PANJIT SEMI CONDUCTOR

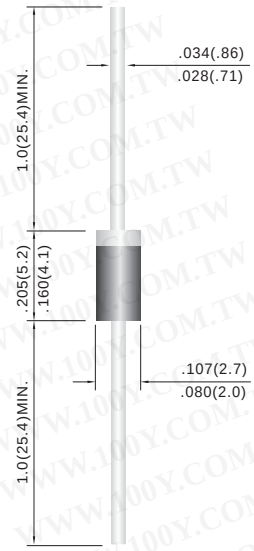
DATA SHEET

1N4729A~1N4764A

SILICON ZENER DIODE

VOLTAGE 3.6 to 100 Volts **POWER** 1.0 Watts

DO-41 Unit: inch(mm)



FEATURES

- Low profile package
- Built-in strain relief
- Low inductance
- High temperature soldering : 260°C /10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Pb free product are available : 99% Sn above can meet RoHS environment substance diective request

MECHANICALDATA

- Case: Molded plastic DO-41
- Epoxy:UL 94V-O rate flame retardant
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes positive end
- Mounting position:Any
- Weight: 0.012 ounce, 0.3 gram
- Ordering information :

  Suffix : " -P " to order Molded plastic Package

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Power Dissipation at Tamb = 25 °C	P_{TOT}	1*	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to + 150	°C
*Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.			

Parameter	Symbol	Min.	Typ.	Max.	Units
Thermal Resistance Junction to Ambient Air	RthA	—	—	170*	K/W
Forward Voltage at IF = 200mA	VF	—	—	1.2	V
*Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.					

Note :

This outline drawing is model plastics.

Its appearance size same as glass.

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Maximum Leakage Current		Marking Code	Package
	V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @V_R			
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V		
1.0 Watt Zener Diodes											
1N4729A	3.6	3.42	3.78	10	69.00	400	1.0	100.00	1.00	1N4729A	DO-41
1N4730A	3.9	3.71	4.10	9.0	64.00	400	1.0	50.00	1.00	1N4730A	DO-41
1N4731A	4.3	4.09	4.52	9.0	58.00	400	1.0	10.00	1.00	1N4731A	DO-41
1N4732A	4.7	4.47	4.94	8.0	53.00	500	1.0	10.00	1.00	1N4732A	DO-41
1N4733A	5.1	4.85	5.36	7.0	49.00	550	1.0	10.00	1.00	1N4733A	DO-41
1N4734A	5.6	5.32	5.88	5.0	45.00	600	1.0	10.00	2.00	1N4734A	DO-41
1N4735A	6.2	5.89	6.51	2.0	41.00	700	1.0	10.00	3.00	1N4735A	DO-41
1N4736A	6.8	6.46	7.14	3.5	37.00	700	1.0	5.00	4.00	1N4736A	DO-41
1N4737A	7.5	7.13	7.88	4.0	34.00	700	0.5	5.00	5.00	1N4737A	DO-41
1N4738A	8.2	7.79	8.61	4.5	31.00	700	0.5	5.00	6.00	1N4738A	DO-41
1N4739A	9.1	8.65	9.56	5.0	28.00	700	0.5	0.50	7.00	1N4739A	DO-41
1N4740A	10.0	9.50	10.50	7.0	25.00	700	0.25	0.50	7.60	1N4740A	DO-41
1N4741A	11.0	10.45	11.55	8.0	23.00	700	0.25	0.10	8.40	1N4741A	DO-41
1N4742A	12.0	11.40	12.60	9.0	21.00	700	0.25	0.10	9.10	1N4742A	DO-41
1N4743A	13.0	12.35	13.65	10	19.00	700	0.25	0.10	9.90	1N4743A	DO-41
1N4744A	15.0	14.25	15.75	14	17.00	700	0.25	0.10	11.40	1N4744A	DO-41
1N4745A	16.0	15.20	16.80	16	15.50	700	0.25	0.10	12.20	1N4745A	DO-41
1N4746A	18.0	17.10	18.90	20	14.00	750	0.25	0.10	13.70	1N4746A	DO-41
1N4747A	20.0	19.00	21.00	22	12.50	750	0.25	0.10	15.20	1N4747A	DO-41
1N4748A	22.0	20.90	23.10	23	11.50	750	0.25	0.10	16.70	1N4748A	DO-41
1N4749A	24.0	22.80	25.20	25	10.50	750	0.25	0.10	18.20	1N4749A	DO-41
1N4750A	27.0	25.65	28.35	35	9.50	750	0.25	0.10	20.60	1N4750A	DO-41
1N4751A	30.0	28.50	31.50	40	8.50	1000	0.25	0.10	22.80	1N4751A	DO-41
1N4752A	33.0	31.35	34.65	45	7.50	1000	0.25	0.10	25.10	1N4752A	DO-41
1N4753A	36.0	34.20	37.80	50	7.00	1000	0.25	0.10	27.40	1N4753A	DO-41
1N4754A	39.0	37.05	40.95	60	6.50	1000	0.25	0.10	29.70	1N4754A	DO-41
1N4755A	43.0	40.85	45.15	70	6.00	1500	0.25	0.10	32.70	1N4755A	DO-41
1N4756A	47.0	44.65	49.35	80	5.50	1500	0.25	0.10	35.80	1N4756A	DO-41
1N4757A	51.0	48.45	53.55	95	5.00	1500	0.25	0.10	38.80	1N4757A	DO-41
1N4758A	56.0	53.20	58.80	110	4.50	2000	0.25	0.10	42.60	1N4758A	DO-41
1N4759A	62.0	58.90	65.10	125	4.00	2000	0.25	0.10	47.10	1N4759A	DO-41
1N4760A	68.0	64.60	71.40	150	3.70	2000	0.25	0.10	51.70	1N4760A	DO-41
1N4761A	75.0	71.25	78.75	175	3.30	2000	0.25	0.10	56.00	1N4761A	DO-41
1N4762A	82.0	77.90	86.10	200	3.00	3000	0.25	0.10	62.20	1N4762A	DO-41
1N4763A	91.0	86.45	95.55	250	2.80	3000	0.25	0.10	69.20	1N4763A	DO-41
1N4764A	100	95.00	105.00	350	2.50	3000	0.25	0.10	76.00	1N4764A	DO-41

NOTE:
1. Tolerance and Type Number Designation. The type umbers listed have a standard tolerance on the nominal zener voltage of ± 5%
2. Specials Available Include:
   A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
   B. Matched sets.
3. Zener Voltage (Vz) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at 30 °C ± 1 °C, from the diode body.
4. Zener Impedance (Zz) 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 (Izt or Izk) is superimposed on Izt or Izk.
5. Surge Current (Ir) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2

RATING AND CHARACTERISTICS CURVES

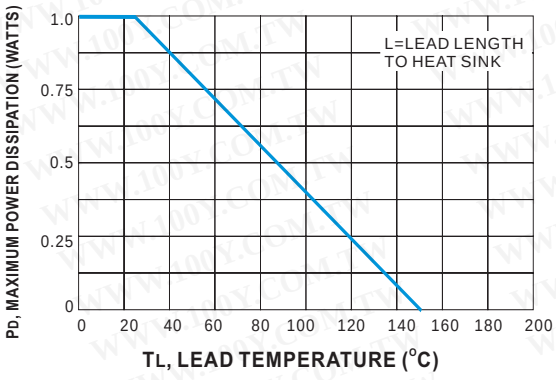


FIGURE.1 POWER TEMPERATURE DERATING CURVE

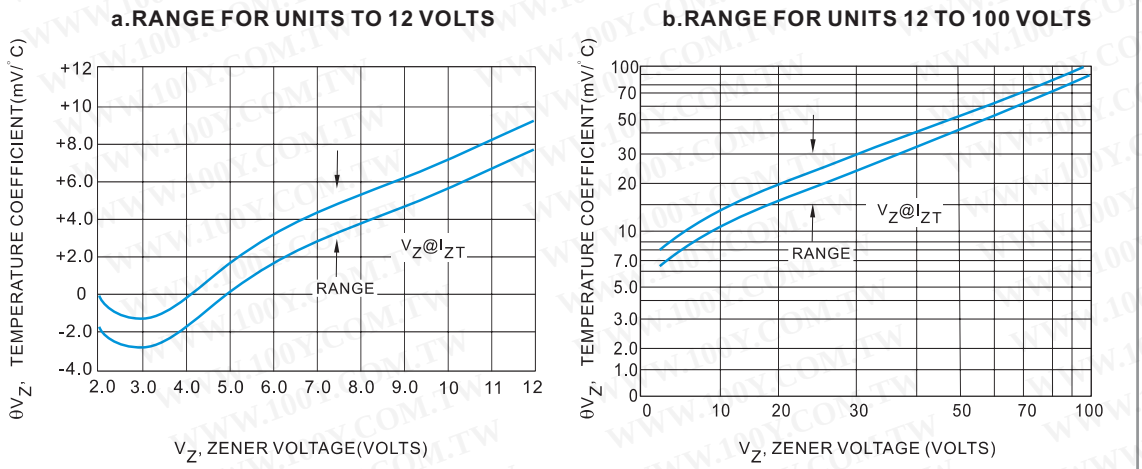


FIGURE.2 TEMPERATURE COEFICIENTS
(-55°C TO +150°C TEMPERATURE RANGE; 90% OF THE UNITS ARE IN THE RANGES INDICATED.)

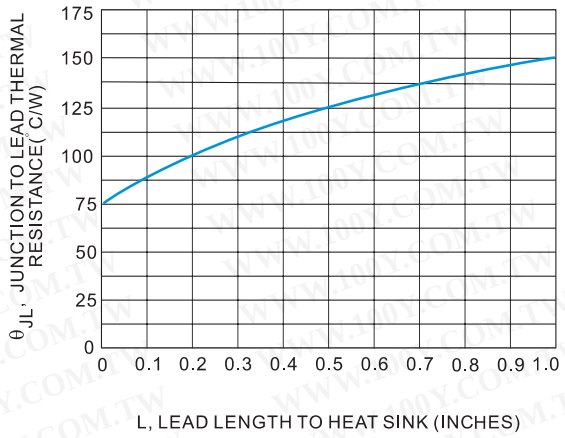


FIGURE.3TYPICAL THERMAL RESISTANCE versus LEAD LENGTH

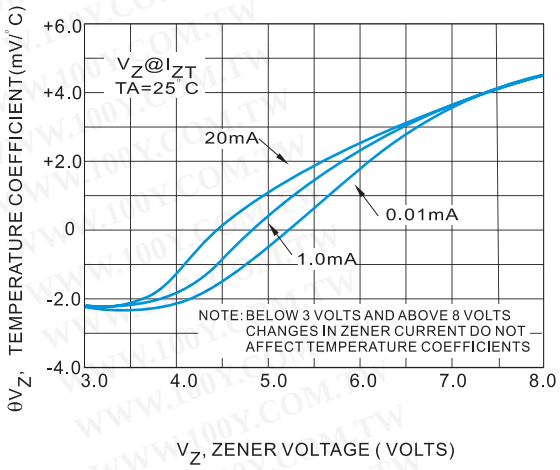
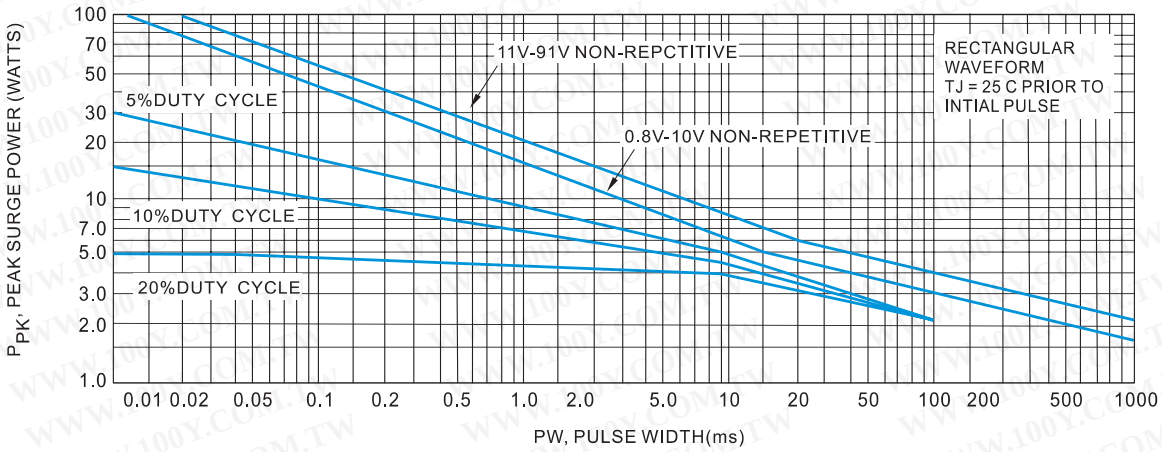


FIGURE.4 EFFECT OF ZENER CURRENT



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

FIGURE.5 MAXIMUM SURGE POWER

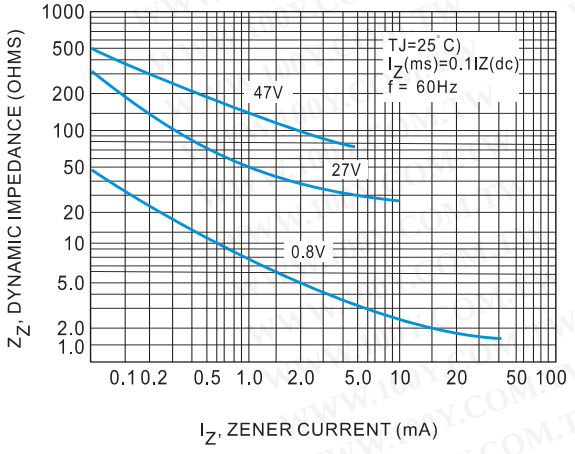


FIGURE.6 EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

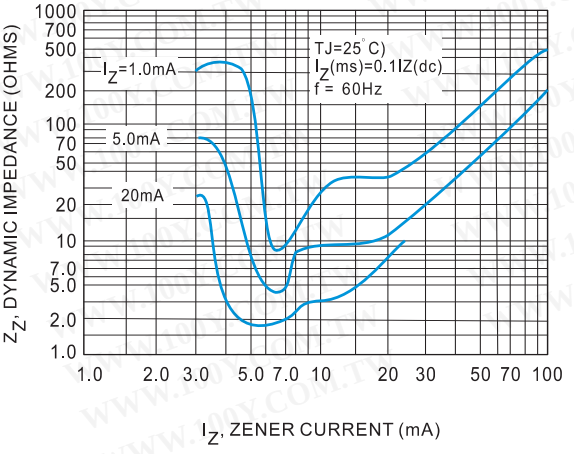


FIGURE.7 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

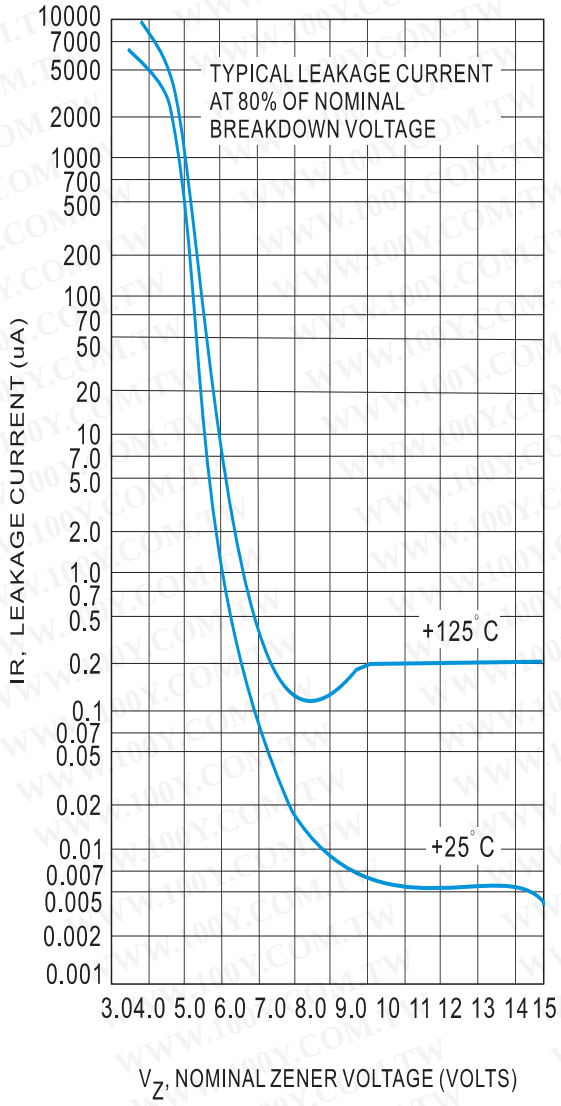


FIGURE.8 TYPICAL LEAKAGE CURRENT

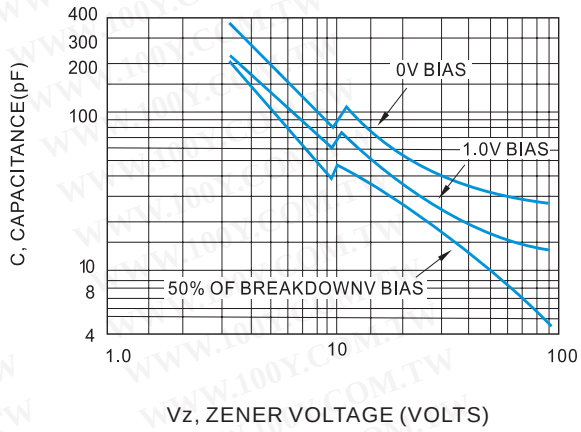


FIGURE.9 TYPICAL CAPACITANCE versus Vz

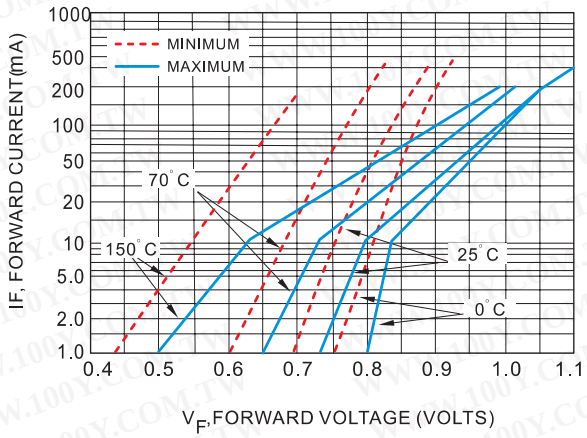


FIGURE.10 TYPICAL FORWARD CHARACTERISTICS