

Features:

- For surface mounted application (flat handing surface for Accurate placement)
- 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 : Indicated by cathode band
 Temperature for soldering : 260°C for 10 seconds (Max.)
 Voltage Range : 3.3 to 100 Volts
 Power Dissipation : 1.0 Watts

For surface mount application with flame retardant epoxy Meeting UL 94V-0

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	Value	Unit
Peak Reverse Voltage	I_s	See Table	
Max. Forward Voltage (Note 1)	V_F	1.2	Volts
Steady State Power Dissipation at (Note 2, 3)	$P_{(AV)}$	1	Watts
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}		

Notes:

1. Forward Current @ 200 mA.
2. Mounted on 4mm² copper pads to each terminal
3. Lead temperature at 100°C or less. Derate linearly above 100°C to zero power at 150°C

Part Number	Zener Voltage	Test Current I_{zt}	Max. Dynamic Impedance $Z_{zt}@I_{zt}$	Max. Reverse Current $I_r@V_r$	Test Voltage V_r	Max. Regulator Current I_{zm} $T_a=50^\circ\text{C}$	Max. Knee Impedance $Z_{zk}@I_{zk}$	Test Current I_{zk}	Max. Surge Current I_s
	Volts	mA	Ω	μA	Volts	mA	Ω	mA	mA
SMAJ4737A	7.5	34	4	10	5	121	700	0.5	605
SMAJ4740A	10	25	7	10	7.6	91	700	0.25	454
SMAJ4742A	12	21	9	5	9.1	76	700	0.25	380

Part Number	Zener Voltage	Test Current Izt	Max. Dynamic Impedance Zzt@Izt	Max. Reverse Current Ir@Vr	Test Voltage Vr	Max. Regulator Current Izm Ta=50°C	Max. Knee Impedance Zzk@Izk	Test Current Izk	Max. Surge Current Is
	Volts	mA	Ω	μA	Volts	mA	Ω	mA	mA
SMAJ4744A	15	17	14	5	11.4	61	700	0.25	304
SMAJ4745A	16	15.5	16	5	12.2	57	700	0.25	285
SMAJ4746A	18	14	20	5	13.7	50	750	0.25	250
SMAJ4747A	20	12.5	22	5	15.2	45	750	0.25	225
SMAJ4748A	22	11.5	23	5	16.7	41	750	0.25	205
SMAJ4749A	24	10.5	25	5	18.2	38	750	0.25	190
SMAJ4750A	27	9.5	35	5	20.6	34	750	0.25	170
SMAJ4751A	30	8.5	40	5	22.8	30	1000	0.25	150
SMAJ4752A	33	7.5	45	5	25.1	27	1000	0.25	135
SMAJ4756A	47	5.5	80	5	35.8	19	1500	0.25	95
SMAJ4758A	56	4.5	110	5	42.6	16	2000	0.25	80

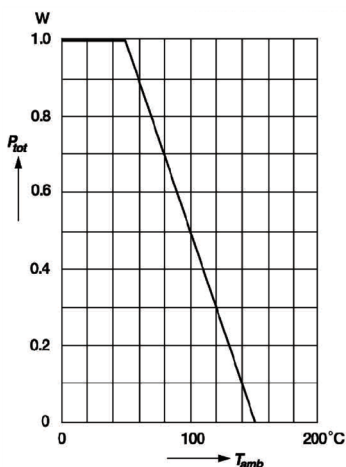
Notes:

1. 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 Izk. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and eliminate unstable units.
2. The reverse surge current is measured at 25°C ambient using a 1/2 square wave or equivalent sine wave pulse 1/20 second duration superimposed on Izt.
3. Voltage measurements to be performed 90 seconds after application of DC current.

Ratings and Characteristic Curves

Admissible power dissipation versus ambient temperature

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

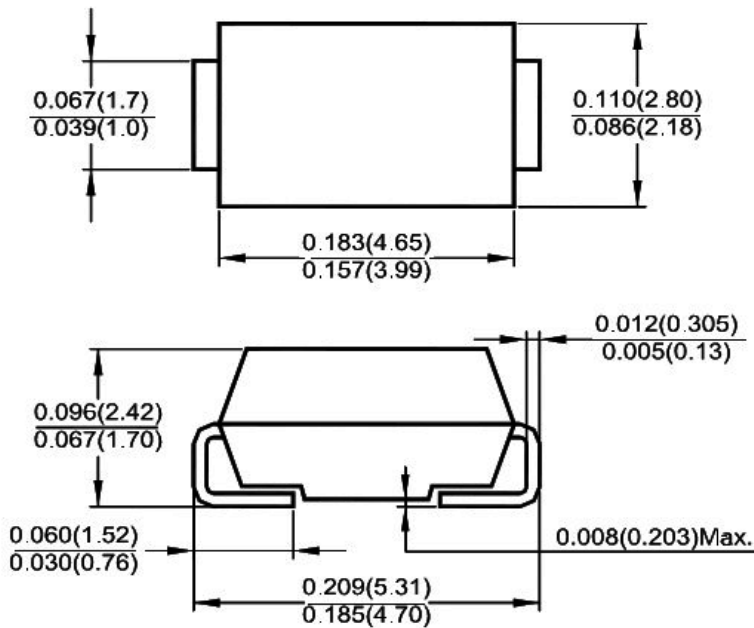


Silicon Zener Diode



Dimensions:

SMA (DO-214AC)



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Silicon Zener Diodes	SMAJ4737A
	SMAJ4740A
	SMAJ4742A
	SMAJ4744A
	SMAJ4745A
	SMAJ4746A
	SMAJ4747A
	SMAJ4748A
	SMAJ4749A
	SMAJ4750A
	SMAJ4751A
	SMAJ4752A
	SMAJ4756A
	SMAJ4758A

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