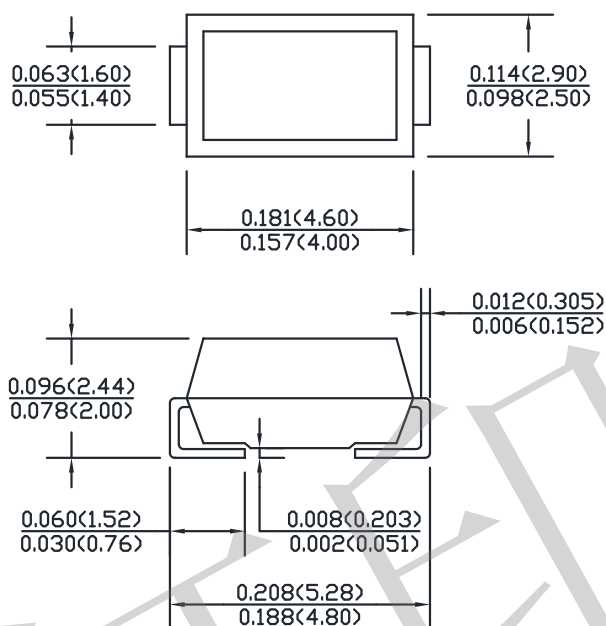




Transient Voltage Suppressor

Breakdown Voltage 3.3V to 30V

CASE: SMA (DO214AC)



Dimensions in inches and (millimeters)

Features

- Zener Voltages selection from 3.3V to 30V
- 1.5 Watt Zener Diodes
- Ideal for high-density and low-profile mounting
- Regulates voltage over a broad operating current and temperature range
- Flexible axial-lead mounting terminals
- High specified maximum current(I_{ZM}) when adequately heat sinking

Application

- Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFE, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication

Mechanical Data

- **Case:** Void-free transfer molded thermosetting epoxy body meeting UL94V-O
- **Terminals:** Tin-Lead or ROHS Compliant annealed matte-Tin plating readily solderable per MIL-STD-750, Method 2026
- **Marking:** Body marked with part number
- **Polarity:** Cathode indicated by band
- **Weight:** 0.053g (Approximately)

Maximum Ratings and Electrical Characteristics @ 25°C unless otherwise specified

Symbol	Conditions	Value	Unit
P _{M(AV)}	Steady state maximum power	1.5	W
V _F	Maximum instantaneous forward voltage at 200mA	1.2	V
R _{θJL}	Thermal resistance junction to lead	15	°C/W
T _J , T _{STG}	Operating and Storage Temperature	-65 to +150	°C

Electrical Characteristics @ 25°C (Unless Otherwise Noted)

Microsemi Part Number	Zener Voltage V_Z @ I_{ZT}	Test Current	Maximum Dynamic Impedance $Z_{ZT}=I_{ZT}$	Maximum Knee Impedance $Z_{ZK}=I_{ZK}$	Knee Current	Maximum Reverse Current I_R @ V_R		Maximum Continuous Current	Maximum Surge Current at 8.3ms square Wave $T_A=25^\circ\text{C}$	Maximum Surge Current at 8.3ms square Wave $T_A=100^\circ\text{C}$
	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (OHMS)	Z_{ZK} (OHMS)	I_{ZK} (mA)	I_R (μA)	V_R (V)	I_{ZM} mA	I_{ZSM} (A)	I_{ZSM} (A)
SMAJ6485	3.3	76.0	10.0	400	1.00	50.0	1.00	433	-	8.4
SMAJ6486	3.6	69.0	10.0	400	1.00	50.0	1.00	397	-	7.8
SMAJ6487	3.9	64.0	9.0	400	1.00	35.0	1.00	366	-	7.2
SMAJ6488	4.3	58.0	9.0	400	1.00	5.00	1.00	332	-	6.6
SMAJ6489	4.7	53.0	8	500	1.00	4.00	1.00	304	-	6.0
SMAJ6490	5.1	49.0	7	500	1.00	1.00	1.00	280	-	5.4
SMAJ6491	5.6	45.0	5	600	1.00	0.50	2.00	255	-	5.0
SMAJ4460	6.2	40.0	4	200	1.00	10.0	3.72	230	-	4.6
SMAJ4461	6.8	37.0	2.5	200	1.00	5.00	4.08	210	10	4.2
SMAJ4462	7.5	34.0	2.5	400	0.50	1.00	4.50	191	9	3.8
SMAJ4463	8.2	31.0	3.0	400	0.50	0.50	4.92	174	7.8	3.4
SMAJ4464	9.1	28.0	4.0	500	0.50	0.30	5.46	157	6.8	3.2
SMAJ4465	10.0	25.0	5.0	500	0.25	0.30	8.00	143	6.0	2.8
SMAJ4466	11.0	23.0	6.0	550	0.25	0.30	8.80	130	5.2	2.6
SMAJ4467	12.0	21.0	7.0	550	0.25	0.20	9.60	119	4.8	2.4
SMAJ4468	13.0	19.0	8.0	550	0.25	0.05	10.4	110	4.4	2.2
SMAJ4469	15.0	17.0	9.0	600	0.25	0.05	12.0	95	3.6	1.9
SMAJ4470	16.0	15.5	10.0	600	0.25	0.05	12.8	90	3.2	1.6
SMAJ4471	18.0	14.0	11.0	650	0.25	0.05	14.4	79	2.8	1.58
SMAJ4472	20.0	12.5	12.0	650	0.25	0.05	16.0	71	2.4	1.42
SMAJ4473	22.0	11.5	14.0	650	0.25	0.05	17.6	65	2.2	1.3
SMAJ4474	24.0	10.5	16.0	700	0.25	0.05	19.2	60	1.8	1.2
SMAJ4475	27.0	9.5	18.0	700	0.25	0.05	21.6	53	1.6	1.06
SMAJ4476	30.0	8.5	20.0	750	0.25	0.05	24.0	48	1.5	0.96

Note:

1. No suffix indicates a $\pm 5\%$ tolerance on nominal V_Z , C denotes a $\pm 2\%$ tolerance, and D denotes a $\pm 1\%$ tolerance.
2. Zener voltage (V_Z) is measured at $T_L=30^\circ\text{C}$. Voltage measurement to be performed 90 seconds after application of dc current.
3. The Zener impedance is derived from the 60Hz 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}).
4. V_F at 200mA 1.2 volts maximum and V_F at 1.0A 1.5 volts maximum.

Characteristic Curve

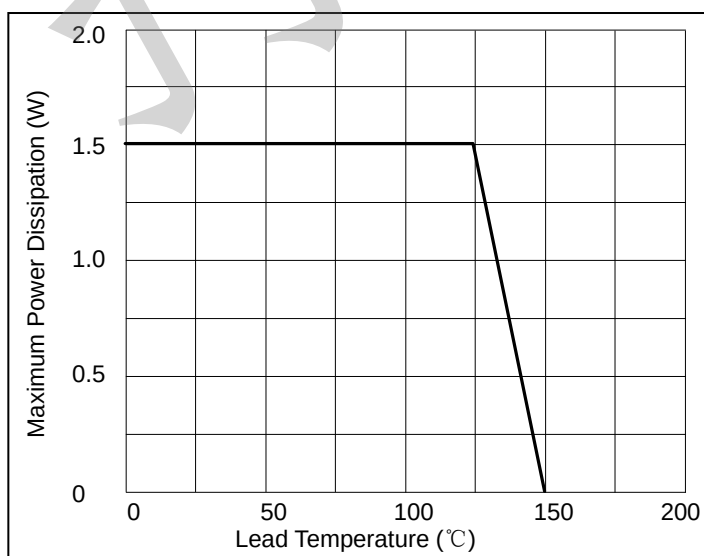


Fig.1 Power Derating Curve