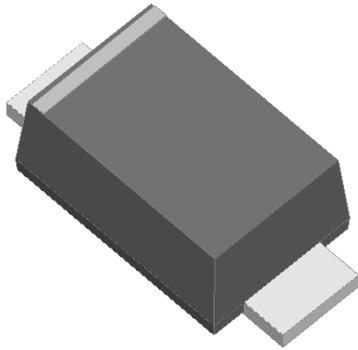


Surface Mount Zener Diodes

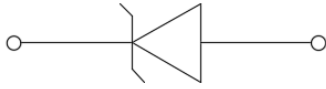


Features

- 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
- Part no. with suffix "Q" means AEC-Q101 qualified

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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MAX
DC power dissipation at T _L = 75 °C	P _D	W	1
Maximum instantaneous forward voltage@ I _F =200mA	V _F	V	1.2
Maximum junction temperature	T _j	°C	-55 to +150
Storage temperature range	T _{stg}	°C	-55 to +150

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

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Thermal resistance(Typical)	R _{θJ-L} ⁽¹⁾	°C/W	junction to lead	40
	R _{θJ-A} ⁽¹⁾	°C/W	junction to ambient	120

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
SMF4735AQ ~ SMF4764AQ	F1	0.0177	3000	30000	120000	7" reel



SMF4735AQ THRU SMF4764AQ

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

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage 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 _{ZM}
	V	V	V	mA	Ω	Ω	mA	μA	V	mA
SMF4735AQ	5.89	6.2	6.51	41.0	2.0	700	1.00	10.0	3.0	146.0
SMF4736AQ	6.46	6.8	7.14	37.0	3.5	700	1.00	10.0	4.0	133.0
SMF4737AQ	7.13	7.5	7.88	34.0	4.0	700	0.50	10.0	5.0	121.0
SMF4738AQ	7.79	8.2	8.61	31.0	4.5	700	0.50	10.0	6.0	110.0
SMF4739AQ	8.65	9.1	9.56	28.0	5.0	700	0.50	10.0	7.0	100.0
SMF4740AQ	9.50	10.0	10.50	25.0	7.0	700	0.25	10.0	7.6	91.0
SMF4741AQ	10.45	11.0	11.55	23.0	8.0	700	0.25	5.0	8.4	83.0
SMF4742AQ	11.40	12.0	12.60	21.0	9.0	700	0.25	5.0	9.1	76.0
SMF4743AQ	12.35	13.0	13.65	19.0	10.0	700	0.25	5.0	9.9	69.0
SMF4744AQ	14.25	15.0	15.75	17.0	14.0	700	0.25	5.0	11.4	61.0
SMF4745AQ	15.20	16.0	16.80	15.5	16.0	700	0.25	5.0	12.2	57.0
SMF4746AQ	17.10	18.0	18.90	14.0	20.0	750	0.25	5.0	13.7	50.0
SMF4747AQ	19.00	20.0	21.00	12.5	22.0	750	0.25	5.0	15.2	45.0
SMF4748AQ	20.90	22.0	23.10	11.5	23.0	750	0.25	5.0	16.7	41.0
SMF4749AQ	22.80	24.0	25.20	10.5	25.0	750	0.25	5.0	18.2	38.0
SMF4750AQ	25.65	27.0	28.35	9.5	35.0	750	0.25	5.0	20.6	34.0
SMF4751AQ	28.50	30.0	31.50	8.5	40.0	1000	0.25	5.0	22.8	30.0
SMF4752AQ	31.35	33.0	34.65	7.5	45.0	1000	0.25	5.0	25.1	27.0
SMF4753AQ	34.20	36.0	37.80	7.0	50.0	1000	0.25	5.0	27.4	25.0
SMF4754AQ	37.05	39.0	40.95	6.5	60.0	1000	0.25	5.0	29.7	23.0
SMF4755AQ	40.85	43.0	45.15	6.0	70.0	1500	0.25	5.0	32.7	22.0
SMF4756AQ	44.65	47.0	49.35	5.5	80.0	1500	0.25	5.0	35.8	19.0
SMF4757AQ	48.45	51.0	53.55	5.0	95.0	1500	0.25	5.0	38.8	18.0
SMF4758AQ	53.20	56.0	58.80	4.5	110.0	2000	0.25	5.0	42.6	16.0
SMF4759AQ	58.90	62.0	65.10	4.0	125.0	2000	0.25	5.0	47.1	14.0
SMF4760AQ	64.60	68.0	71.40	3.7	150.0	2000	0.25	5.0	51.7	13.0
SMF4761AQ	71.25	75.0	78.75	3.3	175.0	2000	0.25	5.0	56.0	12.0
SMF4762AQ	77.90	82.0	86.10	3.0	200.0	3000	0.25	5.0	62.2	11.0
SMF4763AQ	86.45	91.0	95.55	2.8	250.0	3000	0.25	5.0	69.2	10.0
SMF4764AQ	95.00	100.0	105.00	2.5	350.0	3000	0.25	5.0	76.0	9.0

Notes:

(1) Nominal Zener voltage Range: 95% Typ.V_Z (1)at I_{ZT}---105% Typ.V_Z (1)at I_{ZT}



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■ Characteristics (Typical)

Fig1 : Power Temperature Derating Curve

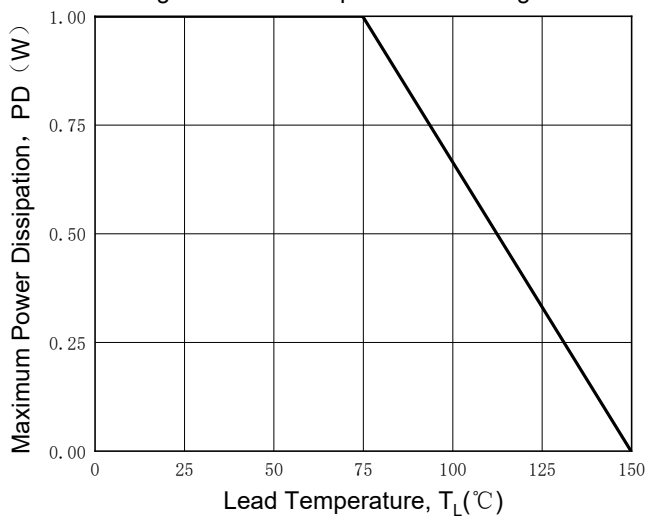


Fig2 : Typical Zener Breakdown Characteristics

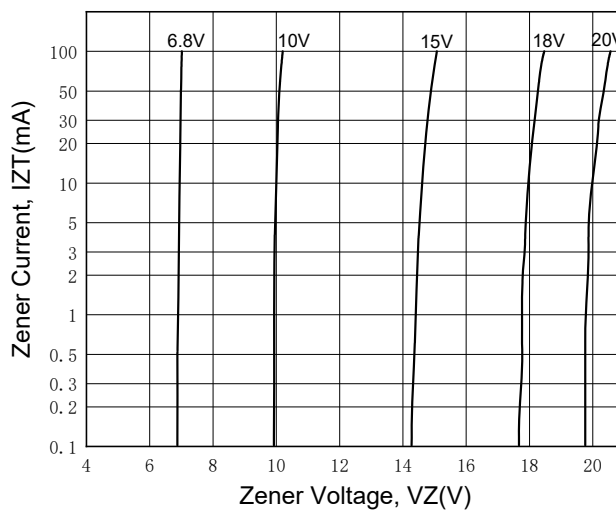
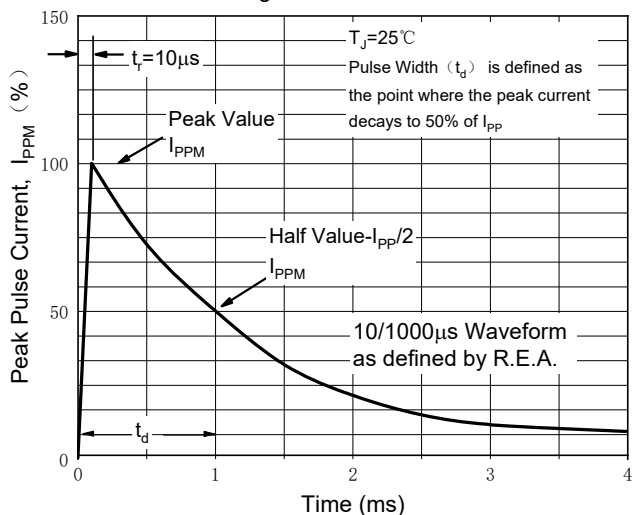


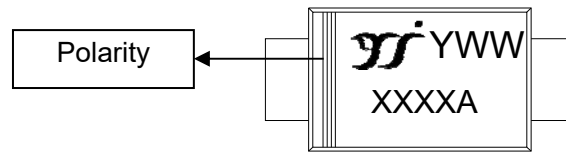
Fig.3 Pulse Waveform





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■ Marking Information



Note:

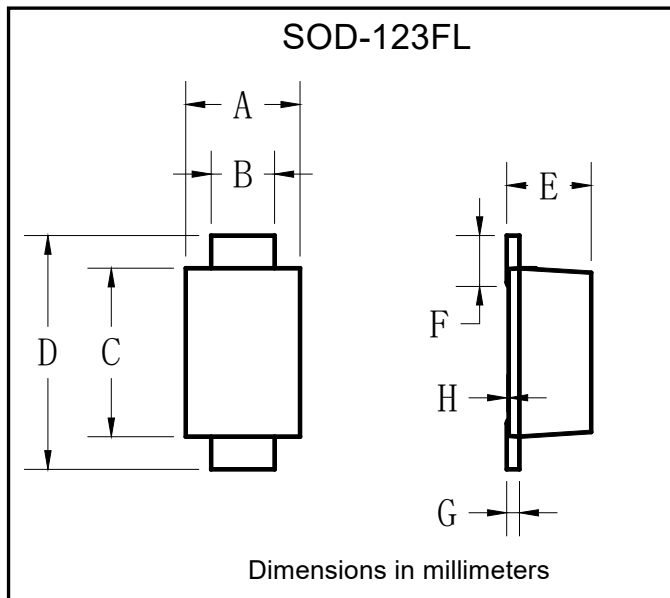
1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXXA is marking code, like SMF4735AQ marking code is 4735
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 45th week of 2021, date code is 145

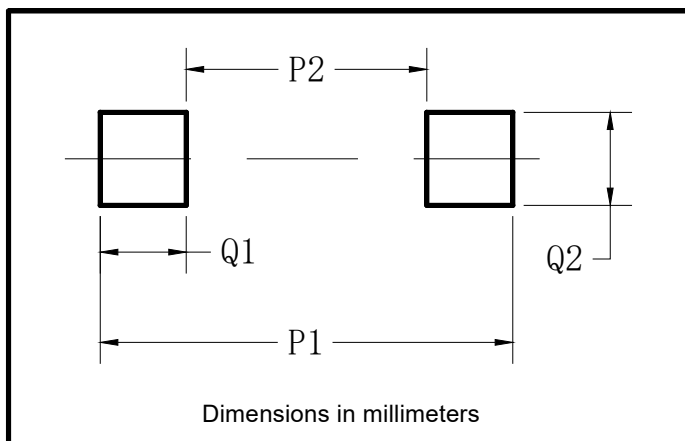
The 45th week of 2022, date code is 245

■ 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



SMF4735AQ THRU SMF4764AQ

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