

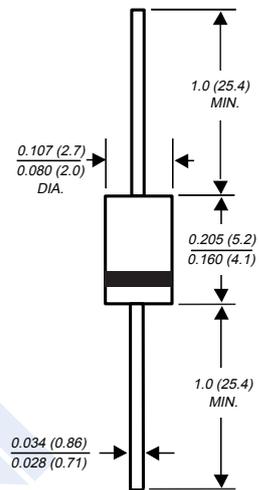
Zener Diodes

1N4728A ~ 1N4758A

■ Features

- Zener Voltage Range 3.3 to 56 Volts
- Through-Hole Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- RoHS Compliant

DO-41



Dimensions in inches and (millimeters)

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Power Dissipation	P_d	1	W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	100	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	53.5	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	200	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 200	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Device Type	$V_Z @ I_{ZT}$ (Volts) Nominal	I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
1N4728A	3.3	76	10	1	400	100	1
1N4729A	3.6	69	10	1	400	100	1
1N4730A	3.9	64	9	1	400	50	1
1N4731A	4.3	58	9	1	400	10	1
1N4732A	4.7	53	8	1	500	10	1
1N4733A	5.1	49	7	1	550	10	1
1N4734A	5.6	45	5	1	600	10	2
1N4735A	6.2	41	2	1	700	10	3
1N4736A	6.8	37	3.5	1	700	10	4
1N4737A	7.5	34	4	0.5	700	10	5
1N4738A	8.2	31	4.5	0.5	700	10	6
1N4739A	9.1	28	5	0.5	700	10	7
1N4740A	10	25	7	0.25	700	10	7.6
1N4741A	11	23	8	0.25	700	5	8.4
1N4742A	12	21	9	0.25	700	5	9.1
1N4743A	13	19	10	0.25	700	5	9.9

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■ Typical Characteristics

Device Type	V _Z @ I _{ZT} (Volts) Nominal	I _{ZT} (mA)	Z _{ZT} @ I _{ZT} (Ω) Max	I _{ZK} (mA)	Z _{ZK} @ I _{ZK} (Ω) Max	I _R @ V _R (μA) Max	V _R (Volts)
1N4744A	15	17	14	0.25	700	5	11.4
1N4745A	16	15.5	16	0.25	700	5	12.2
1N4746A	18	14	20	0.25	700	5	13.7
1N4747A	20	12.5	22	0.25	750	5	15.2
1N4748A	22	11.5	23	0.25	750	5	16.7
1N4749A	24	10.5	25	0.25	750	5	18.2
1N4750A	27	9.5	35	0.25	750	5	20.6
1N4751A	30	8.5	40	0.25	1000	5	22.8
1N4752A	33	7.5	45	0.25	1000	5	25.1
1N4753A	36	7	50	0.25	1000	5	27.4
1N4754A	39	6.5	60	0.25	1000	5	29.7
1N4755A	43	6	70	0.25	1500	5	32.7
1N4756A	47	5.5	80	0.25	1500	5	35.8
1N4757A	51	5	95	0.25	1500	5	38.8
1N4758A	56	4.5	110	0.25	2000	5	42.6

V_F Forward Voltage = 1.2 V Maximum @ I_F = 200 mA for all types

Notes:

1. TOLERANCE AND TYPE NUMBER DESIGNATION (V_Z)

The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$. Device tolerance of $\pm 2\%$ is indicated by a "C" instead of an "A".

2. SPECIALS AVAILABLE INCLUDE

Nominal zener voltages between the voltages shown and tighter voltage, for detailed information on price, availability and delivery, contact you nearest Tak Cheong representative.

3. ZENER VOLTAGE (V_Z) MEASUREMENT

The zener voltage (V_Z) is tested under pulse condition. The measured V_Z is guaranteed to be within specification with device junction in thermal equilibrium.

4. ZENER IMPEDANCE (Z_Z) DERIVATION

The zener impedance is derived from the 60 cycle 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}.

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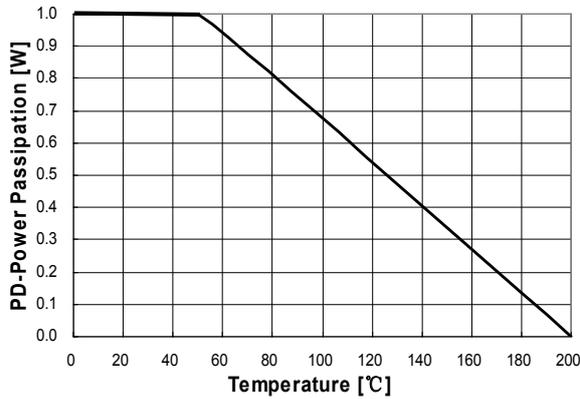


Figure 1. Power Dissipation vs Ambient Temperature
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

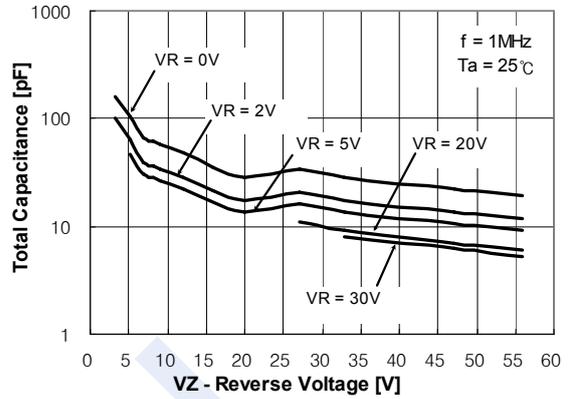


Figure 2. Total Capacitance

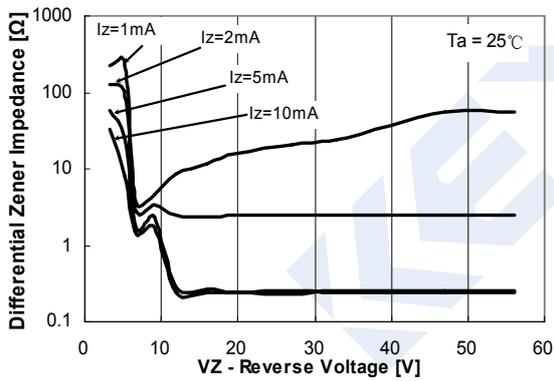


Figure 3. Differential Impedance vs. Zener Voltage

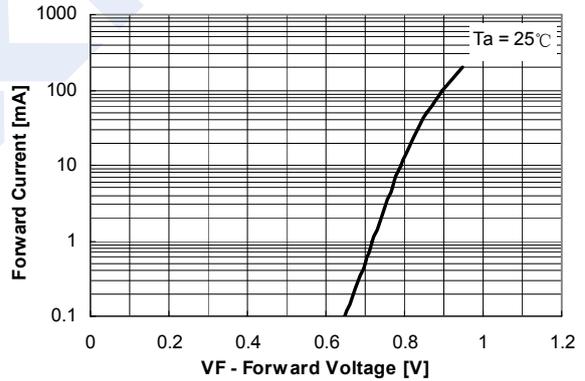


Figure 4. Forward Current vs. Forward Voltage

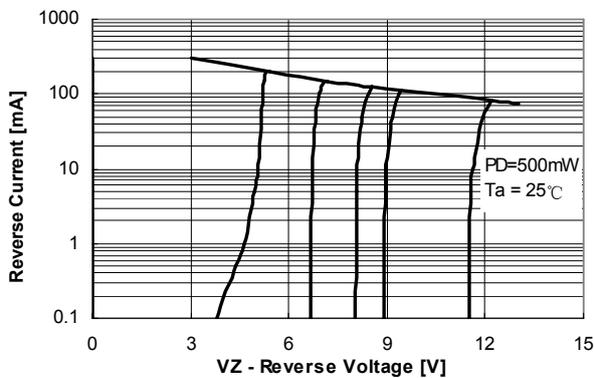


Figure 5. Reverse Current vs. Reverse Voltage

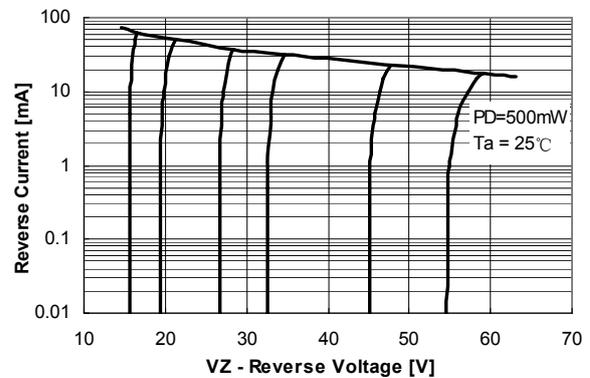


Figure 6. Reverse Current vs. Reverse Voltage