Zener: SML4728~4764

Glass Passivated Zener

Features

- For surface mounted applications in order to optimize board space
- Low profile space
- Glass passivated chip
- High reliability
- Typical I_R less than 1μA at V_R
- For use in stabilizing and clipping circuits with high power rating
- Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC

SMA (DO－214AC)

Mechanical Date

- **Case:** JEDEC DO-214AC molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per MIL-STD-750 Method 2026
- **Polarity:** types the band by laser denotes the cathode

Applications

- Voltage stabilization

Maximum Ratings & Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Items	Symbol	Value	UNIT
Power dissipation	P	1	W
Typical thermal resistance, junction to ambient(1)	$R_{\theta JA}$	150	°C / W
Typical thermal resistance, junction to lead(1)	$R_{\theta JL}$	35	°C / W
Junction temperature	T_J	150	℃
Storage temperature range	T_{STG}	–55 to +150	℃

Note 1: Mounted on P.C.B. with 0.2 x 0.2” (5.0 x 5.0mm) copper pad areas.

Electrical Characteristics

T_A =25℃ unless otherwise noted, V_F=1.2VMax.@I_F=200mA for all types.

TYPE	Marking	V_Z@I_{ZT}	I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}		I_R@V_R		Surge Current
		V	mA	Ω	Ω	mA	μA	V	mA(dc)
SML4728	3P3	3.3	76	10	400	1	100	1	1380
SML4729	3P6	3.6	69	10	400	1	100	1	1260
SML4730	3P9	3.9	64	9	400	1	50	1	1190
SML4731	4P3	4.3	58	9	400	1	10	1	1070
SML4732	4P7	4.7	53	8	500	1	10	1	970
SML4733	5P1	5.1	49	7	550	1	10	1	890
SML4734	5P6	5.6	45	5	600	1	10	2	810
SML4735	6P2	6.2	41	2	700	1	10	3	730
SML4736	6P8	6.8	37	3.5	700	1	10	4	660
SML4737	7P5	7.5	34	4	700	0.5	10	5	605
SML4738	8P2	8.2	31	4.5	700	0.5	10	6	550
SML4739	9P1	9.1	28	5	700	0.5	10	7	500
SML4740	10	10	25	7	700	0.25	10	7.6	454
SML4741	11	11	23	8	700	0.25	5	8.4	414
SML4742	12	12	21	9	700	0.25	5	9.1	380
SML4743	13	13	19	10	700	0.25	5	9.9	344
SML4744	15	15	17	14	700	0.25	5	11.4	305
SML4745	16	16	15.5	16	700	0.25	5	12.2	285
SML4746	189	18	14	20	750	0.25	5	13.7	250
SML4747	20	20	12.5	22	750	0.25	5	15.2	225
SML4748	22	22	11.5	23	750	0.25	5	16.7	205
SML4749	24	24	10.5	25	750	0.25	5	18.2	190
SML4750	27	27	9.5	35	750	0.25	5	20.6	170
SML4751	30	30	8.5	40	1000	0.25	5	22.8	150
SML4752	33	33	7.5	45	1000	0.25	5	25.1	135
SML4753	36	36	7	50	1000	0.25	5	27.4	125
SML4754	39	39	6.5	60	1000	0.25	5	29.7	115
SML4755	43	43	6	70	1500	0.25	5	32.7	110
SML4756	47	47	5.5	80	1500	0.25	5	35.8	95
SML4757	51	51	5	95	1500	0.25	5	38.8	90
SML4758	56	56	4.5	110	2000	0.25	5	42.6	80
SML4759	62	62	4	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	60
SML4762	82	82	3	200	3000	0.25	5	62.2	55
SML4763	91	91	2.8	250	3000	0.25	5	69.2	50
SML4764	100	100	2.5	350	3000	0.25	5	76	45

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1--Steady State Power Derating

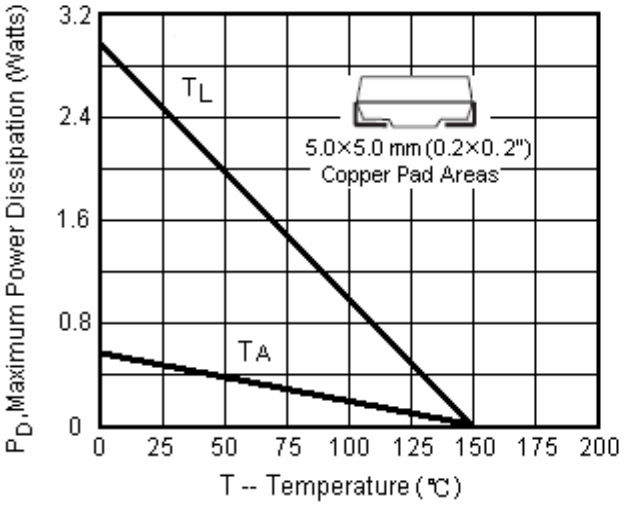


Fig.2--Vz-3.3 Thru 10 Volts

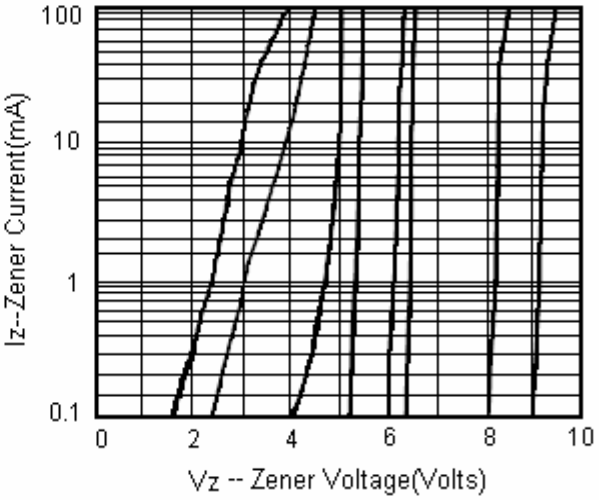


Fig.3 -- Vz-12 Thru 68 Volts

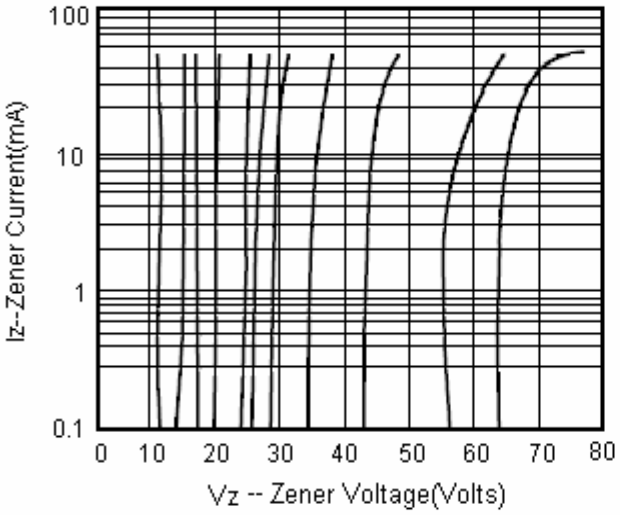


Fig.4--Zener Voltage-3.3 to 12 Volts

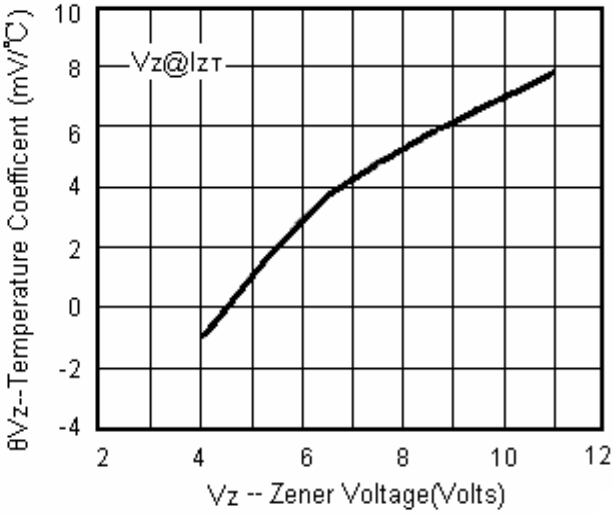


Fig.5--Zener Voltage-14 to 68 Volts

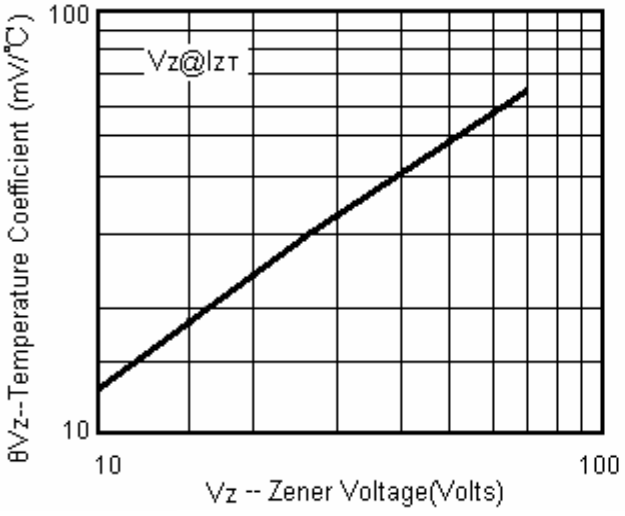
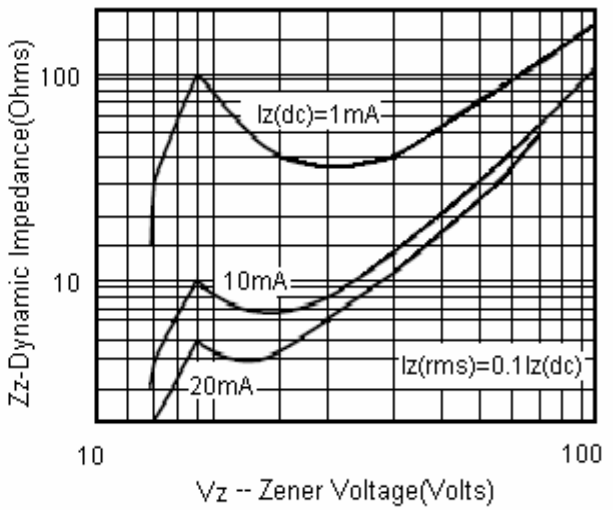
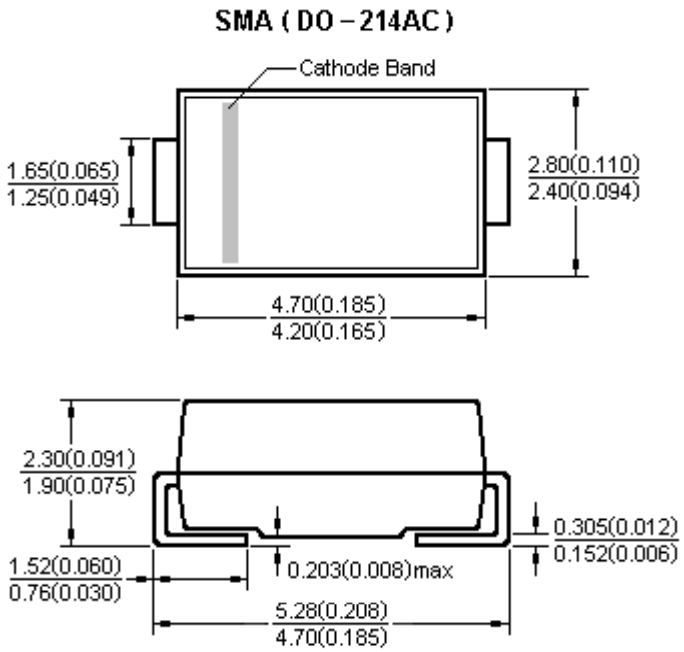


Fig.6--Effect Of Zener Voltage



Package Outline



Dimensions in millimeters and (inches)

Notice

- Product is intended for use in general electronics applications.
- Product should be worked less than the ratings; if exceeded, may cause permanent damage.or introduce latent failure mechanisms.
- The absolute maximum ratings are rated values and must not be exceeded during operation. The following are the general derating methods you design a circuit with a device.

  $I_{F(AV)}$: We recommend that the worst case current be no greater than 80% .

  I_{FSM} : This rating specifies the non-repetitive peak current. This is only applied for an abnormal operation, which the general during the lifespan of the device.

  T_J : Derate this rating when using a device in order to ensure high reliability. We recommend that the device be used at a T_J of below 125°C.