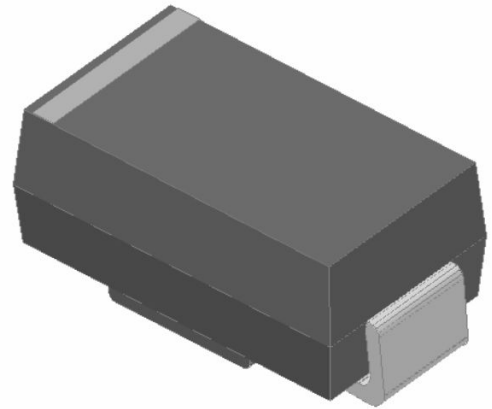


## SMA47 SERIES SILICON PLANAR POWER ZENER DIODES

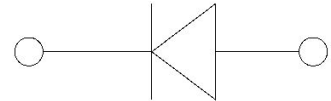
### ■ Features

- Silicon Planar Power Zener Diodes for use in stabilizing and clipping circuits with high power rating. Standard Zener voltage tolerance is 10%. Add suffix A for 5% tolerance. Other tolerances available upon request.



### Mechanical Data

- ✧ Case: Molded plastic over passivated junction
- ✧ Terminals: Pure tin plated lead free, solderable per MIL-STD-750, Method 2025
- ✧ Polarity: Color Band denotes positive end (cathode)
- ✧ Standard packaging: 12mm tape (EIA-481)
- ✧ Weight: 0.002 ounces, 0.064 gram



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Type Number	Symbol	Value	Units
Peak Power Dissipation at $T_A=50^\circ\text{C}$ , Derate above $50^\circ\text{C}$ ( Note 1 )	$P_D$	1.0 6.67	Watts mW/°C
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) ( Note 2 )	$I_{FSM}$	10.0	Amps
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	°C

- Notes:
1. Mounted on  $5.0\text{mm}^2$  (0.013mm thick) land areas.
  2. Measured on 8.3ms Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 Pulses Per Minute Maximum



## SMA47 SERIES

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) VF=1.2V max, IF=200mA for all types.

Device	Device Marking Code	Nominal Zener Voltage Vz @ Izt Voltage	Test Current Izt mA	Maximum Zener Impedance			Leakage Current		Surge Current @ TA = 25°C Ir - mA
				ZZT @ Izt Ohms	ZZK @ IZK		IR @ VR		
					Ohms	mA	uA Max	Volts	
SMA4733A	733A	5.1	49	7	550	1.00	10	1.0	-
SMA4734A	734A	5.6	45	5	600	1.00	10	2.0	-
SMA4735A	735A	6.2	41	2	700	1.00	10	3.0	-
SMA4736A	736A	6.8	37	3.5	700	1.00	10	4.0	-
SMA4737A	737A	7.5	34.0	4	700	0.50	10	5.0	-
SMA4738A	738A	8.2	31.0	4.5	700	0.50	10	6.0	-
SMA4739A	739A	9.1	28.0	5	700	0.50	10	7.0	-
SMA4740A	740A	10	25.0	7	700	0.25	10	7.6	-
SMA4741A	741A	11	23	8	700	0.25	5.0	8.4	414
SMA4742A	742A	12	21	9	700	0.25	5.0	9.1	380
SMA4743A	743A	13	19	10	700	0.25	5.0	9.9	344
SMA4744A	744A	15	17	14	700	0.25	5.0	11.4	304
SMA4745A	745A	16	15.5	16	700	0.25	5.0	12.2	285
SMA4746A	746A	18	14.0	20	750	0.25	5.0	13.7	250
SMA4747A	747A	20	12.5	22	750	0.25	5.0	15.2	225
SMA4748A	748A	22	11.5	23	750	0.25	5.0	16.7	205
SMA4749A	749A	24	10.5	25	750	0.25	5.0	18.2	190
SMA4750A	750A	27	9.5	35	750	0.25	5.0	20.6	170
SMA4751A	751A	30	8.5	40	1000	0.25	5.0	22.8	150
SMA4752A	752A	33	7.5	45	1000	0.25	5.0	25.1	135
SMA4753A	753A	36	7.0	50	1000	0.25	5.0	27.4	125
SMA4754A	754A	39	6.5	60	1000	0.25	5.0	29.7	115
SMA4755A	755A	43	6.0	70	1500	0.25	5.0	32.7	110
SMA4756A	756A	47	5.5	80	1500	0.25	5.0	35.8	95
SMA4757A	757A	51	5.0	95	1500	0.25	5.0	38.8	90
SMA4758A	758A	56	4.5	110	2000	0.25	5.0	42.6	80
SMA4759A	759A	62	4.0	125	2000	0.25	5.0	47.1	70
SMA4760A	760A	68	3.7	150	2000	0.25	5.0	51.7	65
SMA4761A	761A	75	3.3	175	2000	0.25	5.0	56.0	60
SMA4762A	762A	82	3.0	200	3000	0.25	5.0	62.2	55
SMA4763A	763A	91	2.8	250	3000	0.25	5.0	69.2	50
SMA4764A	764A	100	2.5	350	3000	0.25	5.0	76.0	45
SZ1110A	110A	110	2.3	450	4000	0.25	5.0	83.6	-
SZ1120A	120A	120	2.0	550	4500	0.25	5.0	91.2	-
SZ1130A	130A	130	1.9	700	5000	0.25	5.0	98.8	-
SZ1150A	150A	150	1.7	1000	6000	0.25	5.0	114.0	-
SZ1160A	160A	160	1.6	1100	6500	0.25	5.0	121.6	-
SZ1180A	180A	180	1.4	1200	7000	0.25	5.0	136.8	-
SZ1200A	200A	200	1.2	1500	8000	0.25	5.0	152.0	-



## SMA47 SERIES

### RATINGS AND CHARACTERISTIC CURVES (1SMA4733THRU 1SMA200Z)

FIG.1- POWER TEMPERATURE DERATING CURVE

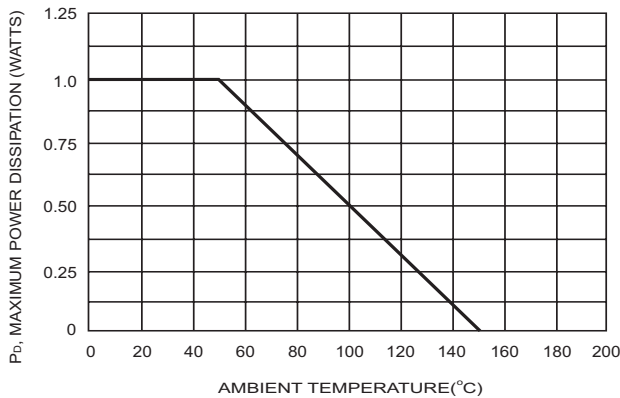


FIG.2- TYPICAL FORWARD CHARACTERISTICS

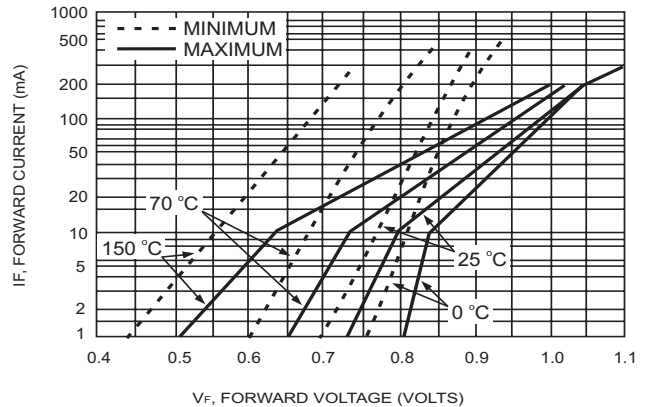


FIG.3- EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

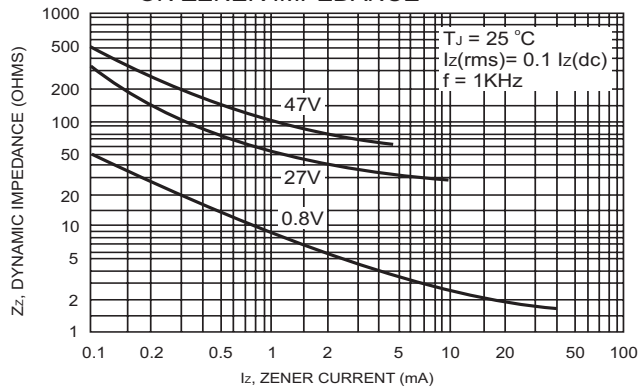


FIG.4- EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

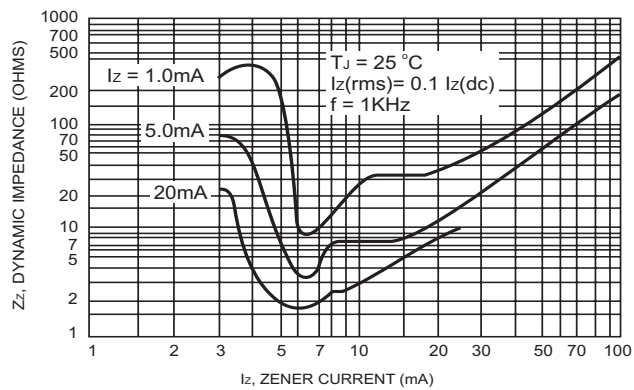
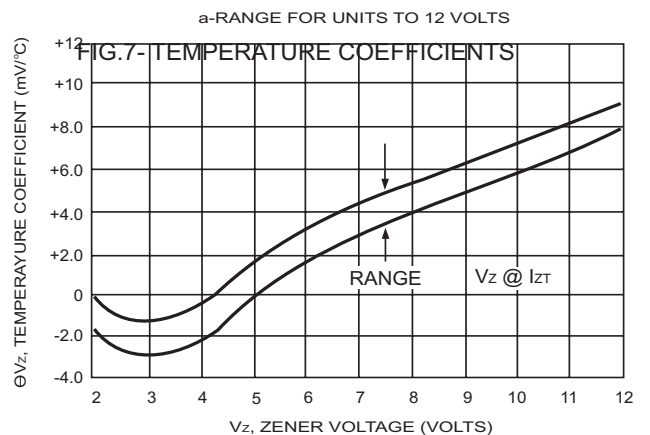
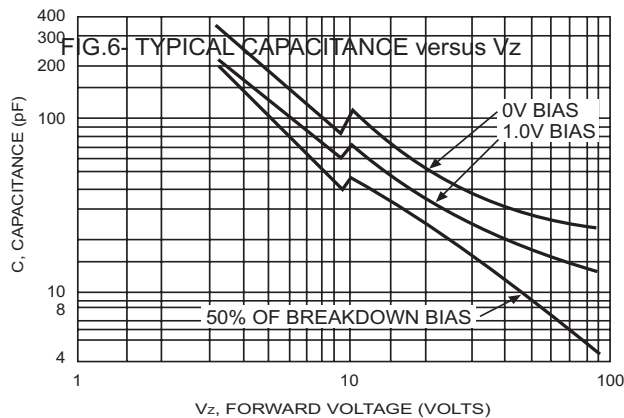
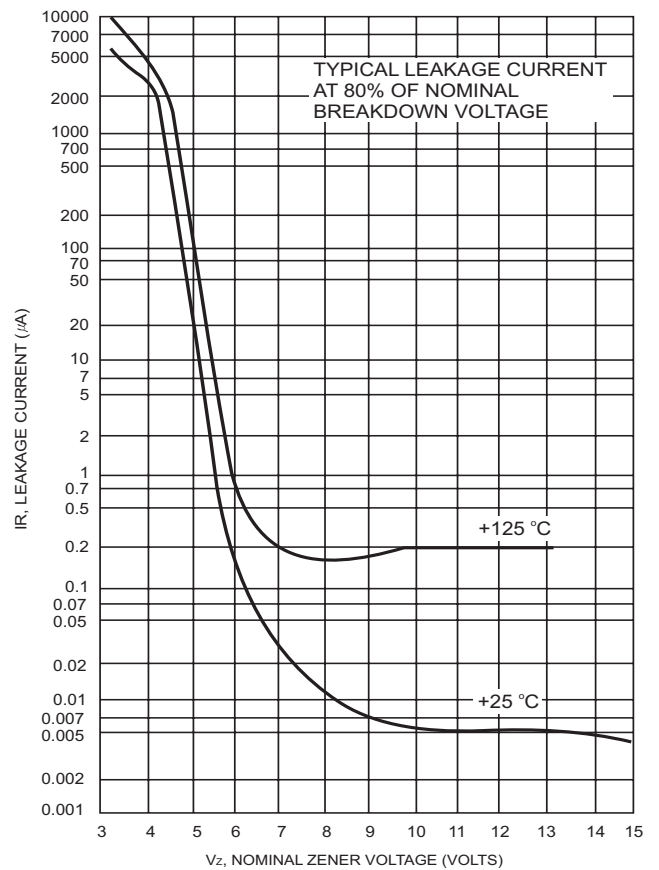


FIG.5- TYPICAL LEAKAGE CURRENT



# SMA47 SERIES

## RATINGS AND CHARACTERISTIC CURVES (1SMA4733 THRU 1SMA200Z)

FIG.8- TEMPERATURE COEFFICIENTS

b-RANGE FOR UNITS 11 TO 100 VOLTS

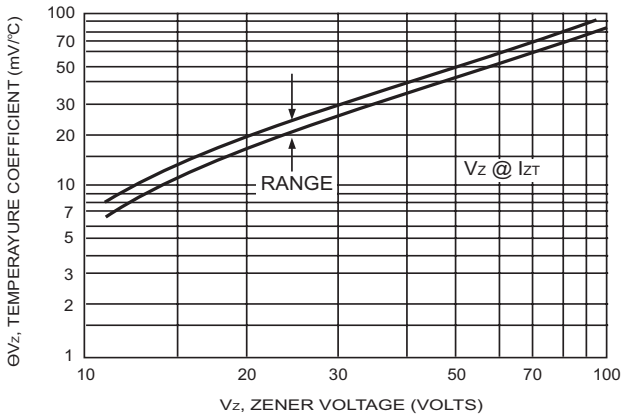


FIG.9- EFFECT OF ZENER CURRENT

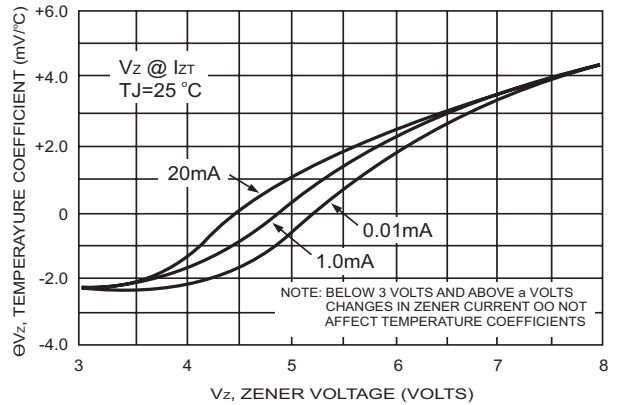
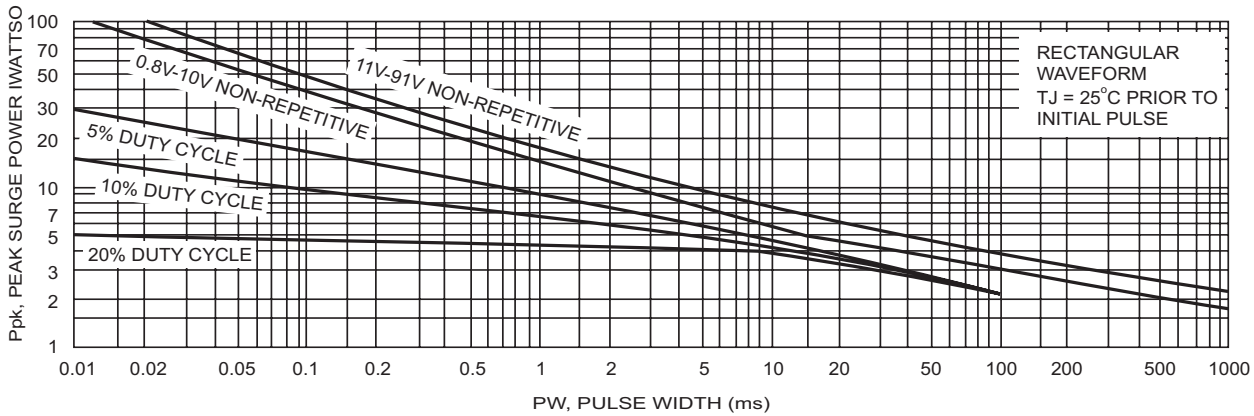


FIG.10- MAXIMUM SURGE POWER



### Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1SMA47 series	SMA	5000	10000	80000	13" reel

### Outline Dimensions

