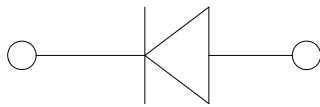
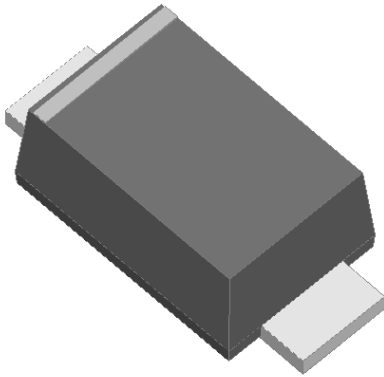


Surface Mount Zener Diodes



Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Fast switching for high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

Stabilizing Voltage.

Mechanical Data

- **Package:** SOD-123FL
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Conditions	Max
Power dissipation	P _{tot}	W	T _L =75°C	1.0
Zener current	I _Z	mA		P _V /V _Z
Maximum junction temperature	T _j	°C		150
Storage temperature range	T _{stg}	°C		-65 to +150

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Conditions	Max
Forward voltage	V _F	V	I _F =200mA	1.2

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Max
Thermal resistance Between junction and lead	R _{θJ-L}	°C/W	20

Note: Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm.

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SMF47 SERIES	F1	Approximate 0.0169	3000	15000	120000	7" reel
SMF47 SERIES	F2	Approximate 0.0169	10000	20000	160000	13" reel



SMF47 SERIES

■Electrical Characteristics (Ta=25°C unless otherwise noted)

Part Number	Marking Code	Nominal Zener voltage	Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Max Surge current
		V _Z ⁽¹⁾ at I _{ZT}	I _{ZT}	Z _{ZT} at I _{ZT}	Z _{ZK} at I _{ZK}	I _{ZK}	IR	Test voltage V _R	I _{RM} ⁽²⁾
		V	mA	Ω	Ω	mA	μA	V	mA
SMF4734	4734	5.6	45	5	600	1	5	2.0	810
SMF4735	4735	6.2	41	2	700	1	5	3.0	730
SMF4736	4736	6.8	37	3.5	700	1	5	4.0	660
SMF4737	4737	7.5	34	4	700	0.5	5	5.0	605
SMF4738	4738	8.2	31	4.5	700	0.5	5	6.0	550
SMF4739	4739	9.1	28	5	700	0.5	5	7.0	500
SMF4740	4740	10	25	7	700	0.25	1	7.6	454
SMF4741	4741	11	23	8	700	0.25	1	8.4	414
SMF4742	4742	12	21	9	700	0.25	1	9.1	380
SMF4743	4743	13	19	10	700	0.25	1	9.9	344
SMF4744	4744	15	17	14	700	0.25	1	11.4	304
SMF4745	4745	16	15.5	16	700	0.25	1	12.2	285
SMF4746	4746	18	14	20	750	0.25	1	13.7	250
SMF4747	4747	20	12.5	22	750	0.25	1	15.2	225
SMF4748	4748	22	11.5	23	750	0.25	1	16.7	205
SMF4749	4749	24	10.5	25	750	0.25	1	18.2	190
SMF4750	4750	27	9.5	35	750	0.25	1	20.6	170
SMF4751	4751	30	8.5	40	1000	0.25	1	22.8	150
SMF4752	4752	33	7.5	45	1000	0.25	1	25.1	135
SMF4753	4753	36	7	50	1000	0.25	1	27.4	125
SMF4754	4754	39	6.5	60	1000	0.25	1	29.7	115
SMF4755	4755	43	6	70	1500	0.25	1	32.7	110
SMF4756	4756	47	5.5	80	1500	0.25	1	35.8	95
SMF4757	4757	51	5	95	1500	0.25	1	38.8	90
SMF4758	4758	56	4.5	110	2000	0.25	1	42.6	80
SMF4759	4759	62	4	125	2000	0.25	1	47.1	70
SMF4760	4760	68	3.7	150	2000	0.25	1	51.7	65
SMF4761	4761	75	3.3	175	2000	0.25	1	56.0	60
SMF4762	4762	82	3.0	200	3000	0.25	1	62.2	55
SMF4763	4763	91	2.8	250	3000	0.25	1	69.2	50



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SMF4764	4764	100	2.5	350	3000	0.25	1	76.0	45
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Notes:

- (1) Based on dc-measurement at thermal equilibrium.
- (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) Zener Tolerance: $\pm 10\%$

■ Characteristics (Typical)

FIG1: Maximum Continuous Power Dissipation

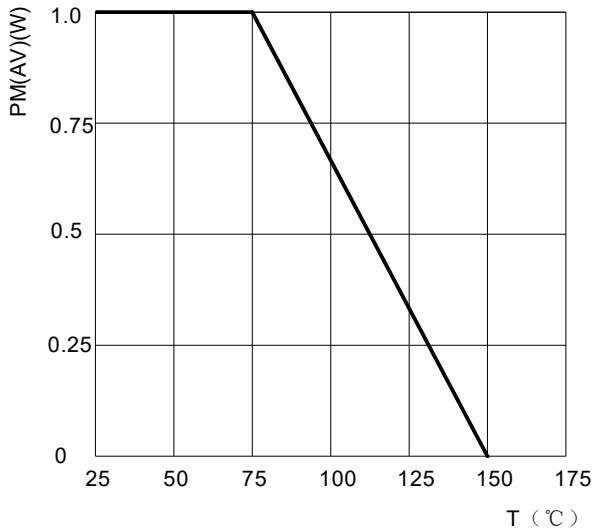


FIG2: Typical Zener Impedance

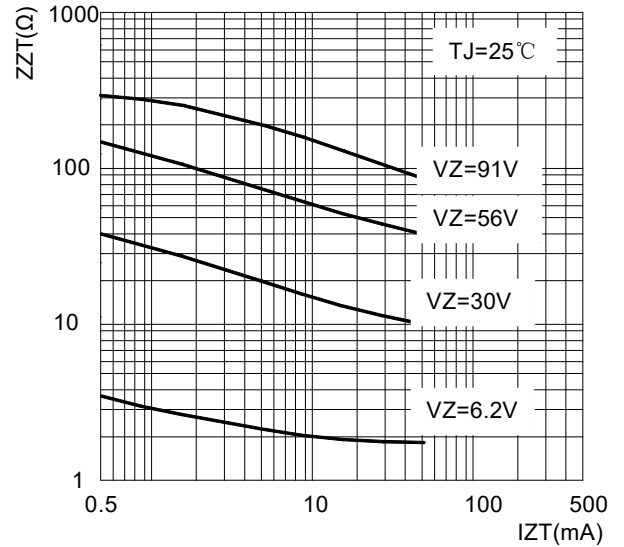


FIG3: Typical Temperature Coefficients

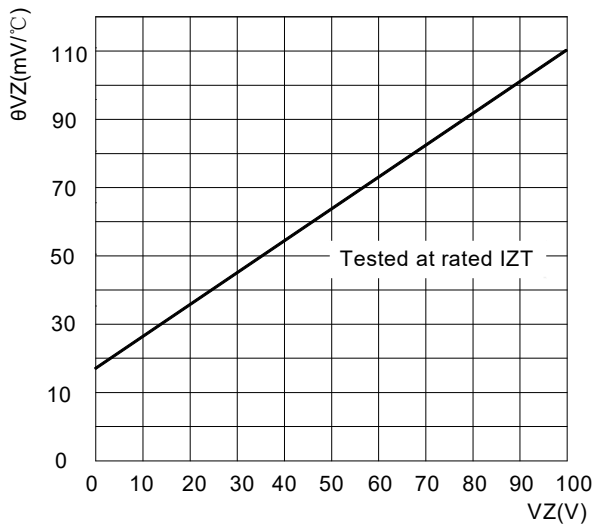


FIG4: Typical Instantaneous Forward Characteristics for SMA4763A

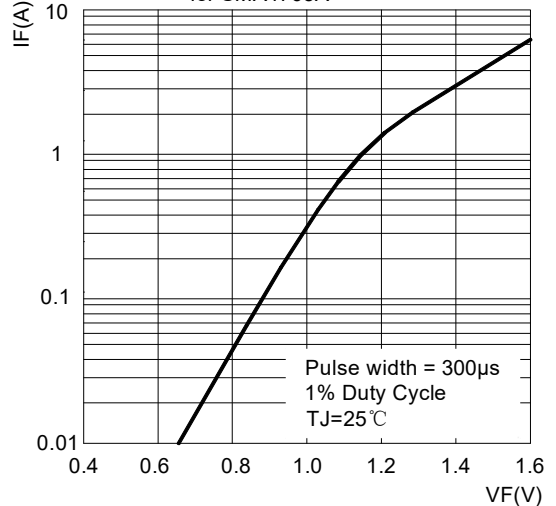
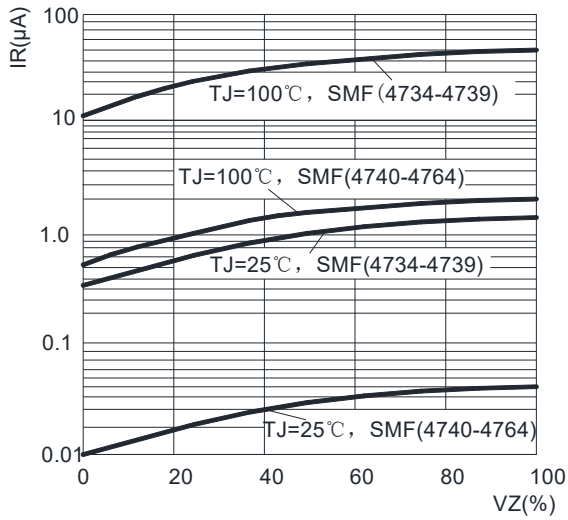
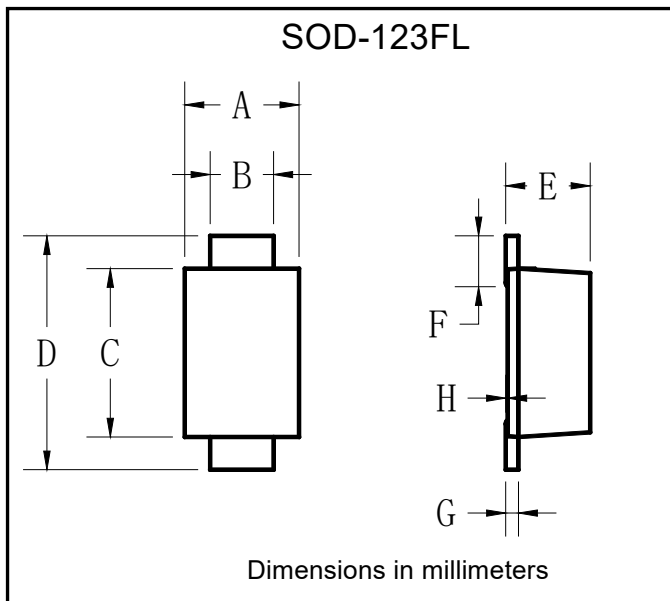


FIG5: Typical Reverse Characteristics

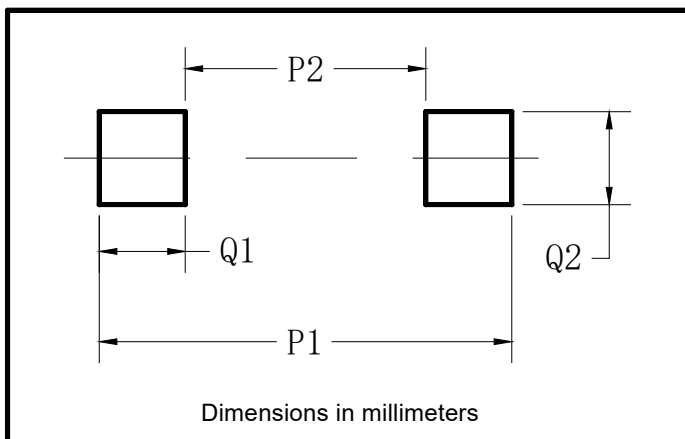


■ Outline Dimensions



SOD-123FL		
Dim	Min	Max
A	1.60	1.90
B	0.90	1.10
C	2.55	2.85
D	3.60	3.90
E	1.00	1.20
F	0.40	0.90
G	0.10	0.25
H	0.02	0.05

■ Suggested pad layout



SOD-123FL	
Dim	Millimeters
P1	3.90
P2	1.90
Q1	1.00
Q2	1.50



SMF47 SERIES

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