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Jameco Part Number 1538030

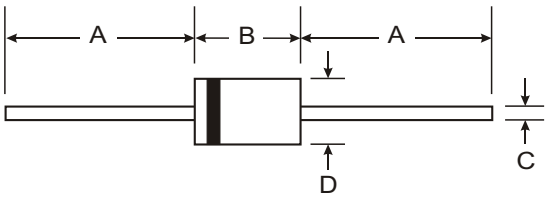
1N4728A - 1N4761A

1.0W ZENER DIODE

SPICE MODELS: 1N4728A 1N4729A 1N4730A 1N4731A 1N4732A 1N4733A 1N4734A 1N4735A 1N4736A 1N4737A 1N4738A 1N4739A 1N4740A 1N4741A 1N4742A 1N4743A 1N4744A 1N4745A 1N4746A 1N4747A 1N4748A 1N4749A 1N4750A 1N4751A 1N4752A 1N4753A 1N4754A 1N4755A 1N4756A 1N4757A 1N4758A 1N4759A 1N4760A 1N4761A

Features

- 1.0 Watt Power Dissipation
- 3.3V - 75V Nominal Zener Voltage
- Standard V_Z Tolerance is 5%
- **Lead Free Finish, RoHS Compliant (Note 2)**



Mechanical Data

- Case: DO-41
- Case Material: Glass. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Sn96.5Ag3.5. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.35 grams (approximate)

DO-41 Glass		
Dim	**Min**	**Max**
A	26.0	—
B	—	4.10
C	—	0.86
D	—	2.60
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Zener Current (see Table page 2)	I_Z	Pd / V_Z	mA
Power Dissipation Derate Above 50°C (Note 1)	P_d	1.0 6.67	W mW/°C
Thermal Resistance - Junction to Ambient Air	R_{JA}	175	°C/W
Forward Voltage @ I_F = 200 mA	V_F	1.2	V
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to + 175	°C

Note: 1. Valid provided that leads are kept at T_L @ 50 C with lead length = 9.5mm (3/8") from case.
2. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied where applicable, see *EU Directive Annex Notes 5 and 7.*

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Type Number	Nominal Zener Voltage (Note 3)	Test Current	Maximum Zener Impedance (Note 4)			Maximum Reverse Leakage Current		Max Surge Current 8.3ms	Temperature Coefficient @ I_{ZT}
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	@ V_R	I_{ZS}	
	(V)	(mA)	( )	( )	(mA)	(µA)	(V)	(mA)	%/°C
1N4728A	3.3	76	10	400	1.0	100	1.0	1380	-0.08 to -0.05
1N4729A	3.6	69	10	400	1.0	100	1.0	1260	-0.08 to -0.05
1N4730A	3.9	64	9.0	400	1.0	50	1.0	1190	-0.07 to -0.02
1N4731A	4.3	58	9.0	400	1.0	10	1.0	1070	-0.07 to -0.01
1N4732A	4.7	53	8.0	500	1.0	10	1.0	970	-0.03 to +0.04
1N4733A	5.1	49	7.0	550	1.0	10	1.0	890	-0.01 to +0.04
1N4734A	5.6	45	5.0	600	1.0	10	2.0	810	0 to +0.045
1N4735A	6.2	41	2.0	700	1.0	10	3.0	730	+0.01 to +0.055
1N4736A	6.8	37	3.5	700	1.0	10	4.0	660	+0.015 to +0.06
1N4737A	7.5	34	4.0	700	0.5	10	5.0	605	+0.02 to +0.065
1N4738A	8.2	31	4.5	700	0.5	10	6.0	550	0.03 to 0.07
1N4739A	9.1	28	5.0	700	0.5	10	7.0	500	0.035 to 0.075
1N4740A	10	25	7.0	700	0.25	10	7.6	454	0.04 to 0.08
1N4741A	11	23	8.0	700	0.25	5.0	8.4	414	0.045 to 0.08
1N4742A	12	21	9.0	700	0.25	5.0	9.1	380	0.045 to 0.085
1N4743A	13	19	10	700	0.25	5.0	9.9	344	0.05 to 0.085
1N4744A	15	17	14	700	0.25	5.0	11.4	304	0.055 to 0.09
1N4745A	16	15.5	16	700	0.25	5.0	12.2	285	0.055 to 0.09
1N4746A	18	14	20	750	0.25	5.0	13.7	250	0.06 to 0.09
1N4747A	20	12.5	22	750	0.25	5.0	15.2	225	0.06 to 0.09
1N4748A	22	11.5	23	750	0.25	5.0	16.7	205	0.06 to 0.095
1N4749A	24	10.5	25	750	0.25	5.0	18.2	190	0.06 to 0.095
1N4750A	27	9.5	35	750	0.25	5.0	20.6	170	0.06 to 0.095
1N4751A	30	8.5	40	1000	0.25	5.0	22.8	150	0.06 to 0.095
1N4752A	33	7.5	45	1000	0.25	5.0	25.1	135	0.06 to 0.095
1N4753A	36	7.0	50	1000	0.25	5.0	27.4	125	0.06 to 0.095
1N4754A	39	6.5	60	1000	0.25	5.0	29.7	115	0.06 to 0.095
1N4755A	43	6.0	70	1500	0.25	5.0	32.7	110	0.06 to 0.095
1N4756A	47	5.5	80	1500	0.25	5.0	35.8	95	0.06 to 0.095
1N4757A	51	5.0	95	1500	0.25	5.0	38.8	90	0.06 to 0.095
1N4758A	56	4.5	110	2000	0.25	5.0	42.6	80	0.06 to 0.095
1N4759A	62	4.0	125	2000	0.25	5.0	47.1	70	0.06 to 0.095
1N4760A	68	3.7	150	2000	0.25	5.0	51.7	65	0.06 to 0.095
1N4761A	75	3.3	175	2000	0.25	5.0	56.0	60	0.06 to 0.095

Notes: 3. Measured under thermal equilibrium and dc (I_{ZT}) test conditions.

4. 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 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 to eliminate unstable units.

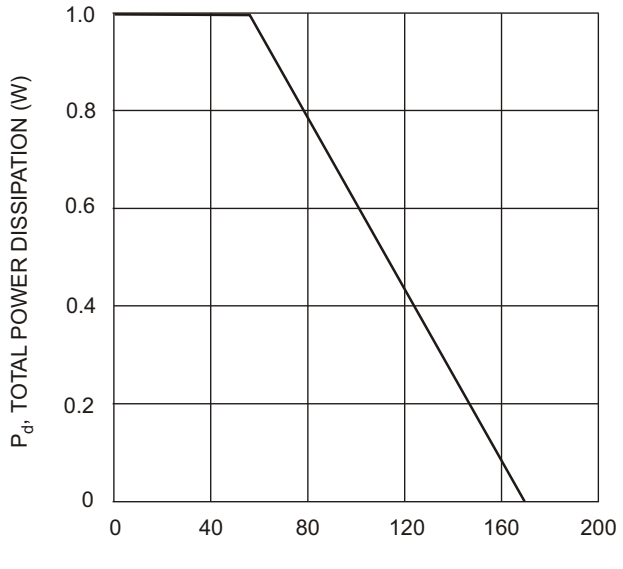


Fig.1 Power Dissipation vs Ambient Temperature

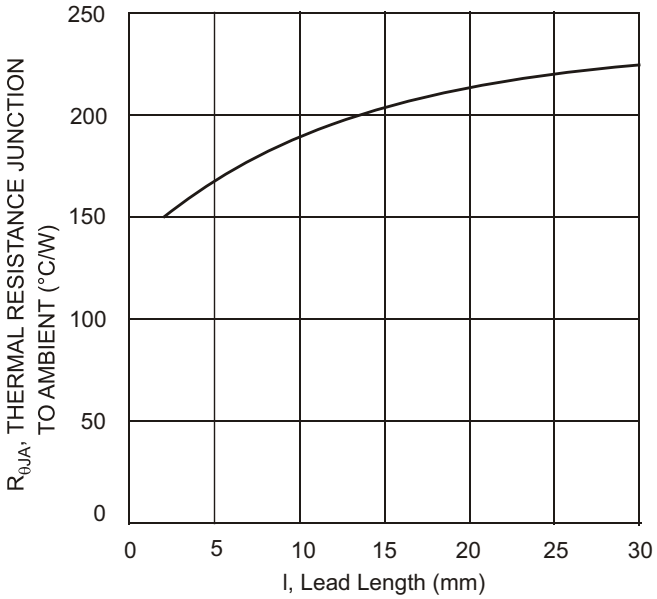


Fig. 2 Typical Thermal Resistance vs. Lead Length

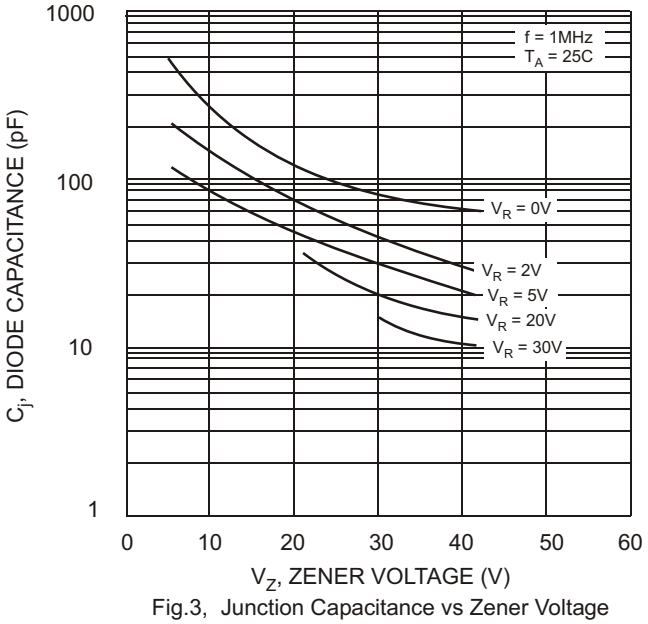


Fig.3, Junction Capacitance vs Zener Voltage

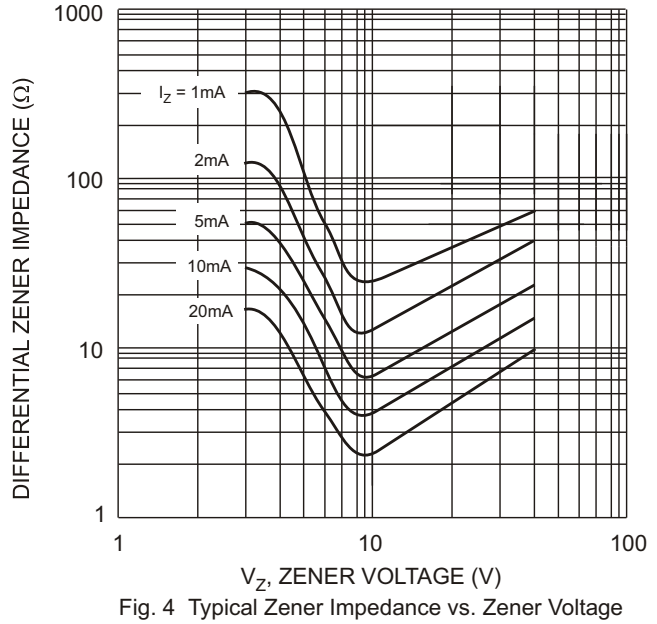


Fig. 4 Typical Zener Impedance vs. Zener Voltage

Ordering Information (Note 6)

Device	Packaging	Shipping
(Type Number)-A*	DO-41	5K/Ammo Pack
(Type Number)-T*	DO-41	5K/Tape & Reel

Notes: 5. *Add "-A" or "-T" to the appropriate type number in Table 1. Example: 6.2V Zener = 1N4735A-A for ammo pack.
6. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf

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