

Features

- AEC-Q101 Qualified
- Glass Passivated Junction
- Excellent Clamping Capability
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

1.0 Watt Surface Mount Silicon Zener Diodes 110 to 330 Volts

Maximum Ratings

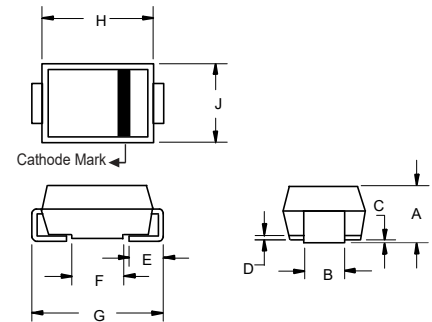
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 170°C/W Junction to Ambient(Note 3)

Parameter	Symbol	Rating	Conditions
Steady State Power Dissipation	P_D	1.0W	$T_L=75^\circ\text{C}$, Note 4
Maximum Forward Voltage	V_F	1.2V	$I_F=200\text{mA}$

Note:

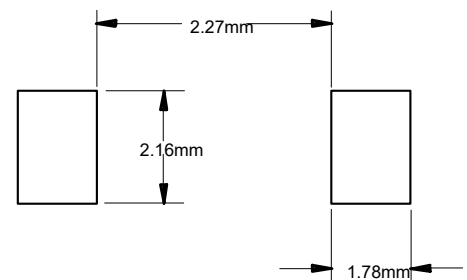
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.
3. Valid Provided That Leads Are Kept at Ambient Temperature at a Distance of 10mm From Case.
4. T_L =Lead Temperature at 3/8"(9.5mm) From Body.

SMA (DO-214AC) LEAD FRAME



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Nominal Zener Voltage (Note 5)	Test current	Maximum Zener Impedance (Note 6)			Leakage Current		Maximum Zener Current	Surge Current @T _A =25°C	Marking Code
	V _{Z@I_{ZT}}	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{Zk} @ I _{ZK}	I _{ZK}	I _R	V _R	I _{ZM}	I _{ZSM}	
	V	mA	Ω	Ω	mA	μA(Max.)	V	mA	A	
SMA1EZ110D5HE3	110	2.3	450	4000	0.25	0.1	83.6	8.6	40	11Z
SMA1EZ120D5HE3	120	2.0	550	4500	0.25	0.1	91.2	7.8	37	12Z
SMA1EZ130D5HE3	130	1.9	700	5000	0.25	0.1	98.8	7.0	34	13Z
SMA1EZ150D5HE3	150	1.7	1000	6000	0.25	0.1	114.0	6.4	30	15Z
SMA1EZ160D5HE3	160	1.6	1100	6500	0.25	0.1	121.6	5.8	28	16Z
SMA1EZ180D5HE3	180	1.4	1200	7000	0.25	0.1	136.8	5.2	25	18Z
SMA1EZ200D5HE3	200	1.2	1900	9990	0.25	0.1	152.0	4.7	22	20Z
SMA1EZ220D5HE3	220	1.0	1600	8000	0.25	0.1	167.2	4.0	20	22Z
SMA1EZ240D5HE3	240	0.9	1800	8500	0.25	0.1	182.4	3.8	19	24Z
SMA1EZ250D5HE3	250	0.9	2000	9000	0.25	0.1	190.0	3.6	18	25Z
SMA1EZ270D5HE3	270	0.8	2100	9000	0.25	0.1	205.0	3.3	16	27Z
SMA1EZ300D5HE3	300	0.8	2300	9500	0.25	0.1	228.0	3.0	15	30Z
SMA1EZ330D5HE3	330	0.7	2500	9500	0.25	0.1	250.2	2.7	13	33Z

NOTE:

5. Zener Voltage (V_Z) Measurement. Guarantees the Zener Voltage When Measured at 90 Seconds While Maintaining the Lead Temperature (T_L) at 25°C, From the Diode Body.

6. 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}.

Curve Characteristics

Fig. 1 - Power Derating Curve

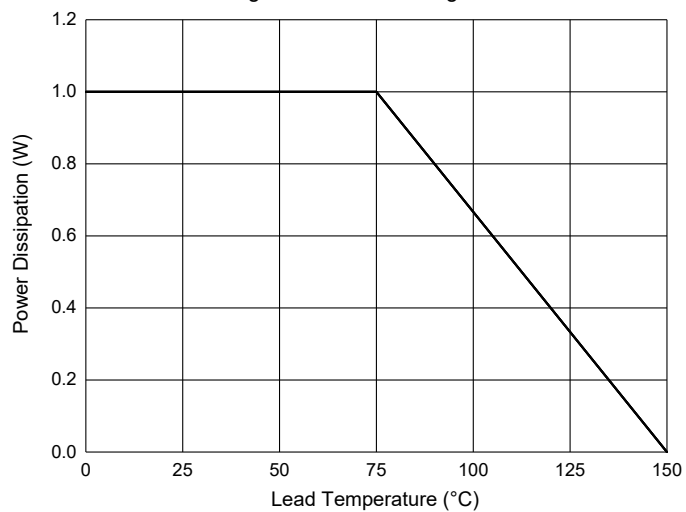
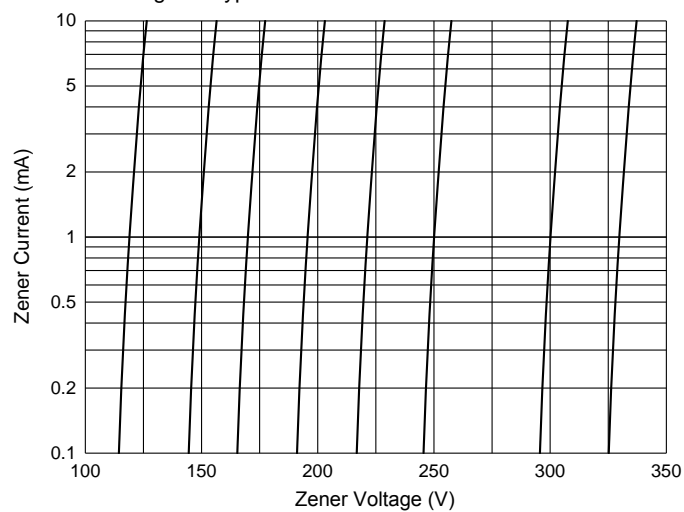


Fig. 2 - Typical Zener Breakdown Characteristics



Ordering Information

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

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