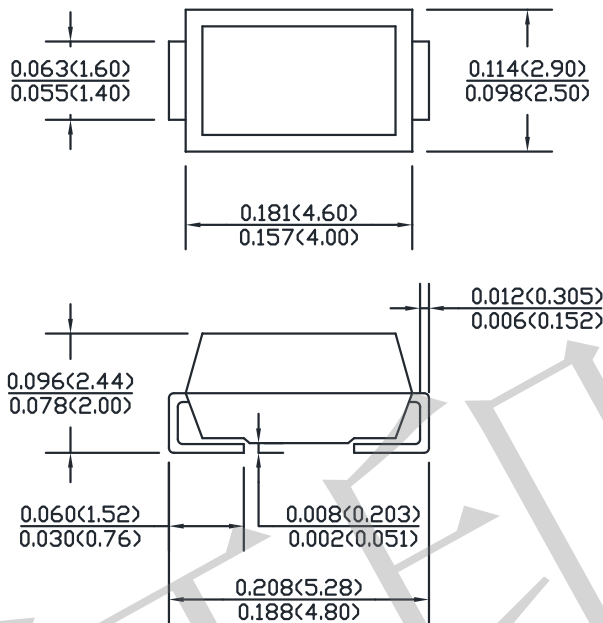




## Transient Voltage Suppressor

**Breakdown Voltage 3.3 to 30 Volts**

**CASE: SMA (DO214AC)**



**Dimensions in inches and (millimeters)**

### Features

- Extensive Voltages selection from 3.3 to 30V
- Silicon 2.0 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<sub>ZM</sub>) when adequately heat sinking

### Application

- Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on IC<sub>s</sub>, 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:** 0.3g ( Approximately )

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

Symbol	Conditions	Value	Unit
P <sub>M(AV)</sub>	Steady state maximum power dissipation	2.0	W
I <sub>zsm</sub>	Peak surge current	SEE TABLE1	A
V <sub>F</sub>	Maximum instantaneous forward voltage at 200mA	1.2	V
R <sub>θJL</sub>	Thermal resistance junction to lead	25	°C/W
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature	-65 to +150	°C

Electrical Characteristics @ 25°C (Unless Otherwise Noted) TABLE1

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 Regulator Current $T_L = 100^\circ\text{C}$	Maximum Surge Current
	$V_Z$ (V)	$I_{ZT}$ (mA)	$Z_{ZT}$ (OHMS)	$Z_{ZK}$ (OHMS)	$I_{ZK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	$V_R$ (V)	$I_{ZM}$ (mA)	$I_{ZSM}$ (mA)
SMAJ4728A	3.3	76.0	10.0	400	1.00	100	1.0	552	1380
SMAJ4729A	3.6	69.0	10.0	400	1.00	100	1.0	504	1260
SMAJ4730A	3.9	64.0	9.0	400	1.00	50	1.0	468	1190
SMAJ4731A	4.3	58.0	9.0	400	1.00	10	1.0	434	1070
SMAJ4732A	4.7	53.0	8.0	500	1.00	10	1.0	386	970
SMAJ4733A	5.1	49.0	7.0	550	1.00	10	1.0	356	890
SMAJ4734A	5.6	45.0	5.0	600	1.00	10	2.0	324	810
SMAJ4735A	6.2	41.0	2.0	700	1.00	10	3.0	292	730
SMAJ4736A	6.8	37.0	3.5	700	1.00	10	4.0	266	660
SMAJ4737A	7.5	34.0	4.0	700	0.50	10	5.0	242	605
SMAJ4738A	8.2	31.0	4.5	700	0.50	10	6.0	220	550
SMAJ4739A	9.1	28.0	5.0	700	0.50	10	7.0	200	500
SMAJ4740A	10.0	25.0	7.0	700	0.25	10	7.6	182	454
SMAJ4741A	11.0	23.0	8.0	700	0.25	5	8.4	166	414
SMAJ4742A	12.0	21.0	9.0	700	0.25	5	9.1	152	380
SMAJ4743A	13.0	19.0	10.0	700	0.25	5	9.9	138	344
SMAJ4744A	15.0	17.0	14.0	700	0.25	5	11.4	132	304
SMAJ4745A	16.0	15.5	16.0	700	0.25	5	12.2	114	285
SMAJ4746A	18.0	14.0	20.0	750	0.25	5	13.7	100	250
SMAJ4747A	20.0	12.5	22.0	750	0.25	5	15.2	90	225
SMAJ4748A	22.0	11.5	23.0	720	0.25	5	16.7	82	205
SMAJ4749A	24.0	10.5	25.0	750	0.25	5	18.2	76	190
SMAJ4750A	27.0	9.5	35.0	750	0.25	5	20.6	68	170
SMAJ4751A	30.0	8.5	40.0	1000	0.25	5	22.8	60	150

Note:

1. The type numbers shown with an A suffix have a 5% tolerance on nominal zener voltage. No suffix signifies a 10% tolerance, C signifies 2%, and D signifies 1% tolerance.
2. The Zener impedance is derived from the 60 HZ 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  $I_{ZK}$ . Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and eliminate unstable units.
3. The reverse surge current is measured at 25°C ambient using a 1/2 square wave or equivalent sine wave pulse 1/120 second duration superimposed on  $I_{ZT}$ .
4. Voltage at thermal equilibrium or 90seconds after application of dc current.