

SMAF Plastic-Encapsulate Diodes

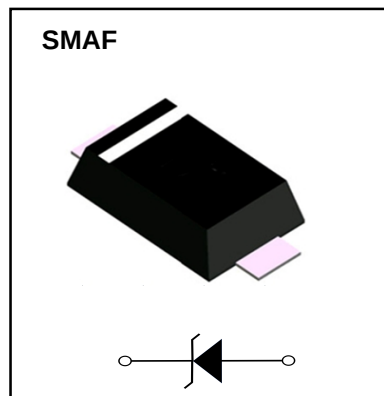
Zener Diodes

Features

- P_d 1.0W
- V_z 3.0V-390V
- Range 5%

Applications

- Stabilizing Voltage



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Power dissipation	P_d	W	$T_L=75^{\circ}\text{C}$	1.0
Zener current	I_z	mA		P_v / V_z
Maximum junction temperature	T_j	$^{\circ}\text{C}$		-65 to +150
Storage temperature range	T_{stg}	$^{\circ}\text{C}$		-65 to +150
Forward voltage	V_F	V	$I_F=200\text{mA}$	1.2

Electrical Characteristics (T_A=25°C unless otherwise noted)

Part Number	Device Marking Code	Nominal Zener Voltage @I _T			I _{ZT} (mA)	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		V _{Z AVE.} (V)	V _{Z MIN.} (V)	V _{Z MAX.} (V)		Z _{ZT MAX.} (Ω) @I _{ZT}	Z _{ZK MAX.} (Ω) @I _{ZK}	I _{ZK} (mA)	I _R (uA)@V _R	V _R (V)	
1SMAF4727A	727A	3.0	2.85	3.15	80.0	10.0	400.0	1.00	100.0	1.0	288.0
1SMAF4728A	728A	3.3	3.14	3.47	76.0	10.0	400.0	1.00	100.0	1.0	274.0
1SMAF4729A	729A	3.6	3.42	3.78	69.0	10.0	400.0	1.00	100.0	1.0	251.0
1SMAF4730A	730A	3.9	3.71	4.10	64.0	9.0	400.0	1.00	50.0	1.0	232.0
1SMAF4731A	731A	4.3	4.09	4.52	58.0	9.0	400.0	1.00	10.0	1.0	210.0
1SMAF4732A	732A	4.7	4.47	4.94	53.0	8.0	500.0	1.00	10.0	1.0	192.0
1SMAF4733A	733A	5.1	4.85	5.36	49.0	7.0	550.0	1.00	10.0	1.0	177.0
1SMAF4734A	734A	5.6	5.32	5.88	45.0	5.0	600.0	1.00	10.0	2.0	161.0
1SMAF4735A	735A	6.2	5.89	6.51	41.0	2.0	700.0	1.00	10.0	3.0	146.0
1SMAF4736A	736A	6.8	6.46	7.14	37.0	3.5	700.0	1.00	10.0	4.0	133.0
1SMAF4737A	737A	7.5	7.13	7.88	34.0	4.0	700.0	0.50	10.0	5.0	121.0
1SMAF4738A	738A	8.2	7.79	8.61	31.0	4.5	700.0	0.50	10.0	6.0	110.0
1SMAF4739A	739A	9.1	8.65	9.56	28.0	5.0	700.0	0.50	10.0	7.0	100.0
1SMAF4740A	740A	10.0	9.50	10.50	25.0	7.0	700.0	0.25	10.0	7.6	91.0
1SMAF4741A	741A	11.0	10.45	11.55	23.0	8.0	700.0	0.25	0.5	8.4	83.0
1SMAF4742A	742A	12.0	11.40	12.60	21.0	9.0	700.0	0.25	0.5	9.1	76.0
1SMAF4743A	743A	13.0	12.35	13.65	19.0	10.0	700.0	0.25	0.5	9.9	69.0
1SMAF4744A	744A	15.0	14.25	15.75	17.0	14.0	700.0	0.25	0.5	11.4	61.0
1SMAF4745A	745A	16.0	15.20	16.80	15.5	16.0	700.0	0.25	0.5	12.2	57.0
1SMAF4746A	746A	18.0	17.10	18.90	14.0	20.0	750.0	0.25	0.5	13.7	50.0
1SMAF4747A	747A	20.0	19.00	21.00	12.5	22.0	750.0	0.25	0.5	15.2	45.0
1SMAF4748A	748A	22.0	20.90	23.10	11.5	23.0	750.0	0.25	0.5	16.7	41.0
1SMAF4749A	749A	24.0	22.80	25.20	10.5	25.0	750.0	0.25	0.5	18.2	38.0
1SMAF4750A	750A	27.0	25.65	28.35	9.5	35.0	750.0	0.25	0.5	20.6	34.0
1SMAF4751A	751A	30.0	28.50	31.50	8.5	40.0	1000.0	0.25	0.5	22.8	30.0
1SMAF4752A	752A	33.0	31.35	34.65	7.5	45.0	1000.0	0.25	0.5	25.1	27.0
1SMAF4753A	753A	36.0	34.20	37.80	7.0	50.0	1000.0	0.25	0.5	27.4	25.0
1SMAF4754A	754A	39.0	37.05	40.95	6.5	60.0	1000.0	0.25	0.5	29.7	23.0
1SMAF4755A	755A	43.0	40.85	45.15	6.0	70.0	1500.0	0.25	0.5	32.7	22.0
1SMAF4756A	756A	47.0	44.65	49.35	5.5	80.0	1500.0	0.25	0.5	35.8	19.0
1SMAF4757A	757A	51.0	48.45	53.55	5.0	95.0	1500.0	0.25	0.5	38.8	18.0
1SMAF4758A	758A	56.0	53.20	58.80	4.5	110.0	2000.0	0.25	0.5	42.6	16.0
1SMAF4759A	759A	62.0	58.90	65.10	4.0	125.0	2000.0	0.25	0.5	47.1	14.0
1SMAF4760A	760A	68.0	64.60	71.40	3.7	150.0	2000.0	0.25	0.5	51.7	13.0
1SMAF4761A	761A	75.0	71.25	78.75	3.3	175.0	2000.0	0.25	0.5	56.0	12.0
1SMAF4762A	762A	82.0	77.90	86.10	3.0	200.0	3000.0	0.25	0.5	62.2	11.0
1SMAF4763A	763A	91.0	86.45	95.55	2.8	250.0	3000.0	0.25	0.5	69.2	10.0
1SMAF4764A	764A	100.0	95.00	105.00	2.5	350.0	3000.0	0.25	0.5	76.0	9.0
1SMAF1110A	711Z	110.0	104.50	115.50	2.3	450.0	4000.0	0.25	0.5	83.6	8.6
1SMAF1120A	712Z	120.0	114.00	126.00	2.0	550.0	4500.0	0.25	0.5	91.2	7.8
1SMAF1130A	713Z	130.0	123.50	136.50	1.9	700.0	5000.0	0.25	0.5	98.8	7.0
1SMAF1150A	715Z	150.0	142.50	157.50	1.7	1000.0	6000.0	0.25	0.5	114.0	6.4
1SMAF1160A	716Z	160.0	152.00	168.00	1.6	1100.0	6500.0	0.25	0.5	121.6	5.8
1SMAF1180A	718Z	180.0	171.00	189.00	1.4	1200.0	7000.0	0.25	0.5	136.8	5.2
1SMAF1200A	720Z	200.0	190.00	210.00	1.2	1900.0	9990.0	0.25	0.5	152.0	4.7
1SMAF1220A	722Z	220.0	209.00	231.00	1.0	1600.0	8000.0	0.25	0.5	167.2	4.0
1SMAF1240A	724Z	240.0	228.00	252.00	0.9	1800.0	8500.0	0.25	0.5	182.4	3.8
1SMAF1250A	725Z	250.0	237.50	262.50	0.9	2000.0	9000.0	0.25	0.5	190.0	3.6
1SMAF1270A	727Z	270.0	256.50	283.50	0.8	2100.0	9000.0	0.25	0.5	205.0	3.3
1SMAF1300A	730Z	300.0	285.00	315.00	0.8	2300.0	9500.0	0.25	0.5	228.0	3.0
1SMAF1330A	733Z	330.0	313.50	346.50	0.7	2500.0	9500.0	0.25	0.5	250.2	2.7
1SMAF1360A	736Z	360.0	342.00	378.00	0.7	2700.0	10000.0	0.25	0.5	275.0	2.5
1SMAF1390A	739Z	390.0	370.50	409.50	0.7	3000.0	10000.0	0.25	0.5	300.0	2.2

Typical Characteristics

FIG1: Maximum Continuous Power Dissipation

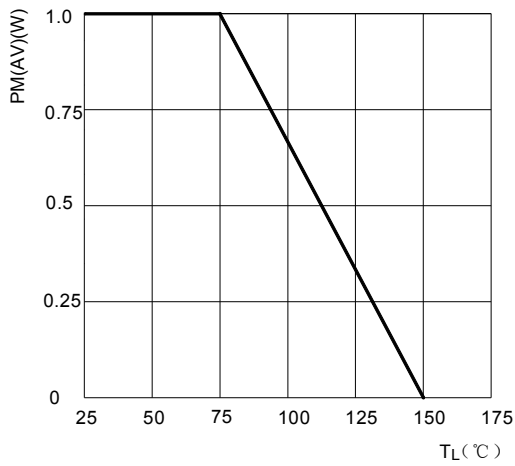


FIG2: Typical Zener Impedance

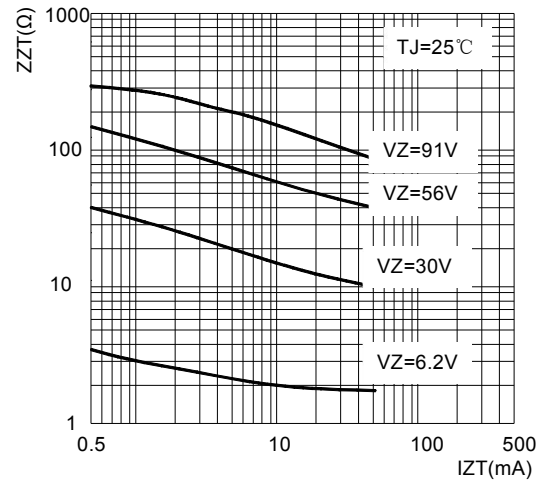


FIG3: Typical Temperature Coefficients

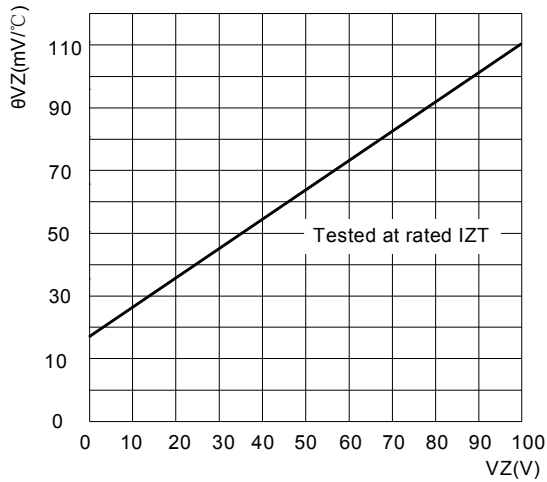


FIG4: Typical Instantaneous Forward Characteristics for SMA4763A

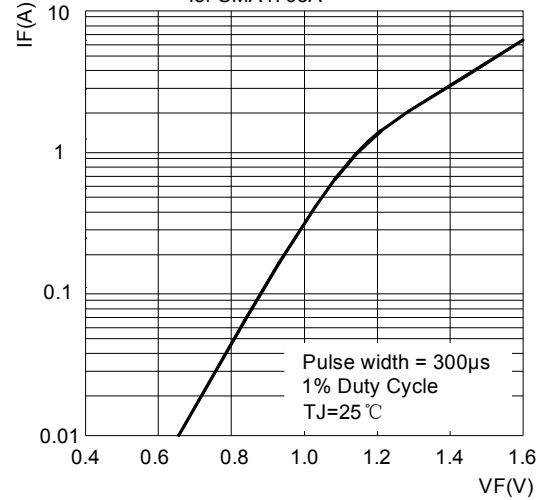
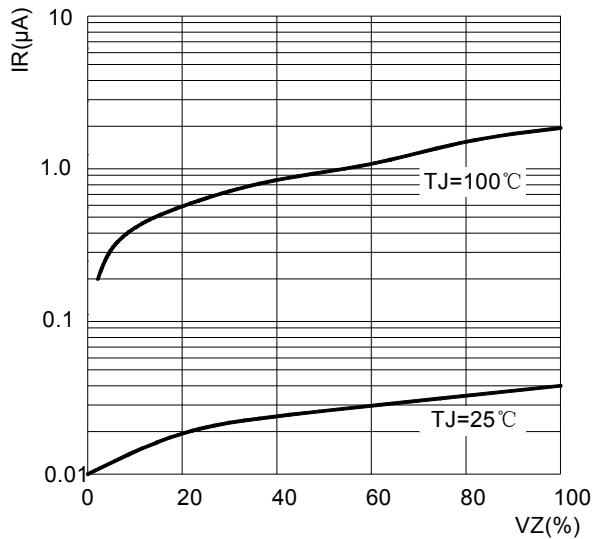
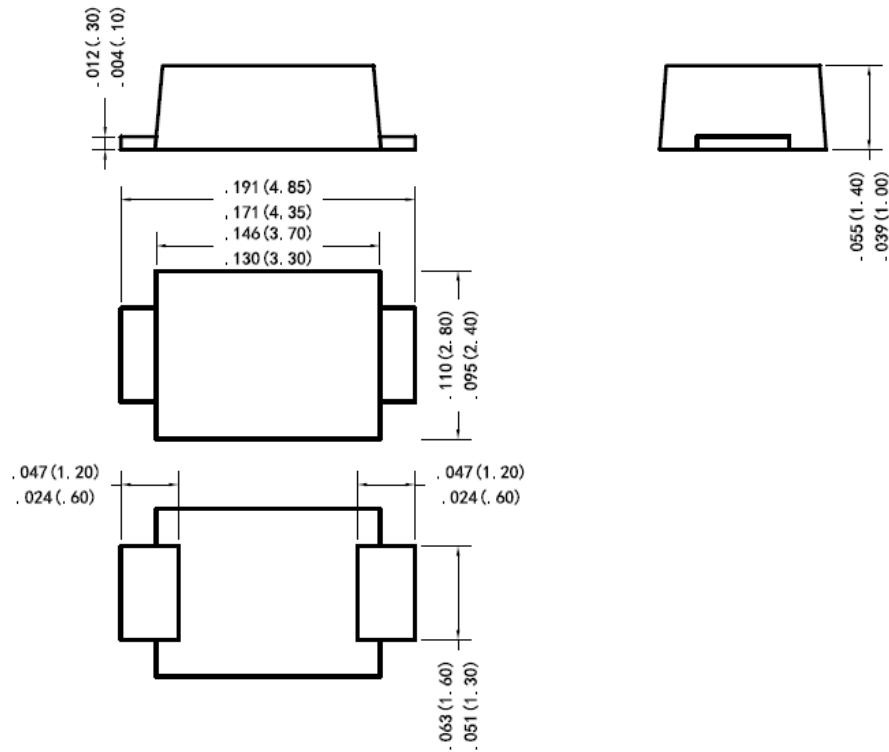


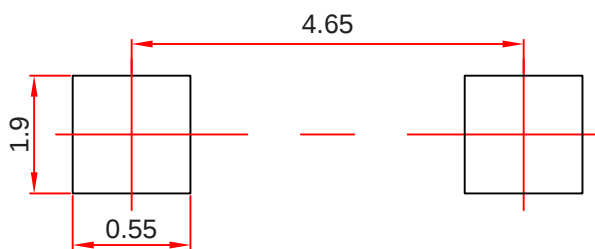
FIG5: Typical Reverse Characteristics



SMAF Package Outline Dimensions



SMAF Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

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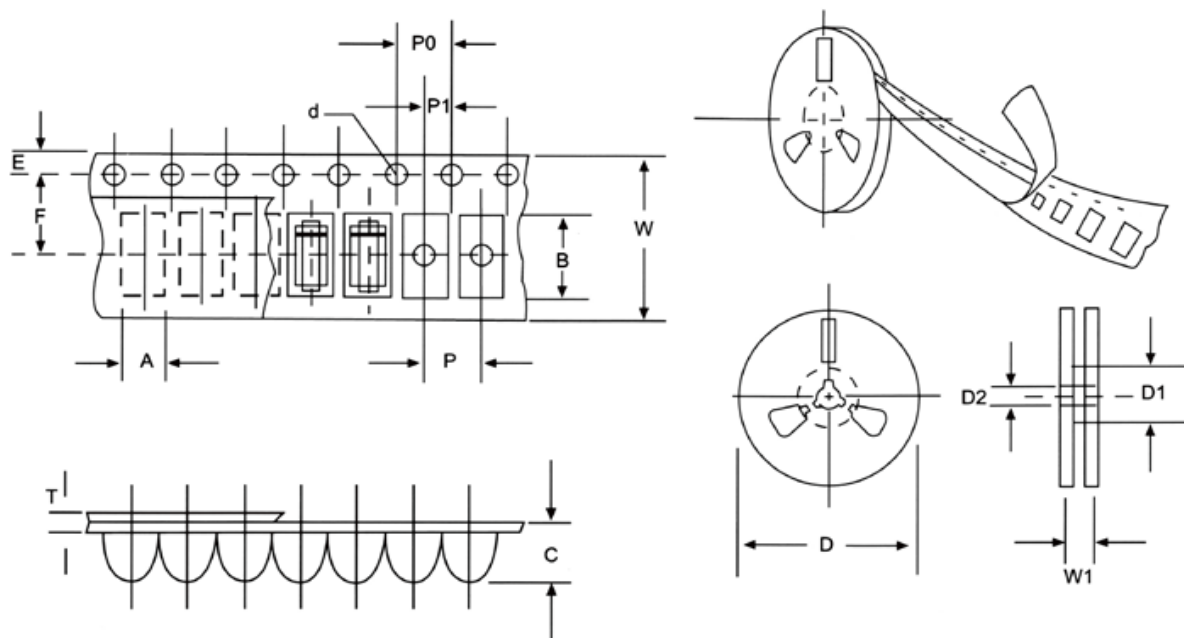


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMAF mm(inch)
Carrier width	A	2.83+0.1(0.112+0.004)
Carrier length	B	4.90+0.1(0.193+0.004)
Carrier depth	C	1.45+0.1(0.057+0.004)
Sprocket hole	d	1.55+0.05(0.061+0.002)
Reel outside diameter	D	178+2.0(7.0+0.079)
Reel inner diameter	D1	54±1.0(2.13±0.039)
Feed hole diameter	D2	13+0.5(0.512+0.020)
Sprocket hole position	E	1.75+0.1(0.069+0.004)
Punch hole position	F	5.5+0.05(0.217+0.002)
Punch hole pitch	P	4.0+0.1(0.157+0.004)
Sprocket hole pitch	P0	4.0+0.1(0.157+0.004)
Embossment center	P1	2.0+0.1(0.079+0.004)
Total tape thickness	T	0.23-0.29(0.009-0.011)
Tape width	W	12.0+0.1(0.472+0.004)
Reel width	W1	16.8+2.0(0.661+0.079)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.