



SMF4728A THRU SMF4764A

ZENER DIODES

ZENER VOLTAGE: 3.3 TO 100 VOLTS

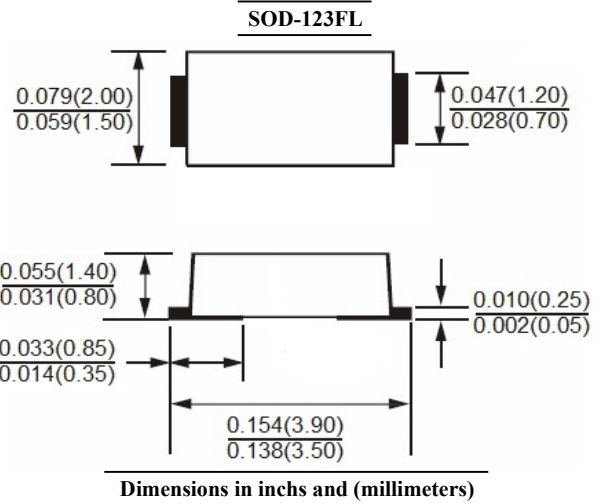
POWER DISSIPATION: 1.0 WATTS

FEATURES

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Suffix " H " indicated Halogen-free part, ex.SMF4728AH

MECHANICAL DATA

Case : Molded plastic SOD-123FL
 Epoxy : UL 94V-0 rate flame retardant
 Lead : Solderable per MIL-STD-750, method 2026
 Polarity : Color band denotes cathode end
 Mounting position : Any



Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Symbol	Value	Unit
DC power dissipation at T _L =50 °C ⁽¹⁾	P _D	1.0	W
Maximum forward voltage at I _F =200mA	V _F	1.2	V
Maximum thermal resistance junction to ambient air ⁽²⁾	R _{θJA}	170	K/W
Junction Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Note:

- (1) T_L=Lead temperature at 3/8"(9.5mm) from body.
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



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Electrical Characteristics

Type	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse leakage Current		Maximum DC Zener Current	Maximum Surge Current
	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	I_R	V_R	I_{ZM}	I_{RM}
	V	mA	Ohm	Ohm	mA	uA	V	mA	mApk
SMF4728A	3.3	76.0	10.0	400	1.00	100	1.0	274	1370
SMF4729A	3.6	69.0	10.0	400	1.00	100	1.0	251	1255
SMF4730A	3.9	64.0	9.0	400	1.00	50.0	1.0	232	1160
SMF4731A	4.3	58.0	9.0	400	1.00	10.0	1.0	210	1050
SMF4732A	4.7	53.0	8.0	500	1.00	10.0	1.0	192	960
SMF4733A	5.1	49.0	7.0	550	1.00	10.0	1.0	177	885
SMF4734A	5.6	45.0	5.0	600	1.00	10.0	2.0	161	805
SMF4735A	6.2	41.0	2.0	700	1.00	10.0	3.0	146	730
SMF4736A	6.8	37.0	3.5	700	1.00	5.0	4.0	133	660
SMF4737A	7.5	34.0	4.0	700	0.50	5.0	5.0	121	605
SMF4738A	8.2	31.0	4.5	700	0.50	5.0	6.0	110	550
SMF4739A	9.1	28.0	5.0	700	0.50	0.5	7.0	100	500
SMF4740A	10.0	25.0	7.0	700	0.25	0.5	7.6	91	454
SMF4741A	11.0	23.0	8.0	700	0.25	0.1	8.4	83	414
SMF4742A	12.0	21.0	9.0	700	0.25	0.1	9.1	76	380
SMF4743A	13.0	19.0	10.0	700	0.25	0.1	9.9	69	344
SMF4744A	15.0	17.0	14.0	700	0.25	0.1	11.4	61	305
SMF4745A	16.0	15.5	16.0	700	0.25	0.1	12.2	57	285
SMF4746A	18.0	14.0	20.0	750	0.25	0.1	13.7	50	250
SMF4747A	20.0	12.5	22.0	750	0.25	0.1	15.2	45	225
SMF4748A	22.0	11.5	23.0	750	0.25	0.1	16.7	41	205
SMF4749A	24.0	10.5	25.0	750	0.25	0.1	18.2	38	190
SMF4750A	27.0	9.5	35.0	750	0.25	0.1	20.6	34	170
SMF4751A	30.0	8.5	40.0	1000	0.25	0.1	22.8	30	150
SMF4752A	33.0	7.5	45.0	1000	0.25	0.1	25.1	27	135
SMF4753A	36.0	7.0	50.0	1000	0.25	0.1	27.4	25	125
SMF4754A	39.0	6.5	60.0	1000	0.25	0.1	29.7	23	115
SMF4755A	43.0	6.0	70.0	1500	0.25	0.1	32.7	22	110
SMF4756A	47.0	5.5	80.0	1500	0.25	0.1	35.8	19	95
SMF4757A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18	90
SMF4758A	56.0	4.5	110	2000	0.25	0.1	42.6	16	80
SMF4759A	62.0	4.0	125	2000	0.25	0.1	47.1	14	70
SMF4760A	68.0	3.7	150	2000	0.25	0.1	51.7	13	65
SMF4761A	75.0	3.3	175	2000	0.25	0.1	56.0	12	60
SMF4762A	82.0	3.0	200	3000	0.25	0.1	62.2	11	55
SMF4763A	91.0	2.8	250	3000	0.25	0.1	69.2	10	50
SMF4764A	100.0	2.5	350	3000	0.25	0.1	76.0	9	45

NOTES:

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method



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RATINGS AND CHARACTERISTIC CURVES

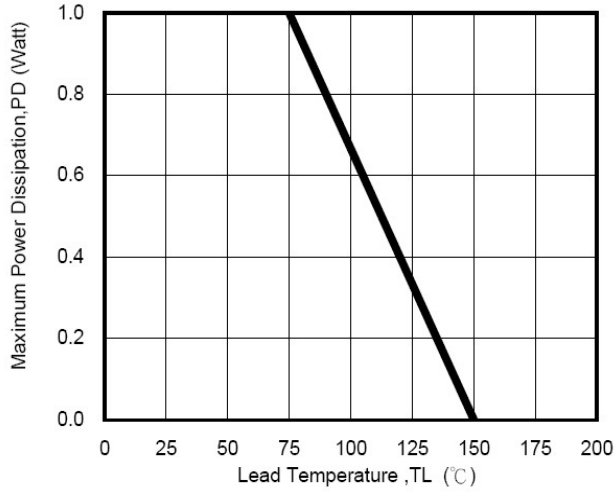


Fig. 1 - Power Temperature Derating Curve

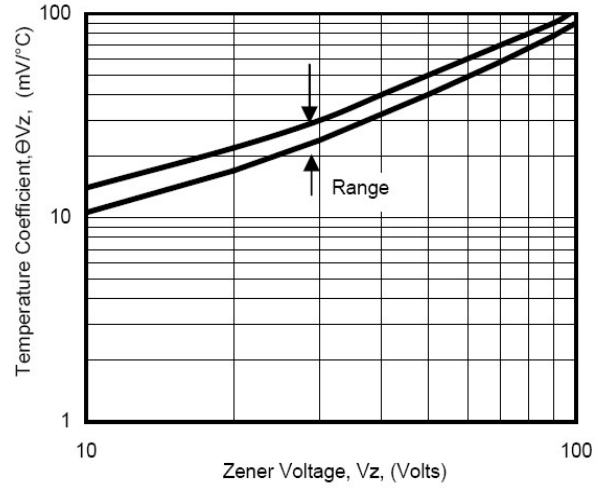


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

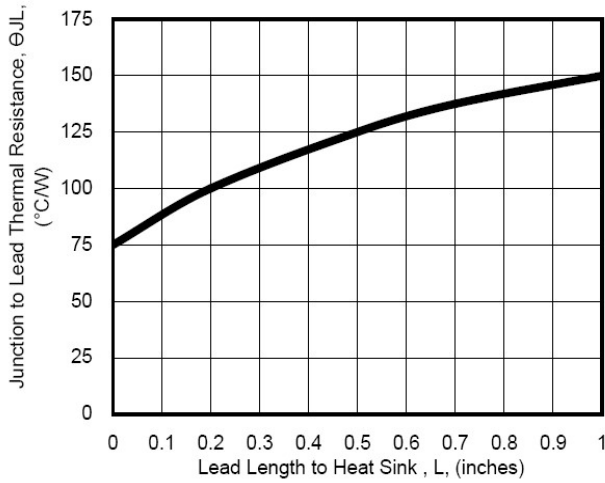


Fig. 3 - Typical Thermal Resistance v.s. Lead Length