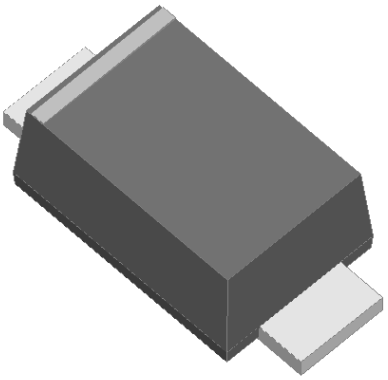
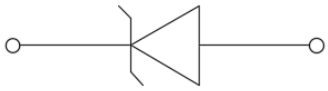
Surface Mount Zener Diodes





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 Date

- **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 (Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	Max
DC power dissipation at TL = 75 °C	P_{tot}	W	1.0
Maximum instantaneous forward voltage@ I_F=200mA	V_F	V	1.2
Zener current	IZ	mA	PV /VZ
Maximum junction temperature	T_j	℃	-55 to +150
Storage temperature range	T_{stg}	℃	-55 to +150

■Thermal Characteristics （Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	Max
Typical Thermal resistance	$R_{\theta J-A}$	℃/W	60
	$R_{\theta J-L}$	℃/W	20
	$R_{\theta J-C}$	℃/W	18

Note：Thermal resistance mounted on P.C.B with 3mm*3mm.

■Ordering Information (Example)

PREFERED 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	30000	120000	7” reel
SMF47 SERIES	F2	Approximate 0.0169	10000	/	160000	13” reel

■Electrical Characteristics (Ta=25℃ unless otherwise noted)

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Maximum Surge Current	Maximum DC Zener Current
	Min V_Z[1] at I_{ZT}	Typ. V_Z[1] at I_{ZT}	Max V_Z[1] at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	I_R	Test voltage V_R	I_{RM}[2]	I_{ZM}
	V	V	V	mA	Ω	Ω	mA	μA	V	mA	mA
SMF4728A	3.14	3.3	3.47	76.0	10.0	400	1.00	100.0	1.0	1370	274.0
SMF4729A	3.42	3.6	3.78	69.0	10.0	400	1.00	100.0	1.0	1255	251.0
SMF4730A	3.71	3.9	4.10	64.0	9.0	400	1.00	50.0	1.0	1160	232.0
SMF4731A	4.09	4.3	4.52	58.0	9.0	400	1.00	10.0	1.0	1050	210.0
SMF4732A	4.47	4.7	4.94	53.0	8.0	500	1.00	10.0	1.0	960	192.0
SMF4733A	4.85	5.1	5.36	49.0	7.0	550	1.00	10.0	1.0	885	177.0
SMF4734A	5.32	5.6	5.88	45.0	5.0	600	1.00	10.0	2.0	805	161.0
SMF4735A	5.89	6.2	6.51	41.0	2.0	700	1.00	10.0	3.0	730	146.0
SMF4736A	6.46	6.8	7.14	37.0	3.5	700	1.00	10.0	4.0	660	133.0
SMF4737A	7.13	7.5	7.88	34.0	4.0	700	0.50	10.0	5.0	605	121.0
SMF4738A	7.79	8.2	8.61	31.0	4.5	700	0.50	10.0	6.0	550	110.0
SMF4739A	8.65	9.1	9.56	28.0	5.0	700	0.50	10.0	7.0	500	100.0
SMF4740A	9.50	10.0	10.50	25.0	7.0	700	0.25	10.0	7.6	454	91.0
SMF4741A	10.45	11.0	11.55	23.0	8.0	700	0.25	5.0	8.4	414	83.0
SMF4742A	11.40	12.0	12.60	21.0	9.0	700	0.25	5.0	9.1	380	76.0
SMF4743A	12.35	13.0	13.65	19.0	10.0	700	0.25	5.0	9.9	344	69.0
SMF4744A	14.25	15.0	15.75	17.0	14.0	700	0.25	5.0	11.4	304	61.0
SMF4745A	15.20	16.0	16.80	15.5	16.0	700	0.25	5.0	12.2	285	57.0
SMF4746A	17.10	18.0	18.90	14.0	20.0	750	0.25	5.0	13.7	250	50.0
SMF4747A	19.00	20.0	21.00	12.5	22.0	750	0.25	5.0	15.2	225	45.0
SMF4748A	20.90	22.0	23.10	11.5	23.0	750	0.25	5.0	16.7	205	41.0
SMF4749A	22.80	24.0	25.20	10.5	25.0	750	0.25	5.0	18.2	190	38.0
SMF4750A	25.65	27.0	28.35	9.5	35.0	750	0.25	5.0	20.6	170	34.0
SMF4751A	28.50	30.0	31.50	8.5	40.0	1000	0.25	5.0	22.8	150	30.0
SMF4752A	31.35	33.0	34.65	7.5	45.0	1000	0.25	5.0	25.1	135	27.0
SMF4753A	34.20	36.0	37.80	7.0	50.0	1000	0.25	5.0	27.4	125	25.0

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Maximum Surge Current	Maximum DC Zener Current
	Min V_Z(1) at I_{ZT}	Typ. V_Z(1) at I_{ZT}	Max V_Z(1) at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	I_R	Test voltage V_R	I_{RM}(2)	I_{ZM}
	V	V	V	mA	Ω	Ω	mA	μA	V	mA	mA
SMF4754A	37.05	39.0	40.95	6.5	60.0	1000	0.25	5.0	29.7	115	23.0
SMF4755A	40.85	43.0	45.15	6.0	70.0	1500	0.25	5.0	32.7	110	22.0
SMF4756A	44.65	47.0	49.35	5.5	80.0	1500	0.25	5.0	35.8	95	19.0
SMF4757A	48.45	51.0	53.55	5.0	95.0	1500	0.25	5.0	38.8	90	18.0
SMF4758A	53.20	56.0	58.80	4.5	110.0	2000	0.25	5.0	42.6	80	16.0
SMF4759A	58.90	62.0	65.10	4.0	125.0	2000	0.25	5.0	47.1	70	14.0
SMF4760A	64.60	68.0	71.40	3.7	150.0	2000	0.25	5.0	51.7	65	13.0
SMF4761A	71.25	75.0	78.75	3.3	175.0	2000	0.25	5.0	56.0	60	12.0
SMF4762A	77.90	82.0	86.10	3.0	200.0	3000	0.25	5.0	62.2	55	11.0
SMF4763A	86.45	91.0	95.55	2.8	250.0	3000	0.25	5.0	69.2	50	10.0
SMF4764A	95.00	100.0	105.00	2.5	350.0	3000	0.25	5.0	76.0	45	9.0

Notes:

（1）Nominal Zener voltage Range：95% Typ.Vz (1)at Izt----105% Typ.Vz (1)at Izt

（2）Surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per JEDEC method

■ **Characteristics** (Typical)

FIG1: Maximum Continuous Power Dissipation

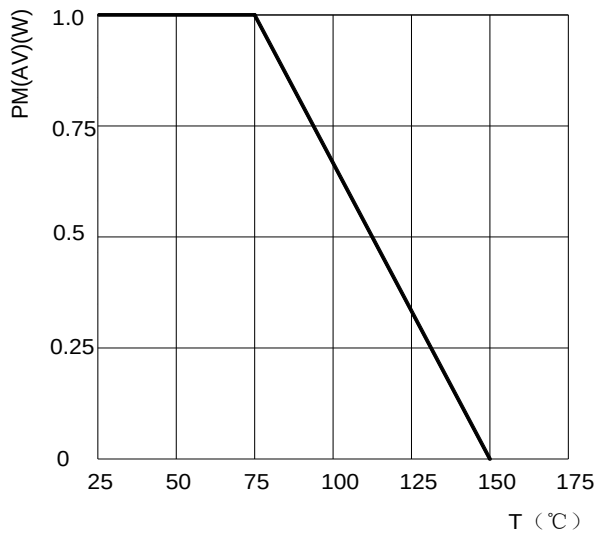


FIG2: Typical Temperature Coefficients

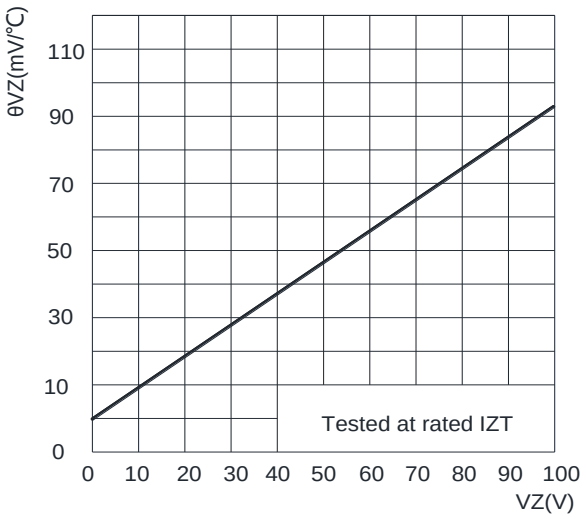


FIG3:Typical Instantaneous Forward Characteristics

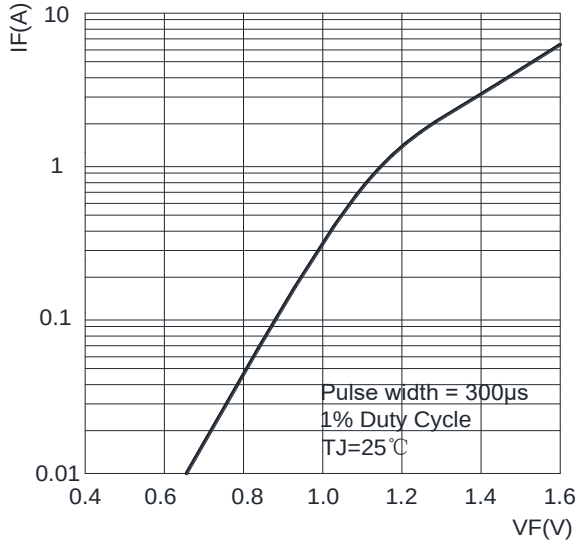
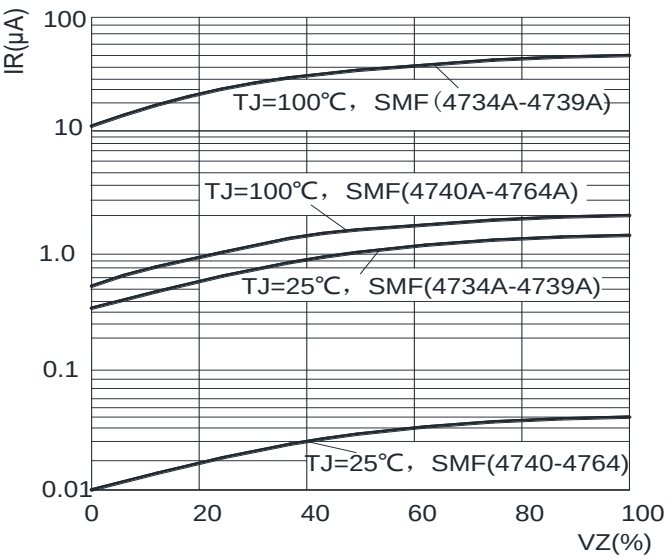
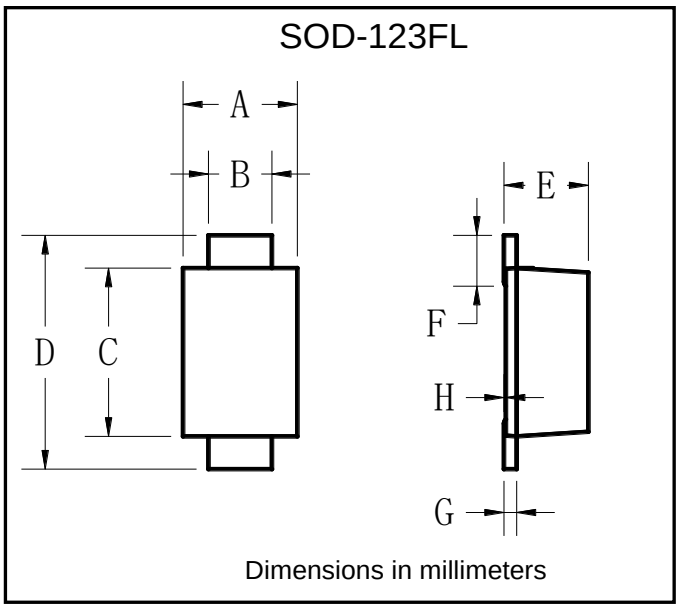


FIG4:Typical Reverse Characteristics

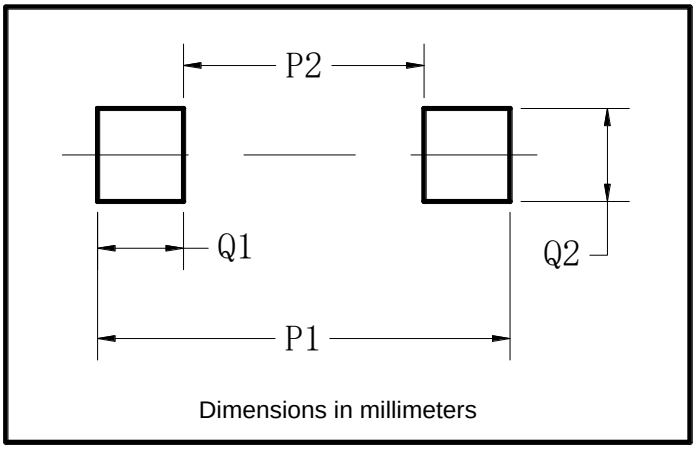


■ Outline Dimensions



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	0.00	0.05

■ Suggested pad layout



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

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