Zener Diode

RoHS Compliant

Features

- Low profile package
- Built-in strain relief
- Low inductance
- High temperature soldering : 260°C/10 seconds at terminals
- Glass package has Underwriters Laboratory Flammability Classification

Specifications

Reverse Voltage : 3.3 Volts to 75 Volts
Forward Current : 1 Watts
Case : Molded Glass DO-41G
Terminals : Axial leads, solderable per MIL-STD-750, Method 2026 guaranteed
Polarity : Colour band denotes positive end
Mounting position : Any
Weight : 0.012 ounce, 0.336 gram

Ratings at 25°C ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Power Dissipation at T_{AMB}=25°C	Ptot	1*	W
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-65 to +200	

*Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction Ambient Air	$R_{\theta JA}$	-	-	170*	K/W
Forward Voltage at I_F=200mA	V_F	-	-	1.2	V

*Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

Specification Table

Nominal Zener Voltage			Max. Zener Impedance				Maximum Leakage Current		Part Number
Vz @ Izt			Zzt @ Izt		Zzt @ Izk		Ir @ Vr		
Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	µA	V	
3.3	3.14	3.47	10	76	400	1	100	1	1N4728A
3.6	3.42	3.78	10	69	400	1	100	1	1N4729A
3.9	3.71	4.1	9	64	400	1	50	1	1N4730A
4.3	4.09	4.52	9	58	400	1	10	1	1N4731A
4.7	4.47	4.94	8	53	500	1	10	1	1N4732A
5.1	4.85	5.36	7	49	550	1	10	1	1N4733A
5.6	5.32	5.88	5	45	600	1	10	2	1N4734A
6.2	5.89	6.51	2	41	700	1	10	3	1N4735A

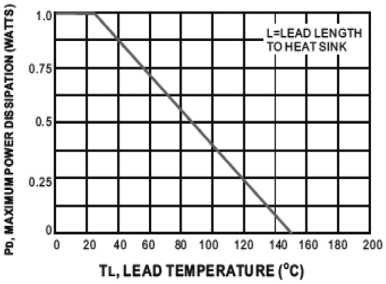
Zener Diode

multicomp PRO

Nominal Zener Voltage			Max. Zener Impedance				Maximum Leakage Current		Part Number
Vz @ Izt			Zzt @ Izt		Zzt @ Izk		Ir @ Vr		
Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	µA	V	
6.8	6.46	7.14	3.5	37	700	1	10	4	1N4736A
7.5	7.13	7.88	4	34	700	0.5	10	5	1N4737A
8.2	7.79	8.61	4.5	31	700	0.5	10	6	1N4738A
9.1	8.65	9.56	5	28	700	0.5	10	7	1N4739A
10	9.5	10.5	7	25	700	0.25	10	7.6	1N4740A
11	10.45	11.55	8	23	700	0.25	5	8.4	1N4741A
12	11.4	12.6	9	21	700	0.25	5	9.1	1N4742A
13	12.35	13.65	10	19	700	0.25	5	9.9	1N4743A
15	14.25	15.75	14	17	700	0.25	5	11.4	1N4744A
16	15.2	16.8	16	15.5	700	0.25	5	12.2	1N4745A
18	17.1	18.9	20	14	750	0.25	5	13.7	1N4746A
20	19	21	22	12.5	750	0.25	5	15.2	1N4747A
22	20.9	23.1	23	11.5	750	0.25	5	16.7	1N4748A
24	22.8	25.2	25	10.5	750	0.25	5	18.2	1N4749A
27	25.65	28.35	35	9.5	750	0.25	5	20.6	1N4750A
30	28.5	31.5	40	8.5	1000	0.25	5	22.8	1N4751A
33	31.35	34.65	45	7.5	1000	0.25	5	25.1	1N4752A
36	34.2	37.8	50	7	1000	0.25	5	27.4	1N4753A
39	37.05	40.95	60	6.5	1000	0.25	5	29.7	1N4754A
43	40.85	45.15	70	6	1500	0.25	0.1	32.7	1N4755A
47	44.65	49.35	80	5.5	1500	0.25	0.1	35.8	1N4756A
51	48.45	53.55	95	5	1500	0.25	0.1	38.8	1N4757A
56	53.2	58.8	110	4.5	2000	0.25	0.1	42.6	1N4758A
62	58.9	65.1	125	4	2000	0.25	0.1	47.1	1N4759A
68	64.6	71.4	150	3.7	2000	0.25	0.1	51.7	1N4760A
75	71.25	78.75	175	3.3	2000	0.25	-	-	1N4761A

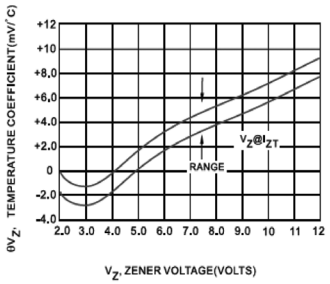
Rating and Characteristic Curves

FIG. 1 - POWER TEMPERATURE DERATING CURVE



Temperature Coefficients
(-55°C to +150°C temperature range; 90% of the units are in the ranges indicated)

a.RANGE FOR UNITS TO 12 VOLTS



b.RANGE FOR UNITS 12 TO 100 VOLTS

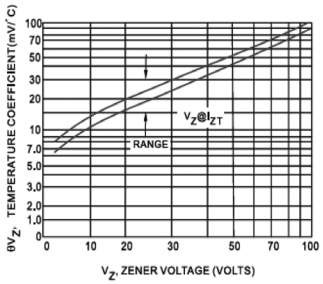


FIG. 3 - TYPICAL THERMAL RESISTANCE versus LEAD LENGTH

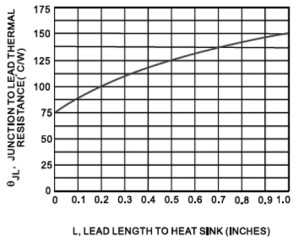


FIG. 4 - EFFECT OF ZENER CURRENT

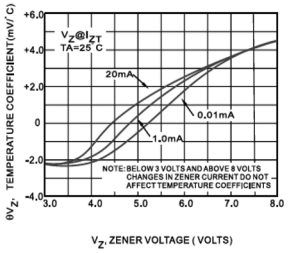
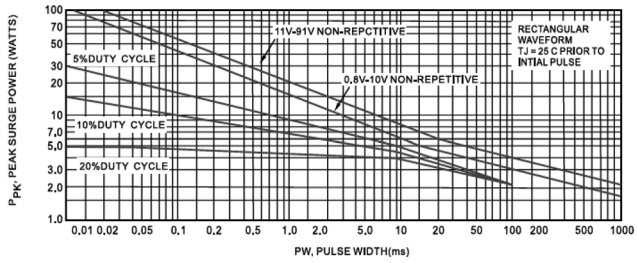


FIG. 5 - MAXIMUM SURGE POWER



This graph represents 90 percentile data points.
FOR worst-case design characteristics, multiply surge power by 2/3

FIG.6- EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

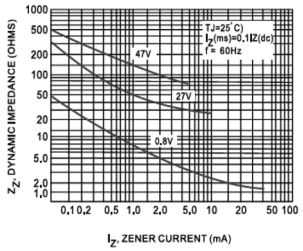


FIG. 7 - EFFECT OF ZENER VOLTAGE ON ZENER

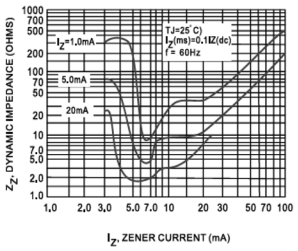


FIG. 8 - TYPICAL LEAKAGE CURRENT

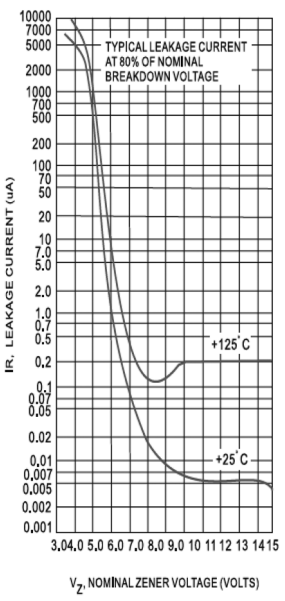


FIG. 9 - TYPICAL CAPACITANGE versus Vz

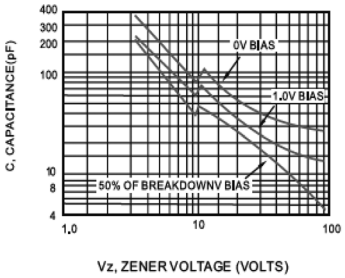
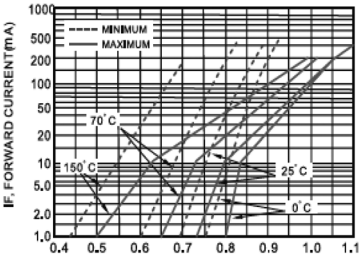


FIG. 10 - TYPICAL FORWAWD CHARACTERISTICS



Diagram