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Technical Data
Data Sheet N0194, Rev. C

1SMA4741-1SMA4764
SURFACE MOUNT ZENER DIODE

SMA

Features

- Glass Passivated Die Construction
- 1.0W Power Dissipation
- 11 – 100V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Low Inductance
- Typical IR Less Than 5.0 μA Above 11V
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- "-A" suffix is for Automotive qualified
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

Mechanical Data

- Case: SMA molded plastic body
- Terminals: Solder Plated, Solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.06 grams

Maximum Ratings@T_A=25°C unless otherwise specified

Parameter	Symbol	Value	Units
Power Dissipation (Note 1) Derate Above 25°C	P_D	1.0 8.0	W mW/°C
Forward Voltage @ I_F = 200mA	V_F	1.2	V
Typical Thermal resistance junction to Ambient (Note 1)	$R_{\theta JA}$	120	°C/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-65 to + 150	°C

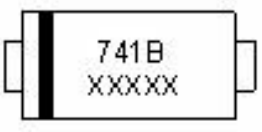
Notes: 1. Valid provided that device terminals are kept at ambient temperature

Ordering Information

Device	Package	Shipping
1SMA4741- 1SMA4764	SMA (Pb-Free)	5000pcs / reel
1SMA4741TR- 1SMA4764TR	SMA (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Where XXXXX is YYWWL

741B = Marking Code

YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ratings and Characteristics Curves

Type Number (Note 1)	Device Marking Code	Nominal Zener Voltage (Note 2)	Test Current	Maximum Zener Impedance (Note 3)			Leakage Current		Max. Surge Current 8.3ms
		Vz @ Izt	Izt	Zzt @ Izt	Zzk @Izk	Izk	Ir	@ Vr	Izs
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMA4741	741B	11	23	8.0	700	0.25	5.0	8.4	414
1SMA4742	742B	12	21	9.0	700	0.25	5.0	9.1	380
1SMA4743	743B	13	19	10	700	0.25	5.0	9.9	344
1SMA4744	744B	15	17	14	700	0.25	5.0	11.4	305
1SMA4745	745B	16	15.5	16	700	0.25	5.0	12.2	285
1SMA4746	746B	18	14	20	750	0.25	5.0	13.7	250
1SMA4747	747B	20	12.5	22	750	0.25	5.0	15.2	225
1SMA4748	748B	22	11.5	23	750	0.25	5.0	16.7	205
1SMA4749	749B	24	10.5	25	750	0.25	5.0	18.2	190
1SMA4750	750B	27	9.5	35	750	0.25	5.0	20.6	170
1SMA4751	751B	30	8.5	40	1000	0.25	5.0	22.8	150
1SMA4752	752B	33	7.5	45	1000	0.25	5.0	25.1	135
1SMA4753	753B	36	7.0	50	1000	0.25	5.0	27.4	125
1SMA4754	754B	39	6.5	60	1000	0.25	5.0	29.7	115
1SMA4755	755B	43	6.0	70	1500	0.25	5.0	32.7	110
1SMA4756	756B	47	5.5	80	1500	0.25	5.0	35.8	95
1SMA4757	757B	51	5.0	95	1500	0.25	5.0	38.8	90
1SMA4758	758B	56	4.5	110	2000	0.25	5.0	42.6	80
1SMA4759	759B	62	4.0	125	2000	0.25	5.0	47.1	70
1SMA4760	760B	68	3.7	150	2000	0.25	5.0	51.7	65
1SMA4761	761B	75	3.3	175	2000	0.25	5.0	56.0	60
1SMA4762	762B	82	3.0	200	3000	0.25	5.0	62.2	55
1SMA4763	763B	91	2.8	250	3000	0.25	5.0	69.2	50
1SMA4764	764B	100	2.5	350	3000	0.25	5.0	76.0	45

ote: 1. Type numbers listed have standard tolerance on the nominal Zener voltage of ±5%.
2. Measured under thermal equilibrium and DC (Izt) test conditions.
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 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 to eliminate unstable units.

Technical Data
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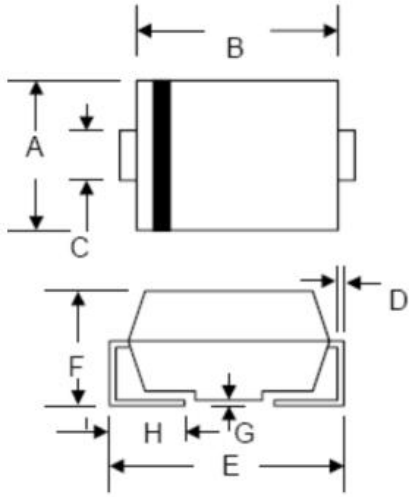
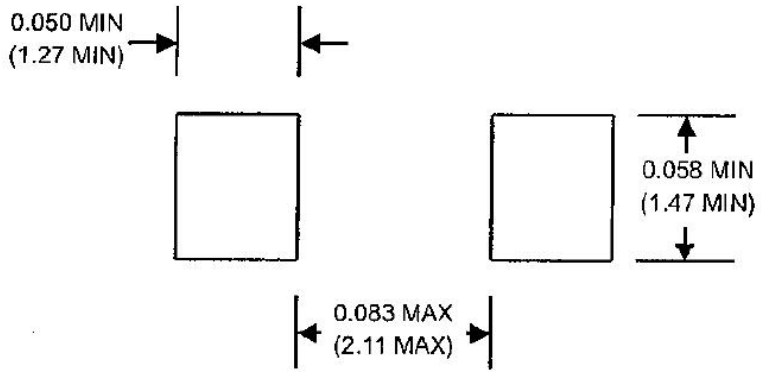
Mechanical Dimensions SMA

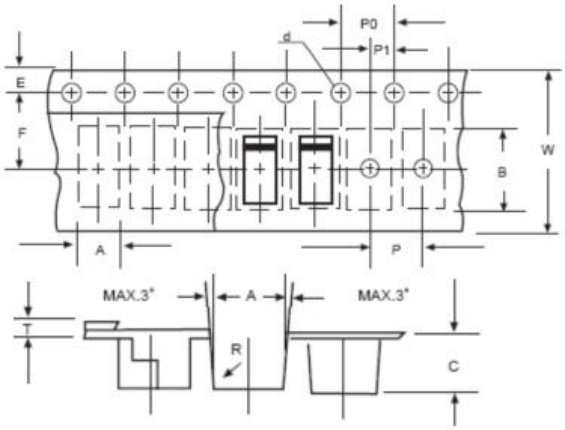


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.18	2.84	0.086	0.112
B	3.99	4.75	0.157	0.187
C	1.05	1.70	0.041	0.067
D	0.15	0.51	0.006	0.020
E	4.70	5.66	0.185	0.223
F	1.70	2.95	0.067	0.116
G	0.05	0.203	0.002	0.008
H	0.76	1.52	0.030	0.600

Recommended Footprint (Inches/Millimeters)



Carrier Tape Specification SMA



SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20

Technical Data
Data Sheet N0194, Rev. C

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