1 Watt DO-41 Hermetically Sealed Glass Zener Voltage Regulators

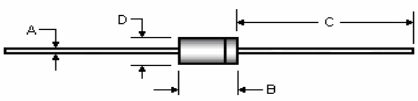
AXIAL LEAD
DO41

Absolute Maximum Ratings

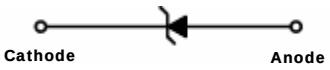
T_A = 25°C unless otherwise noted

Parameter	Value	Units
Storage Temperature Range	-65 to +200	°C
Maximum Junction Operating Temperature	+200	°C
Total Device Dissipation	1.0	Watt
Thermal Resistance Junction to Lead	53.5	°C / W
Thermal Resistance Junction to Ambient	100	°C / W

These ratings are limiting values above which the serviceability of the diode may be impaired.



DIM	D0-41			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.72	0.86	0.028	0.034
B	4.07	5.20	0.160	0.205
C	25.40	---	1.000	---
D	2.04	2.71	0.080	0.107



ELECTRICAL SYMBOL

Specification Features:

- Zener Voltage Range 3.3 to 56 Volts
- DO-41 Package (JEDEC)
- Through-Hole Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Leads Are Readily Solderable
- RoHS Compliant
- Solder Hot Dip Tin (Sn) Terminal Finish
- Cathode Indicated By Polarity Band

Electrical Characteristics

T_A = 25°C unless otherwise noted

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)
HG1N4728A	3.3	76	10	1	400	100	1
HG1N4729A	3.6	69	10	1	400	100	1
HG1N4730A	3.9	64	9	1	400	50	1
HG1N4731A	4.3	58	9	1	400	10	1
HG1N4732A	4.7	53	8	1	500	10	1
HG1N4733A	5.1	49	7	1	550	10	1
HG1N4734A	5.6	45	5	1	600	10	2
HG1N4735A	6.2	41	2	1	700	10	3
HG1N4736A	6.8	37	3.5	1	700	10	4
HG1N4737A	7.5	34	4	0.5	700	10	5
HG1N4738A	8.2	31	4.5	0.5	700	10	6
HG1N4739A	9.1	28	5	0.5	700	10	7
HG1N4740A	10	25	7	0.25	700	10	7.6
HG1N4741A	11	23	8	0.25	700	5	8.4
HG1N4742A	12	21	9	0.25	700	5	9.1
HG1N4743A	13	19	10	0.25	700	5	9.9

Electrical Characteristics T_A = 25°C unless otherwise noted

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)
HG1N4744A	15	17	14	0.25	700	5	11.4
HG1N4745A	16	15.5	16	0.25	700	5	12.2
HG1N4746A	18	14	20	0.25	700	5	13.7
HG1N4747A	20	12.5	22	0.25	750	5	15.2
HG1N4748A	22	11.5	23	0.25	750	5	16.7
HG1N4749A	24	10.5	25	0.25	750	5	18.2
HG1N4750A	27	9.5	35	0.25	750	5	20.6
HG1N4751A	30	8.5	40	0.25	1000	5	22.8
HG1N4752A	33	7.5	45	0.25	1000	5	25.1
HG1N4753A	36	7	50	0.25	1000	5	27.4
HG1N4754A	39	6.5	60	0.25	1000	5	29.7
HG1N4755A	43	6	70	0.25	1500	5	32.7
HG1N4756A	47	5.5	80	0.25	1500	5	35.8
HG1N4757A	51	5	95	0.25	1500	5	38.8
HG1N4758A	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 ± 5%. Device tolerance of ±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}.

Typical Characteristics

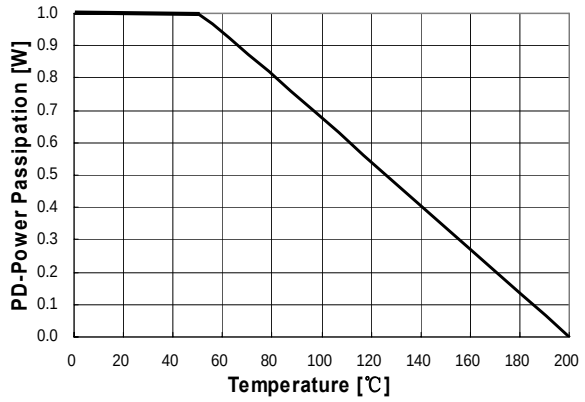


Figure 1. Power Dissipation vs Ambient Temperature
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

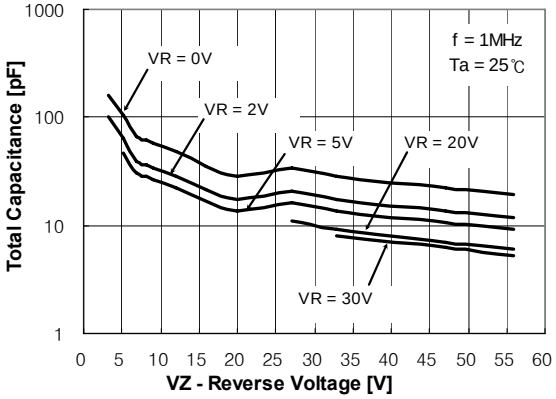


Figure 2. Total Capacitance

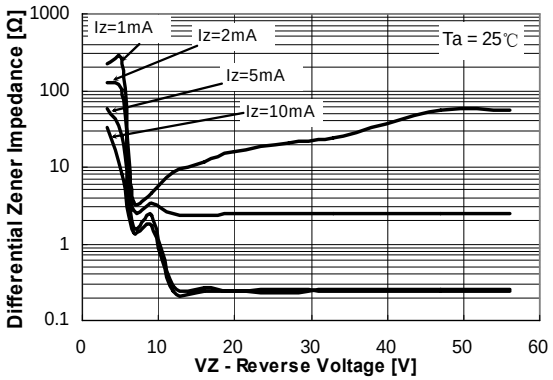


Figure 3. Differential Impedance vs. Zener Voltage

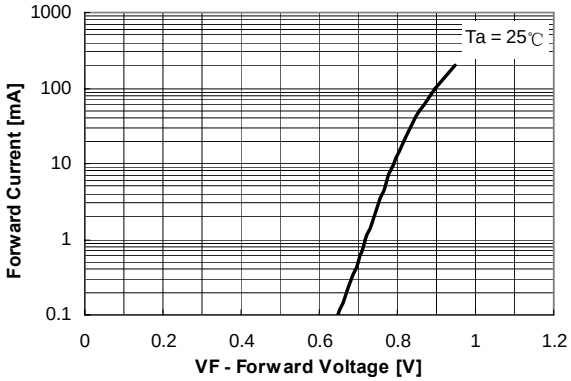


Figure 4. Forward Current vs. Forward Voltage

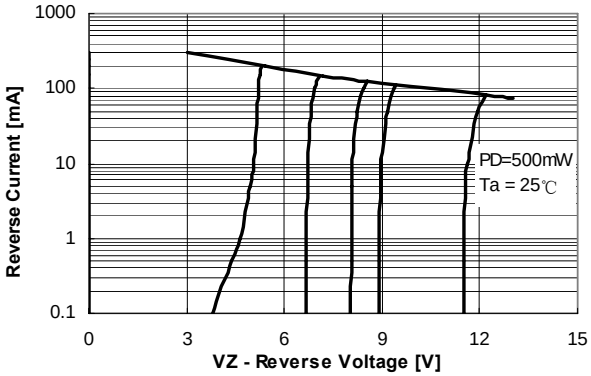


Figure 5. Reverse Current vs. Reverse Voltage

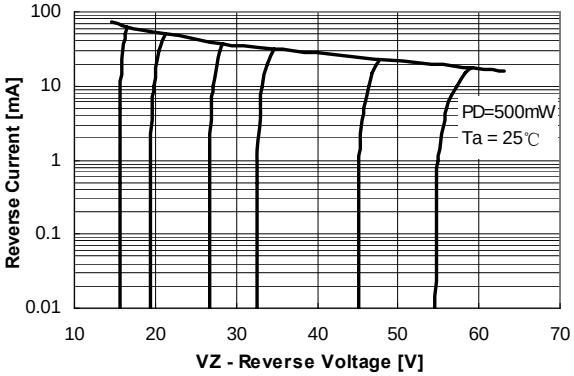


Figure 6. Reverse Current vs. Reverse Voltage