Elektronische Bauelemente

SMA47xx Series

Voltage 5.6 V ~ 300 V

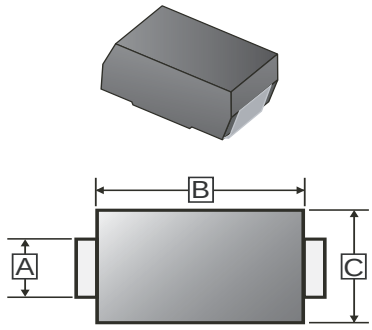
1.0 Watts Surface Mount Zener Diode

2L4RoHS Compliant Product
A suffix of “-C” specifies halogen & lead-free

FEATURES

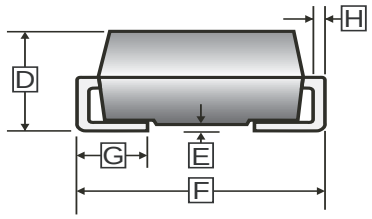
- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Lead (Pb)-free component
- For use in stabilizing and clipping circuits with high power rating

SMA



MECHANICAL DATA

- Case：SMA
- Epoxy：UL 94V-0 rate flame retardant
- Polarity：Laser band denotes cathode end
- Weight：0.062 grams (Approximately)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.25	1.65	E	0.051	0.203
B	3.99	4.60	F	4.78	5.28
C	2.50	2.90	G	0.76	1.52
D	1.98	2.44	H	0.152	0.305

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMA	5K	13’ inch

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS
DC Power Dissipation at TL=50°C (Note 1)	P_D	1.0	W
Junction Temperature Range	T_J	-55 ~ + 175	°C
Storage Temperature Range	T_{STG}	-55 ~ + 175	°C

Notes：

1. TL = Lead temperature at 3/8” (9.5mm) from the body.

ELECTRICAL CHARACTERISTICS

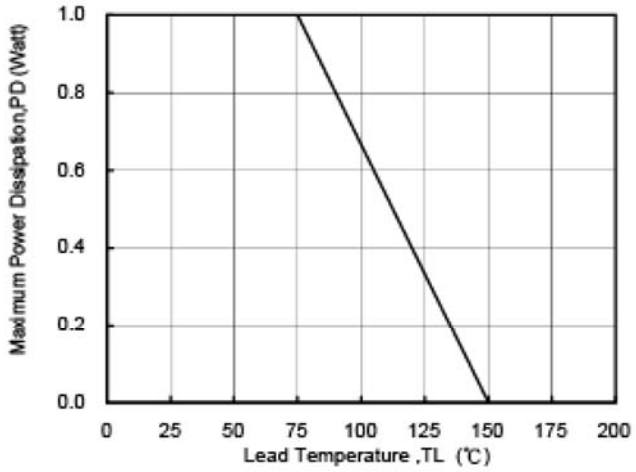
Rating 25°C ambient temperature unless otherwise specified.

PART NUMBER	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener	Max. Surge Current
	V_Z @ I_{ZT}		Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		I_{ZM}	I_{RM}
	Nom.V	mA	Ω	mA	Ω	mA	uA	V	mA	mApk
SMA4734	5.6	45.0	5.0	45.0	600	1.00	10.0	2.0	161.0	805
SMA4735	6.2	41.0	2.0	41.0	700	1.00	10.0	3.0	146.0	730
SMA4736	6.8	37.0	3.5	37.0	700	1.00	10.0	4.0	133.0	660
SMA4737	7.5	34.0	4.0	34.0	700	0.50	10.0	5.0	121.0	605
SMA4738	8.2	31.0	4.5	31.0	700	0.50	10.0	6.0	110.0	550
SMA4739	9.1	28.0	5.0	28.0	700	0.50	10.0	7.0	100.0	500
SMA4740	10.0	25.0	7.0	25.0	700	0.25	10.0	7.6	91.0	454
SMA4741	11.0	23.0	8.0	23.0	700	0.25	5.0	8.4	83.0	414
SMA4742	12.0	21.0	9.0	21.0	700	0.25	5.0	9.1	76.0	380
SMA4743	13.0	19.0	10.0	19.0	700	0.25	5.0	9.9	69.0	344
SMA4744	15.0	17.0	14.0	17.0	700	0.25	5.0	11.4	61.0	305
SMA4745	16.0	15.5	16.0	15.5	700	0.25	5.0	12.2	57.0	285
SMA4746	18.0	14.0	20.0	14.0	750	0.25	5.0	13.7	50.0	250
SMA4747	20.0	12.5	22.0	12.5	750	0.25	5.0	15.2	45.0	225
SMA4748	22.0	11.5	23.0	11.5	750	0.25	5.0	16.7	41.0	205
SMA4749	24.0	10.5	25.0	10.5	750	0.25	5.0	18.2	38.0	190
SMA4750	27.0	9.5	35.0	9.5	750	0.25	5.0	20.6	34.0	170
SMA4751	30.0	8.5	40.0	8.5	1000	0.25	5.0	22.8	30.0	150
SMA4752	33.0	7.5	45.0	7.5	1000	0.25	5.0	25.1	27.0	135
SMA4753	36.0	7.0	50.0	7.0	1000	0.25	5.0	27.4	25.0	125
SMA4754	39.0	6.5	60.0	6.5	1000	0.25	5.0	29.7	23.0	115
SMA4755	43.0	6.0	70.0	6.0	1500	0.25	5.0	32.7	22.0	110
SMA4756	47.0	5.5	80.0	5.5	1500	0.25	5.0	35.8	19.0	95
SMA4757	51.0	5.0	95.0	5.0	1500	0.25	5.0	38.8	18.0	90
SMA4758	56.0	4.5	110.0	4.5	2000	0.25	5.0	42.6	16.0	80
SMA4759	62.0	4.0	125.0	4.0	2000	0.25	5.0	47.1	14.0	70
SMA4760	68.0	3.7	150.0	3.7	2000	0.25	5.0	51.7	13.0	65
SMA4761	75.0	3.3	175.0	3.3	2000	0.25	5.0	56.0	12.0	60
SMA4762	82.0	3.0	200.0	3.0	3000	0.25	5.0	62.2	11.0	55
SMA4763	91.0	2.8	250.0	2.8	3000	0.25	5.0	69.2	10.0	50
SMA4764	100.0	2.5	350.0	2.5	3000	0.25	5.0	76.0	9.0	45
SMAZ1110	110.0	2.3	450.0	2.3	4000	0.25	5.0	83.6	8.6	40
SMAZ1120	120.0	2.0	550.0	2.0	4500	0.25	5.0	91.2	7.8	37
SMAZ1130	130.0	1.9	700.0	1.9	5000	0.25	5.0	98.8	7.0	34
SMAZ1150	150.0	1.7	1000.0	1.7	6000	0.25	5.0	114.0	6.4	30
SMAZ1160	160.0	1.6	1100.0	1.6	6500	0.25	5.0	121.6	5.8	28
SMAZ1180	180.0	1.4	1200.0	1.4	7000	0.25	5.0	136.8	5.2	25
SMAZ1200	200.0	1.2	1900.0	1.2	9990	0.25	5.0	152.0	4.7	22
SMAZ1300	300.0	0.8	2300.0	0.8	9500	0.25	5.0	228.0	3.0	15

NOTES:

1. The type number listed have a standard tolerance on the nominal zener voltage of ±5%.
2. The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per JEDEC.

RATINGS AND CHARACTERISTIC CURVES



ig. 1 - Power Temperature Derating Cur v

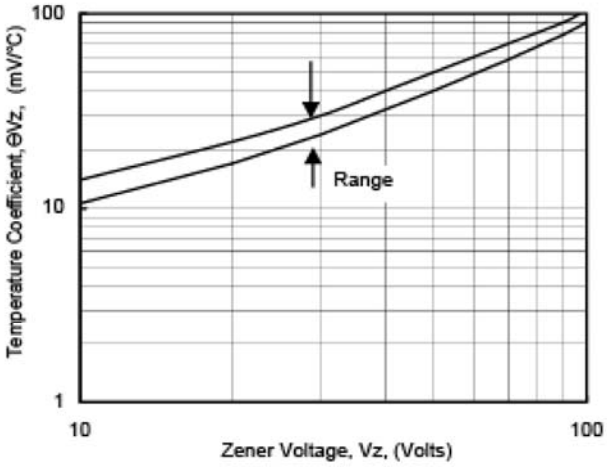


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

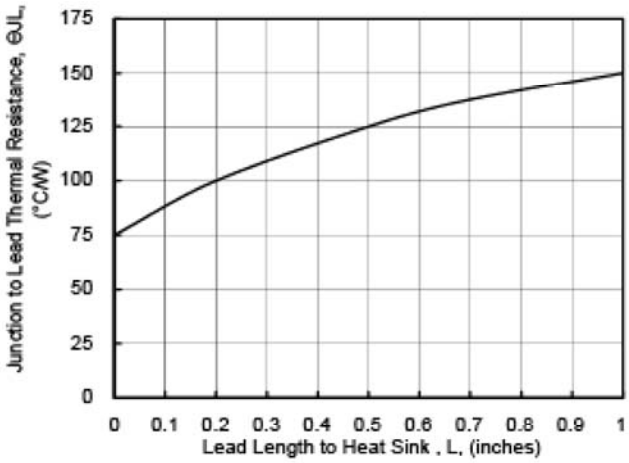
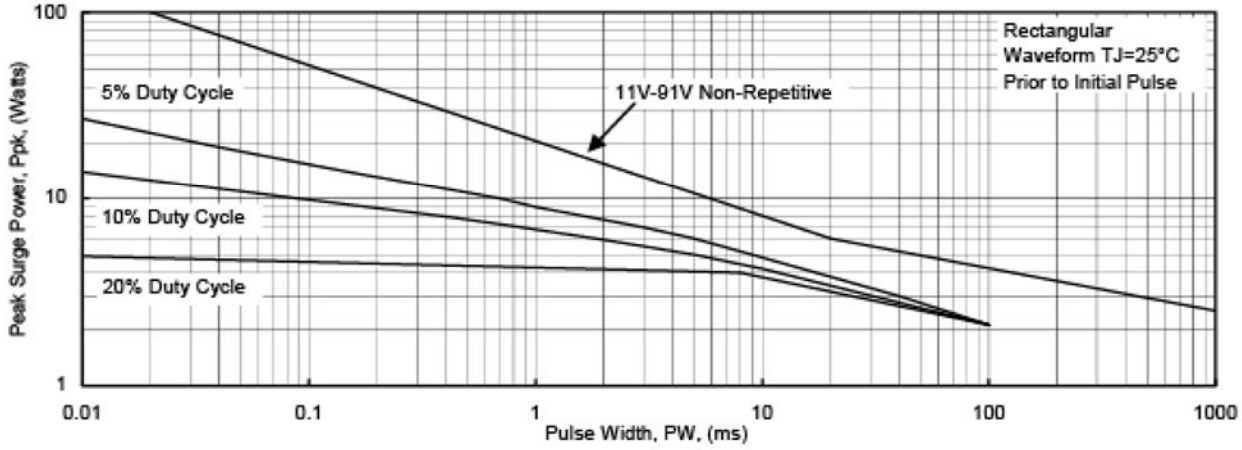


Fig. 3 - Typical Thermal Resistance v.s. Lead Length



Fg. 4 - Maximum Surge Power