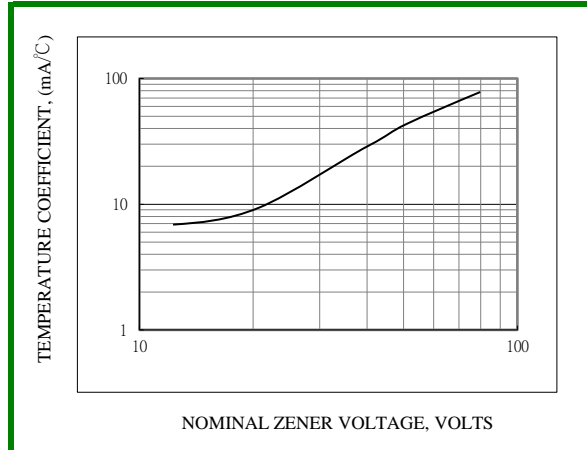


Fig.2- TEMPERATURE COEFFICIENTS

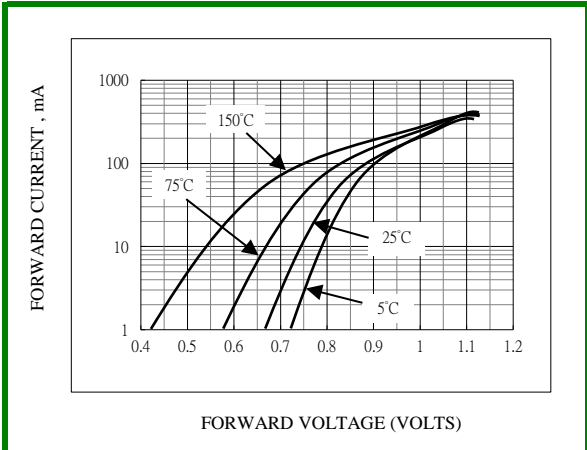


Fig.3- TYPICAL FORWARD VOLTAGE

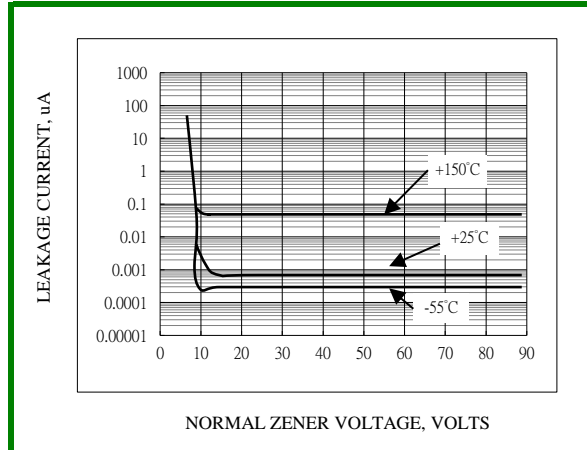


Fig.4- TYPICAL LEAKAGE CURRENT