Micro Commercial Components

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1N4736AP THRU 1N4764AP

1.0 Watt
Zener Diode
6.8 to 100 Volts

Features

- Wide Zener Voltage Range Available
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Glass Passivated Zener Didoe
- Lead Free Finish/Rohs Compliant (Note2) ("P"Suffix designates Compliant. See ordering information)

Mechanical Data

- Case: DO-41 Plastic Package
- Marking : Cathode band and type number(no "P" suffix incldued)
- Weight: 0.33 grams (Approx.)

Maximum Ratings

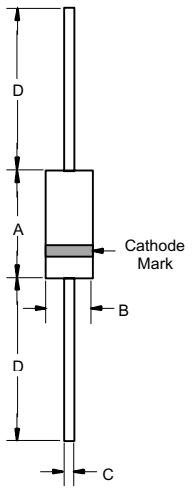
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- For capacitive load, derate current by 20%

Electrical Characteristics @ 25°C Unless Otherwise Specified

DC Power Dissipation	P_d	1.0W	$T_A \leq 50^oC$
Forward Voltage Drop	V_F	1.2V	
Thermal Resistance	R_{thJA}	100K/W	Note 1

Note: (1) Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature.
(2). High Temperature Solder Exemptions Applied,see EU Directive Annex 7a.

DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

1N4736AP thru 1N4764AP

Electrical Characteristics (T_A = 25°C unless otherwise noted). Maximum V_F = 1.2V at I_F = 200mA

MCC Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
	VZ @ IZT	IZT	ZZT @ IZT	ZZK @ IZK	IZK	IR @ VR		IZM	IRM
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
1N4736AP	6.8	37.0	3.5	700	1.0	10	4.0	133	660
1N4737AP	7.5	34.0	4.0	700	0.5	10	5.0	121	605
1N4738AP	8.2	31.0	4.5	700	0.5	10	6.0	110	550
1N4739AP	9.1	28.0	5.0	700	0.5	10	7.0	100	500
1N4740AP	10	25.0	7.0	700	0.25	10	7.6	91	454
1N4741AP	11	23.0	8.0	700	0.25	5.0	8.4	83	414
1N4742AP	12	21.0	9.0	700	0.25	5.0	9.1	76	380
1N4743AP	13	19.0	10	700	0.25	5.0	9.9	69	344
1N4744AP	15	17.0	14	700	0.25	5.0	11.4	61	305
1N4745AP	16	15.5	16	700	0.25	5.0	12.2	57	285
1N4746AP	18	14.0	20	750	0.25	5.0	13.7	50	250
1N4747AP	20	12.5	22	750	0.25	5.0	15.2	45	225
1N4748AP	22	11.5	23	750	0.25	5.0	16.7	41	205
1N4749AP	24	10.5	25	750	0.25	5.0	18.2	38	190
1N4750AP	27	9.5	35	750	0.25	5.0	20.6	34	170
1N4751AP	30	8.5	40	1000	0.25	5.0	22.8	30	150
1N4752AP	33	7.5	45	1000	0.25	5.0	25.1	27	135
1N4753AP	36	7.0	50	1000	0.25	5.0	27.4	25	125
1N4754AP	39	6.5	60	1000	0.25	5.0	29.7	23	115
1N4755AP	43	6.0	70	1500	0.25	5.0	32.7	22	110
1N4756AP	47	5.5	80	1500	0.25	5.0	35.8	19	95
1N4757AP	51	5.0	95	1500	0.25	5.0	38.8	18	90
1N4758AP	56	4.5	110	2000	0.25	5.0	42.6	16	80
1N4759AP	62	4.0	125	2000	0.25	5.0	47.1	14	70
1N4760AP	68	3.7	150	2000	0.25	5.0	51.7	13	65
1N4761AP	75	3.3	175	2000	0.25	5.0	56.0	12	60
1N4762AP	82	3.0	200	3000	0.25	5.0	62.2	11	55
1N4763AP	91	2.8	250	3000	0.25	5.0	69.2	10	50
1N4764AP	100	2.5	350	3000	0.25	5.0	76.0	9.0	45

Note 1: The JEDEC type number shown with an A suffix have a 5% tolerance.

2: The Zener impedance is derived from the 60 Hz ac voltage, which results when an ac current having an rms value equal to 10% of the DC Zener current(I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and eliminate unstable units.

3: The reverse surge current is measured at 25°C ambient using a 1/2 square wave or equivalent sine wave pulse 1/120 second duration superimposed on I_{ZT}.

4: Voltage measurements tobe performed 90 seconds after application of DC current.

5: RoHs Compliant already and Pb-free sticker on reel , box & carton indicated RoHs compliant .

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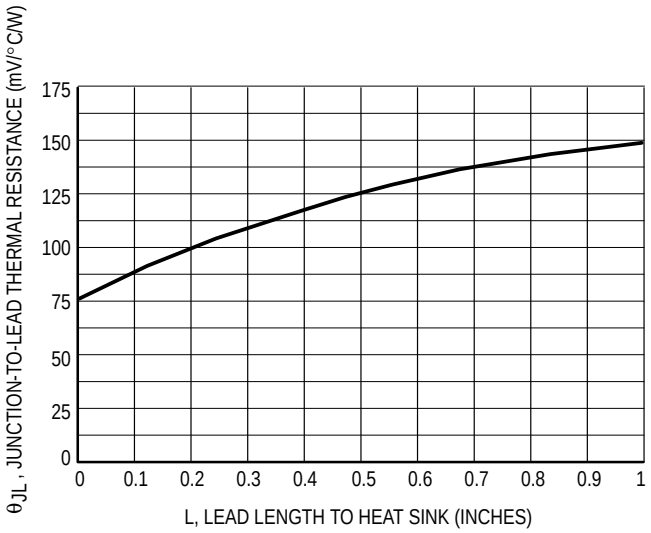


Figure 1. Typical Thermal Resistance versus Lead Length

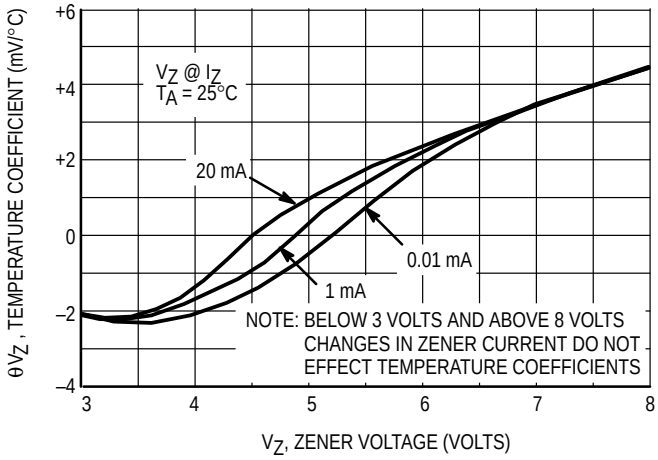


Figure 2. Effect of Zener Current

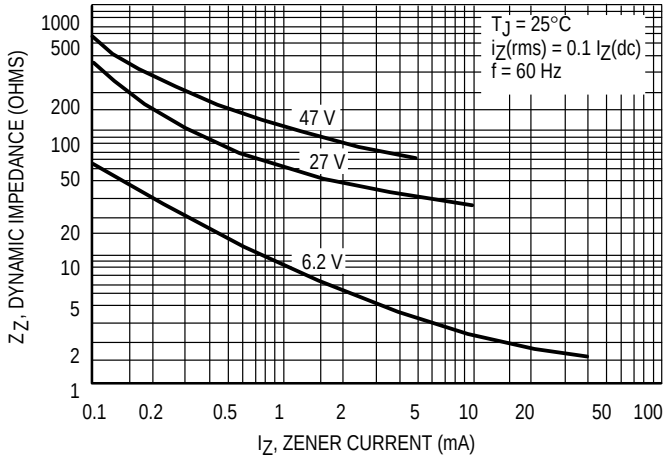


Figure 3. Effect of Zener Current on Zener Impedance

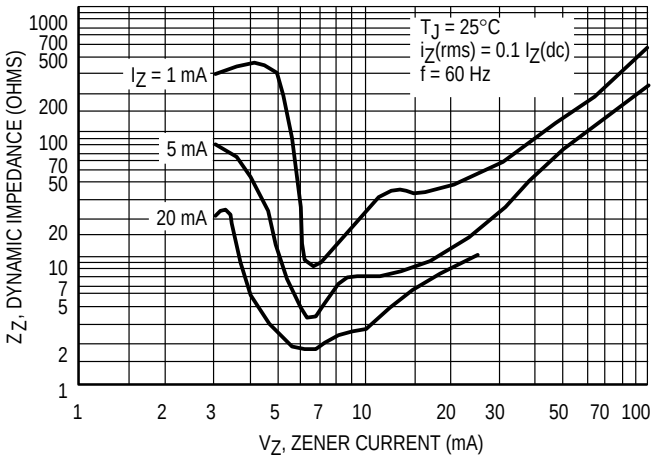
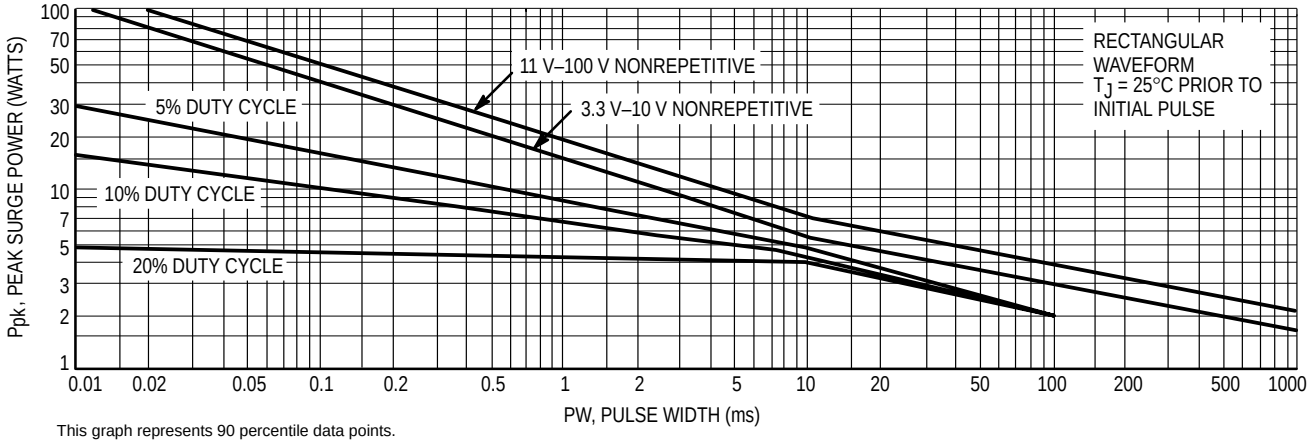


Figure 4. Effect of Zener Voltage on Zener Impedance



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

Figure 5. Maximum Surge Power

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Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel; 5Kpcs/Reel
(Part Number)-AP	Ammo Packing;5Kpcs/AmmoBox
(Part Number)-BP	Bulk;1Kpcs/Box

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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