



Micro Commercial Components
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SMAJ4741 THRU SMAJ4754

Silicon
1 Watt
Zener Diodes

Features

- For surface mount application (flat handing surface for Accurate placement)
- 11 thru 39 Volt Voltage Range
- High Surge Current Rating
- Higher Voltages Available
- Available on Tape and Reel

Mechanical Data

- CASE: JEDEC DO-214AC molded plastic body over passivated chip
- Terminals solderable per MIL-STD-750, Method 2026
- Polarity is indicated by cathode band.
- Maximum temperature for soldering: 260°C for 10 seconds.
- For surface mount applications with flame retardent epoxy Meeting UL94V-0

Maximum Ratings @ 25°C Unless Otherwise Specified

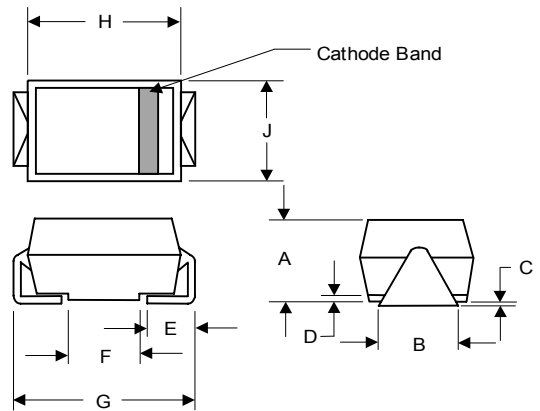
Peak Surge Current	I_S	See Table 1	
Maximum Forward Voltage	V_F	1.2V	(Note: 1)
Steady State Power Dissipation	P_(AV)	1.0W	(Note: 2,3)
Operation And Storage Temperature	T_J, T_{STG}	-55°C to +150°C	

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NOTES:

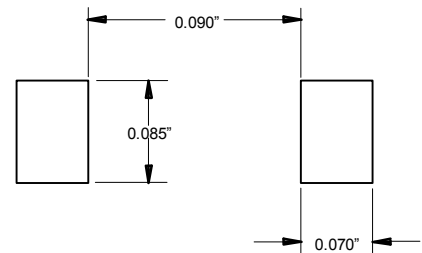
1. Forward Current @ 200mA.
2. Mounted on 4.0mm² copper pads to each terminal.
3. Lead temperature at 100°C or less. Derate linearly above 100°C to zero power at 150°C.

DO-214AC (SMAJ) (High Profile)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.078	.116	1.98	2.95	
B	.067	.089	1.70	2.25	
C	.002	.008	.05	.20	
D	—	.02	—	.51	
E	.035	.065	.89	1.40	
F	.065	.096	1.65	2.45	
G	.205	.224	5.21	5.69	
H	.160	.180	4.06	4.57	
J	.100	.112	2.57	2.84	

SUGGESTED SOLDER PAD LAYOUT



SMAJ4741 thru SMAJ4754



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC PART NUMBER	ZENER VOLTAGE	TEST CURRENT	MAXIMUM DYNAMIC IMPEDANCE	MAXIMUM REVERSE CURRENT	TEST VOLTAGE	MAXIMUM REGULATOR CURRENT	MAXIMUM KNEE IMPEDANCE	TEST CURRENT	MAXIMUM SURGE CURRENT
	Vz	Izt	Zzt @ Izt	Ir @ Vr	Vr	Izm Ta=50°C	Zzk @ Izk	Izk	Is
	VOLTS	mA	OHMS	uA	VOLTS	mA	OHMS	MA	mA
SMAJ4741	11	23	8	5	8.4	83	700	0.25	414
SMAJ4742	12	21	9	5	9.1	76	700	0.25	380
SMAJ4743	13	19	10	5	9.9	69	700	0.25	344
SMAJ4744	15	17	14	5	11.4	61	700	0.25	304
SMAJ4745	16	15.5	16	5	12.2	57	700	0.25	285
SMAJ4746	18	14	20	5	13.7	50	750	0.25	250
SMAJ4747	20	12.5	22	5	15.2	45	750	0.25	225
SMAJ4748	22	11.5	23	5	16.7	41	750	0.25	205
SMAJ4749	24	10.5	25	5	18.2	38	750	0.25	190
SMAJ4750	27	9.5	35	5	20.6	34	750	0.25	170
SMAJ4751	30	8.5	40	5	22.8	30	1000	0.25	150
SMAJ4752	33	7.5	45	5	25.1	27	1000	0.25	135
SMAJ4753	36	7.0	50	5	27.4	25	1000	0.25	125
SMAJ4754	39	6.5	60	5	29.7	23	1000	0.25	115

NOTE 1 The JEDEC type numbers shown have A 5% tolerance on nominal zener voltage.

No suffix signifies A 10% tolerance, C signifies 2%, and D signifies 1% tolerance.

NOTE 2 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 (Izt or Izk) is superimposed on Izt or Izk. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and eliminate unstable units.

NOTE 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 Izt

NOTE 4 Voltage measurements to be performed 90 seconds after application of DC current.

SMAJ4741 thru SMAJ4754

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

