Micro Commercial Components

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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

SMA2EZ5.1D5 THRU SMA2EZ75D5

2 W Glass Passivated Junction Silicon Zener Diode 5.1-75 Volts

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Glass Passivated Junction
- Excellent Clamping Capability
- Built-in Strain Relief
- Low Inductance
- Halogen free available upon request by adding suffix "-HF"

Mechanical Data

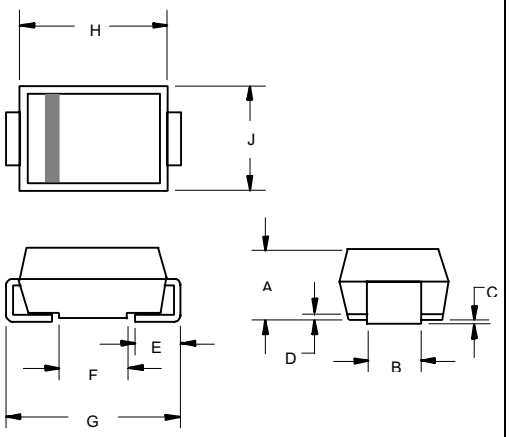
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- TERMINALS : Solder plated, solderable per MIL-STD-750, method 2026
- POLARITY : Color band denotes positive end (cathode)

Maximum Ratings @ 25°C Unless Otherwise Specified

Steady Power Dissipation (Note 2) Derate above 75°C	P_D	2 36	Watts mW/°C
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note 3)	I_{FSM}	15	Amps
Operating And Storage Temperature Range	T_J, T_{STG}	-55°C to +150°C	

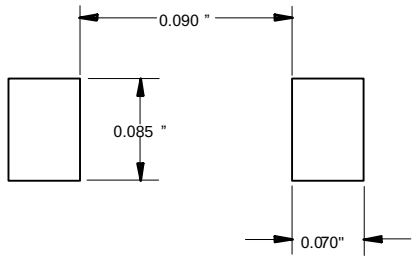
NOTES:
1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.
2. Mounted on 5.0mm^2(.013mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

DO-214AC
(SMA) (LEAD FRAME)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.079	.096	2.00	2.44	
B	.050	.064	1.27	1.63	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.189	.220	4.80	5.59	
H	.157	.181	4.00	4.60	
J	.090	.115	2.25	2.92	

SUGGESTED SOLDER PAD LAYOUT



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ELECTRICAL CHARACTERISTICS(T_A=25°C unless otherwise noted)V_F=1.5V max,I_F=200mA for all types.

Type No. (Note 1.)	Nominal Zener Voltage Vz @I_{ZT} Volts (Note 2.)	Test Current I_{ZT} mA	Maximum Zener Impedance (Note 3)			Leakage Current		Maximum Zener Current I_{ZM} mA	Surge Current @TA=25 I_{ZSM}-A (Note 4.)	Device Marking
			Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	V_R			
			Ohms	Ohms	mA	µA Max	Volts			
SMA2EZ5.1D5	5.1	98.0	3.5	600	1	5	1	356	3.5	2E5.1/2C5V1
SMA2EZ5.6D5	5.6	89.5	2.5	500	1	5	2	324	3.3	2E5.6/2C5V6
SMA2EZ6.2D5	6.2	80.5	1.5	700	1	5	3	292	3.1	2E6.2/2C6V2
SMA2EZ6.8D5	6.8	73.5	2	700	1	5	4	266	2.9	2E6.8/2C6V8
SMA2EZ7.5D5	7.5	66.5	2	700	0.5	5	5	242	2.66	2E7.5/2C7V5
SMA2EZ8.2D5	8.2	61	2.3	700	0.5	5	6	220	2.44	2E8.2/2C8V2
SMA2EZ9.1D5	9.1	55	2.5	700	0.5	3	7	200	2.2	2E9.1/2C9V1
SMA2EZ10D5	10	50	3.5	700	0.25	3	7.6	182	2.0	2E10/2C10
SMA2EZ11D5	11	45.5	4	700	0.25	1	8.4	166	1.82	2E11/2C11
SMA2EZ12D5	12	41.5	4.5	700	0.25	1	9.1	152	1.66	2E12/2C12
SMA2EZ13D5	13	38.5	5	700	0.25	0.5	9.9	138	1.54	2E13/2C13
SMA2EZ14D5	14	35.7	5.5	700	0.25	0.5	10.6	130	1.43	2E14/2C14
SMA2EZ15D5	15	33.4	7	700	0.25	0.5	11.4	122	1.33	2E15/2C15
SMA2EZ16D5	16	31.2	8	700	0.25	0.5	12.2	114	1.25	2E16/2C16
SMA2EZ17D5	17	29.4	9	750	0.25	0.5	13	107	1.18	2E17/2C17
SMA2EZ18D5	18	27.8	10	750	0.25	0.5	13.7	100	1.11	2E18/2C18
SMA2EZ19D5	19	26.3	11	750	0.25	0.5	14.4	95	1.05	2E19/2C19
SMA2EZ20D5	20	25	11	750	0.25	0.5	15.2	90	1	2E20/2C20
SMA2EZ22D5	22	22.8	12	750	0.25	0.5	16.7	82	0.91	2E22/2C22
SMA2EZ24D5	24	20.8	13	750	0.25	0.5	18.2	76	0.83	2E24/2C24
SMA2EZ27D5	27	18.5	18	750	0.25	0.5	20.6	68	0.74	2E27/2C27
SMA2EZ30D5	30	16.6	20	1000	0.25	0.5	22.5	60	0.67	2E30/2C30
SMA2EZ33D5	33	15.1	23	1000	0.25	0.5	25.1	55	0.61	2E33/2C33
SMA2EZ36D5	36	13.9	25	1000	0.25	0.5	27.4	50	0.56	2E36/2C36
SMA2EZ39D5	39	12.8	30	1000	0.25	0.5	29.7	47	0.51	2E39/2C39
SMA2EZ43D5	43	11.6	35	1500	0.25	0.5	32.7	43	0.45	2E43/2C43
SMA2EZ47D5	47	10.6	40	1500	0.25	0.5	35.8	39	0.42	2E47/2C47
SMA2EZ51D5	51	9.8	48	1500	0.25	0.5	38.8	36	0.39	2E51/2C51
SMA2EZ56D5	56	9	55	2000	0.25	0.5	42.6	32	0.36	2E56/2C56
SMA2EZ62D5	62	8.1	60	2000	0.25	0.5	47.1	29	0.32	2E62/2C62
SMA2EZ68D5	68	7.4	75	2000	0.25	0.5	51.7	27	0.29	2E68/2C68
SMA2EZ75D5	75	6.7	90	2000	0.25	0.5	56	24	0.27	2E75/2C75

Notes:

1. TOLERANCES - Suffix indicates 5% tolerance any other tolerance will be considered as a special device.
2. ZENER VOLTAGE (Vz) MEASUREMENT - guarantees the zener voltage when measured at 40 ms from the diode body, and an ambient temperature of 25 centigrade degrees.
3. ZENER IMPEDANCE (Zz) DERIVATION - The zener impedance is derived from the 60 cycle ac voltage, which results when an ac current having an rms falue equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}
4. SURGE CURRENT (Izsm) 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, IZT, per JEDEC standards, however, actual device capability is as described in Figure 3.

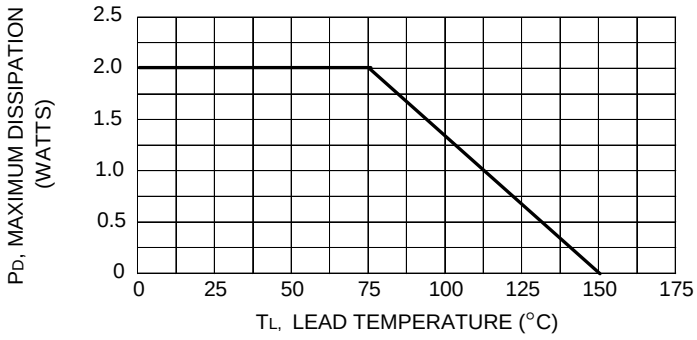


Fig. 1-POWER TEMPERATURE DERATING CURVE

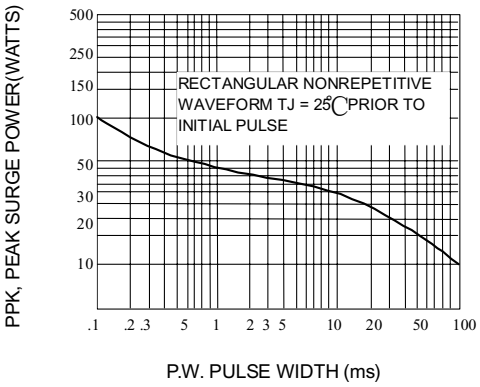


Fig. 2-MAXIMUM SURGE POWER

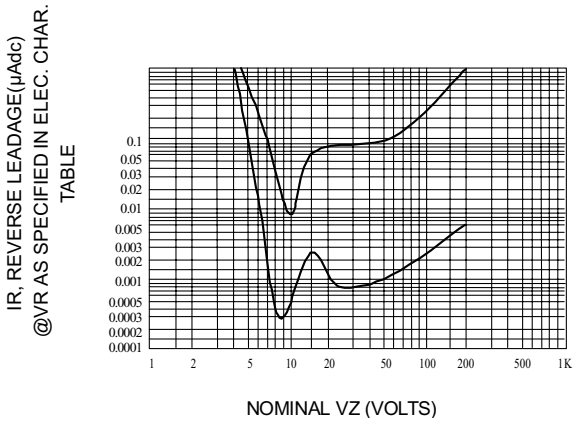


Fig. 3-TYPICAL REVERSE LEAKAGE

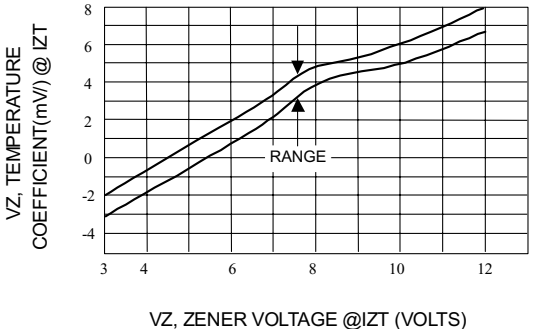


Fig. 4-UNITS 3.9 TO 12 VOLTS

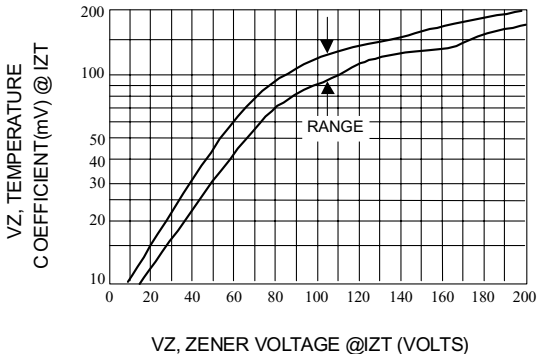


Fig. 5-UNITS 10 TO 200 VOLTS

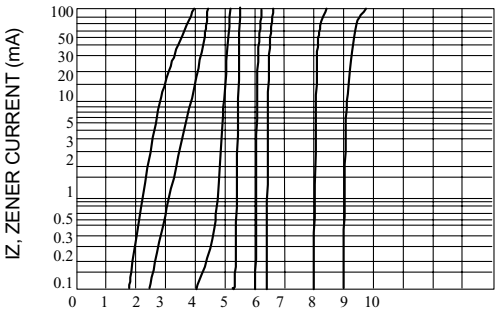


Fig. 6-VZ = 3.9 THRU 10 VOLTS

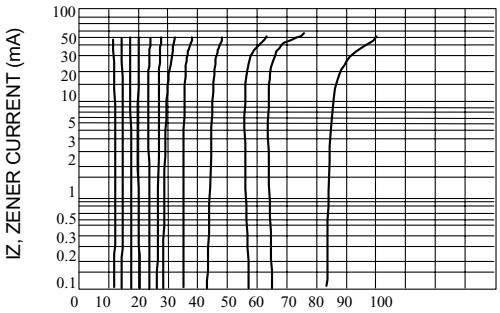


Fig. 7-VZ = 12 THRU 82 VOLTS

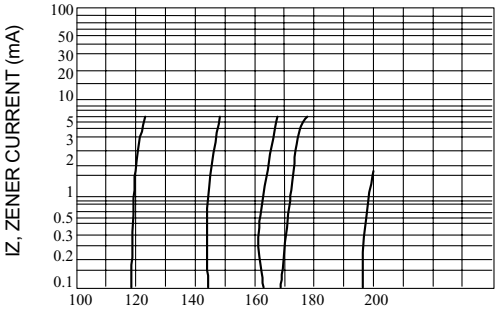


Fig. 8-VZ = 100 THRU 200 VOLTS

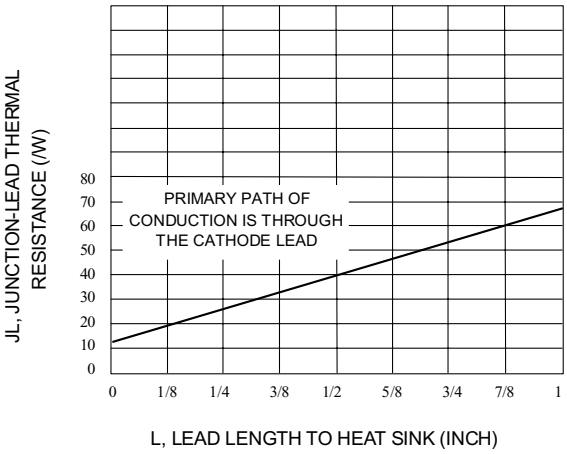


Fig. 9-TYPICAL THERMAL RESISTANCE

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 7.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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