Micro Commercial Components
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MCC012

1.0W Zener Diode 180 Volts

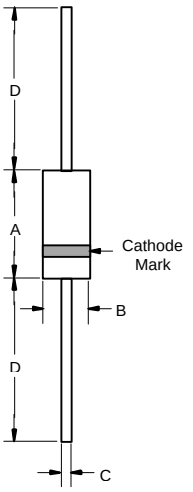
Features

- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- High temperature soldering: 260°C/10 seconds at terminals

Mechanical Data

- CASE: Molded plastic,DO-41
- Polarity : Color band denotes cathode end
- WEIGHT: 0.012 ounce,0.3gram

DO-41



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.160	0.205	4.10	5.20	
B	0.080	0.107	2.00	2.70	Diameter
C	0.028	0.034	0.71	0.86	Diameter
D	1.000	-----	25.40	-----	

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Zener Current		See Next Page	
Peak Pulse Power Dissipation on TA = 50°C (Notes A) Derate above 50°C	P_D	1.0 6.67	W mW/°C
Peak forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC Method) (Notes B)	I_{FSM}	10	Amps
Junction Temperature	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Notes: A.Mounted on 5.0mm^2(.013mm thick) land areas.
B.Measured on 8.3ms, single half sine-wave or equivalent square wave,duty cycle=4 pulses per minute maximum.

MCC012

*ELECTRICAL CHARACTERISTICS (T_A=25 ¢J unless otherwise noted) V_F=1.2V max, I_F=200mA for all types.

Type No. (Note 1.)	Nominal Zener Voltage Vz @ I_{ZT} volts (Notes2. And3.)	Test current I_{ZT} mA	Maximum Zener Impedance (Note 4.)			Leakage Current		Surge Current @ T_A=25 ¢J Ir - mA (Note 5.)
			Z_{ZT} @ I_{ZT} Ohms	Z_{Zk} @ I_{ZK} Ohms	I_{ZK} mA	I_R £g A Max	V_R Volts	
MCC012	180	1.4	1200	7000	0.25	5.0	136.8	-

NOTE:

1.Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of ¡Ó10%.

2.Specials Available Include:

A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.

B. Matched sets.

3.Zener Voltage (V_Z) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at 30 ¢J¡Ó1 ¢J, from the diode body.

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}.

5.Surge Current (I_r) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I_{ZT}, per JEDEC registration; however, actual device capability is as described in Figure 5.

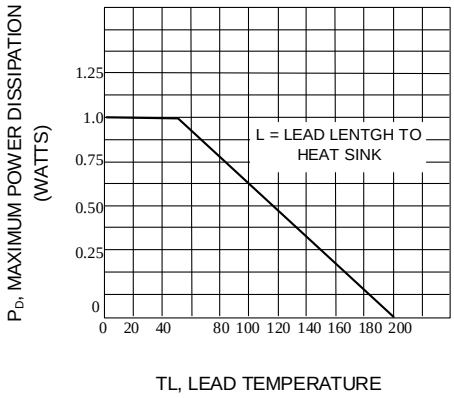


Fig. 1-POWER TEMPERATURE DERATING CURVE

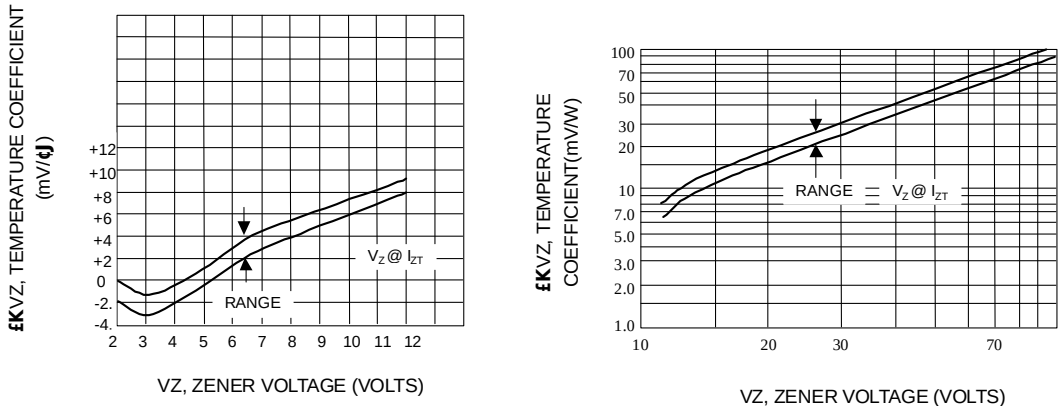


Fig. 2-TEMPERATURE COEFFICIENTS
(-55 ¢J TO +150 ¢J TEMPERATURE RANGE; 90% OF THE UNITS ARE IN THE RANGES INDICATED.)

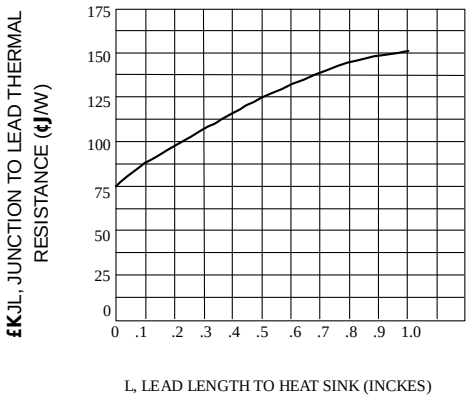


Fig. 3-TYPICAL THERMAL RESISTANCE VERSUS LEAD LENTGH

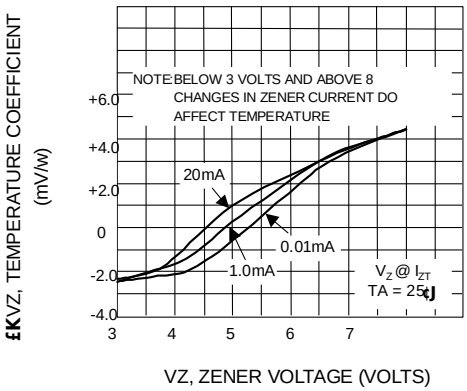
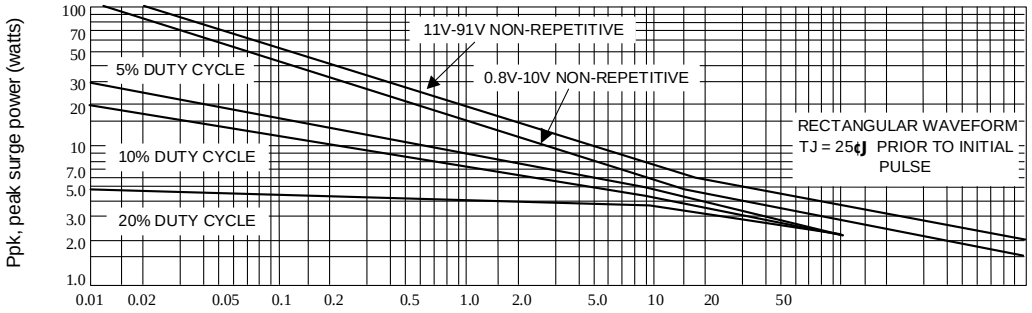


Fig. 4-EFFECT OF ZENER CURRENT



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

Fig. 5-MAXIMUM SURGE POWER

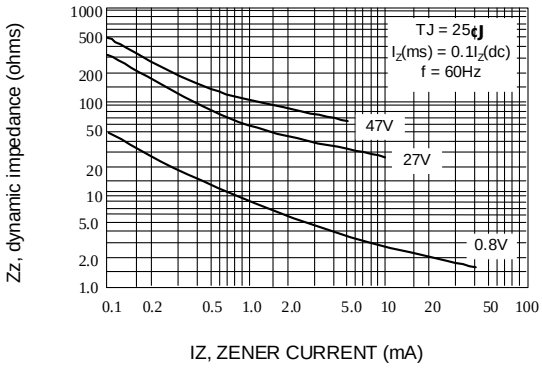


Fig. 6-EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

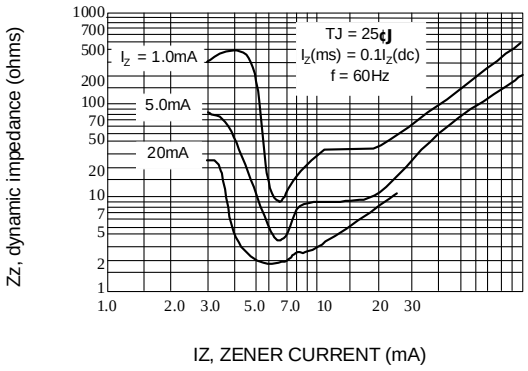


Fig. 7-EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

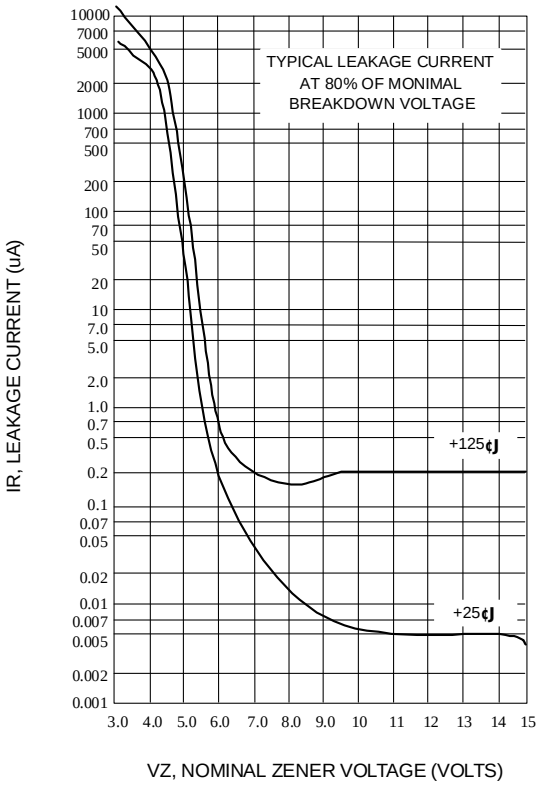


Fig. 8-TYPICAL LEAKAGE CURRENT

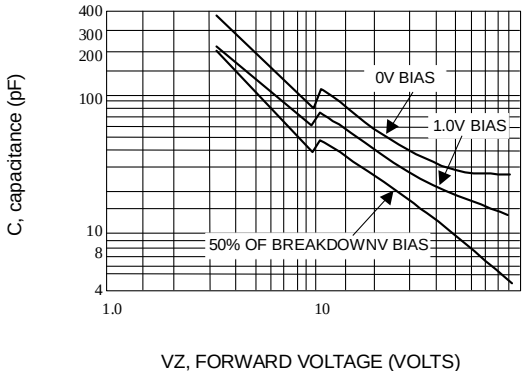


Fig. 9-TYPICAL CAPACITANCE VERSUS V_Z

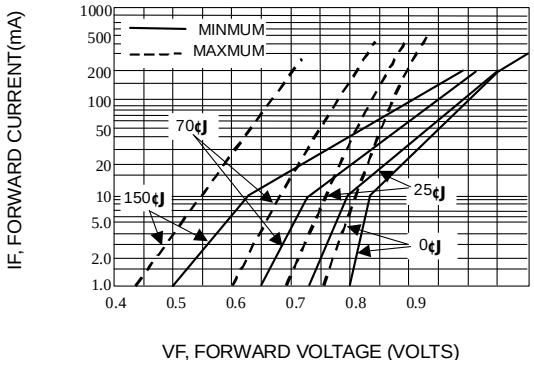


Fig. 10-TYPICAL FORWARD CHARACTERISTICS