

Surface Mount Zener Diode

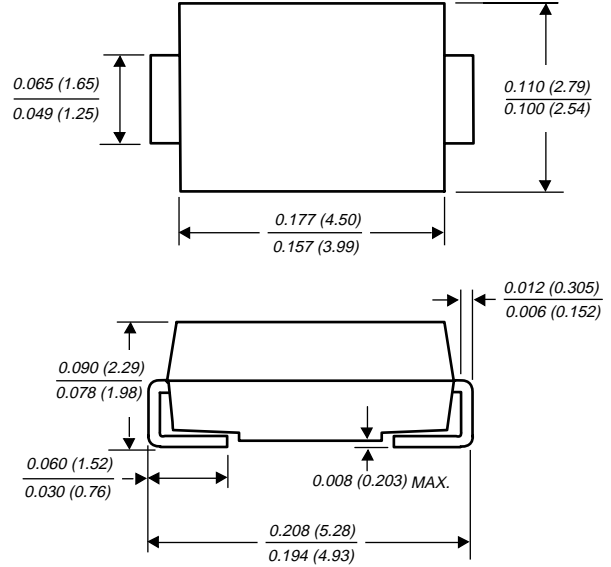
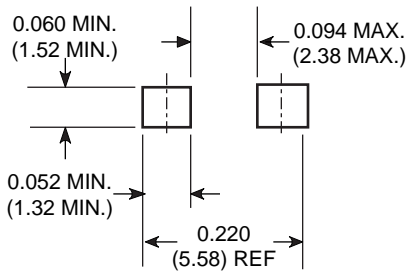
Zener Voltage – 3.3 to 91.0 Volts Steady State Power – 1.0 Watt



DO-214AC

Extended Voltage Range

Mounting Pad Layout



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low Zener impedance
- Low regulation factor
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

- Case:** JEDEC DO-214AC molded plastic over passivated junction
- Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity:** Color band denotes positive end (cathode)
- Mounting Position:** Any
- Weight:** 0.002 ounce, 0.064 gram

Maximum Ratings and Thermal Characteristics (T_c = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Power dissipation at T _L = 75°C	P _{tot}	1.0	Watt
Maximum Junction Temperature	T _J	150	°C
Storage Temperature Range	T _S	-65 to +150	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted) V_F = 1.2V Max@I_F = 200 mA for all types.

Type	Device Marking Code	Nominal Zener Voltage at I _{ZT} V _Z (NOTE 1) (Volts)	Test Current I _{ZT} (mA)	Maximum Dynamic Impedance			Maximum DC Reverse Leakage Current		Maximum Surge Current (NOTE 2) I _{RM} (mApk)
				Z _{ZT} at I _{ZT} (Ohms)	Z _{ZK} at I _{ZK} (Ohms)	(NOTE 1) I _{ZK} (mA)	I _R (μA)	V _R (Volts)	
SML4728	3P3	3.3	76.0	10.0	400	1.0	100	1.0	1380
SML4729	3P6	3.6	69.0	10.0	400	1.0	100	1.0	1260
SML4730	3P9	3.9	64.0	9.0	400	1.0	50	1.0	1190
SML4731	4P3	4.3	58.0	9.0	400	1.0	10	1.0	1070
SML4732	4P7	4.7	53.0	8.0	500	1.0	10	1.0	970
SML4733	5P1	5.1	49.0	7.0	550	1.0	10	1.0	890
SML4734	5P6	5.6	45.0	5.0	600	1.0	10	2.0	810
SML4735	6P2	6.2	41.0	2.0	700	1.0	10	3.0	730
SML4736	6P8	6.8	37.0	3.5	700	1.0	10	4.0	660
SML4737	7P5	7.5	34.0	4.0	700	0.5	10	5.0	605
SML4738	8P2	8.2	31.0	4.5	700	0.5	10	6.0	550
SML4739	9P1	9.1	28.0	5.0	700	0.5	10	7.0	500
SML4740	10	10	25.0	7.0	700	0.25	10	7.6	454
SML4741	11	11	23.0	8.0	700	0.25	5	8.4	414
SML4742	12	12	21.0	9.0	700	0.25	5	9.1	380
SML4743	13	13	19.0	10.0	700	0.25	5	9.9	344
SML4744	15	15	17.0	14.0	700	0.25	5	11.4	305
SML4745	16	16	15.5	16.0	700	0.25	5	12.2	285
SML4746	18	18	14.0	20.0	750	0.25	5	13.7	250
SML4747	20	20	12.5	22.0	750	0.25	5	15.2	225
SML4748	22	22	11.5	23.0	750	0.25	5	16.7	205
SML4749	24	24	10.5	25.0	750	0.25	5	18.2	190
SML4750	27	27	9.5	35.0	750	0.25	5	20.6	170
SML4751	30	30	8.5	40.0	1000	0.25	5	22.8	150
SML4752	33	33	7.5	45.0	1000	0.25	5	25.1	135
SML4753	36	36	7.0	50.0	1000	0.25	5	27.4	125
SML4754	39	39	6.5	60.0	1000	0.25	5	29.7	115
SML4755	43	43	6.0	70.0	1500	0.25	5	32.7	110
SML4756	47	47	5.5	80.0	1500	0.25	5	35.8	95
SML4757	51	51	5.0	95.0	1500	0.25	5	38.8	90
SML4758	56	56	4.5	110	2000	0.25	5	42.6	80
SML4759	62	62	4.0	125	2000	0.25	5	47.1	70
SML4760	68	68	3.7	150	2000	0.25	5	51.7	65
SML4761	75	75	3.3	175	2000	0.25	5	56.0	60
SML4762	82	82	3.0	200	3000	0.25	5	62.2	55
SML4763	91	91	2.0	250	3000	0.25	5	69.2	50

NOTES:

- (1) Standard voltage tolerance is 10%, Suffix A ± 5%
- (2) Surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method
- (3) Maximum steady state power dissipation is 1.0 watt at T_T=75°C

Ratings and Characteristic Curves

FIG. 1 - MAXIMUM CONTINUOUS POWER DISSIPATION

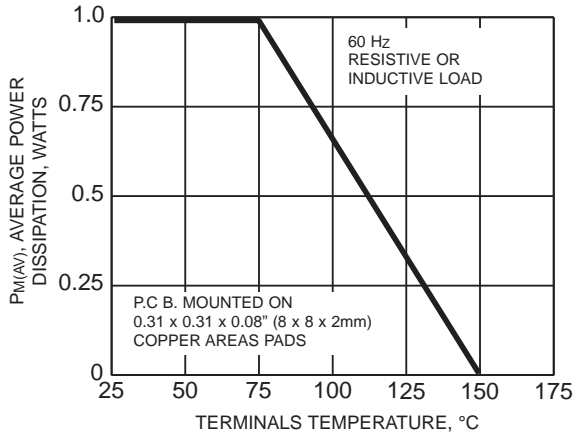


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS FOR SML4763

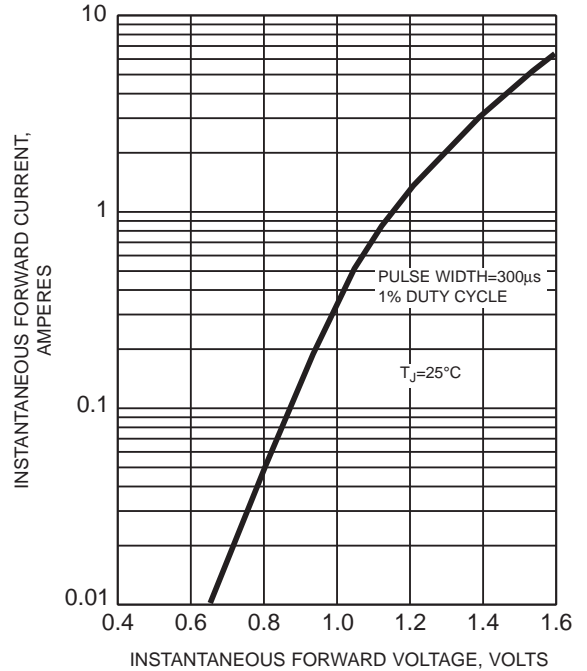


FIG. 3 - TYPICAL ZENER IMPEDANCE

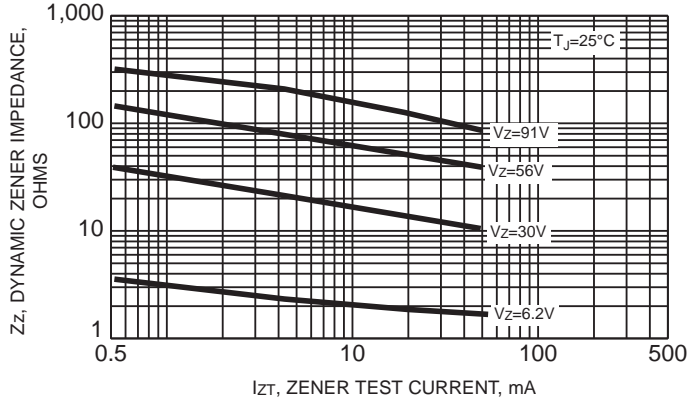


FIG. 4 - TYPICAL TEMPERATURE COEFFICIENTS

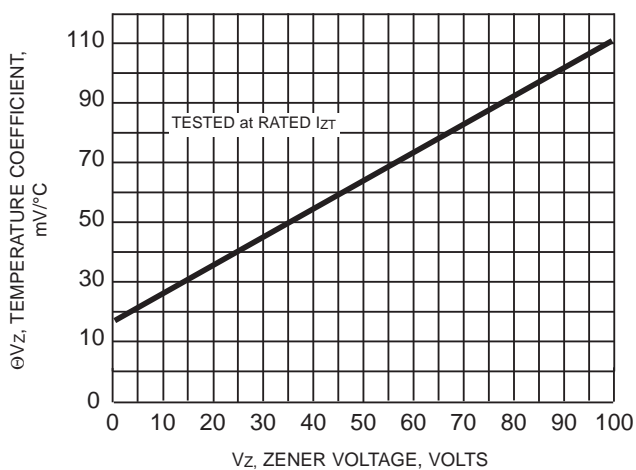


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

