

R2M

V_{RM} : 130 Volts

I_{ZSM} : 1.0 Amp. (100 μ s)

FEATURES :

- * 600 W surge capability at 1ms
- * Excellent clamping capability
- * Low zener impedance
- * Fast response time : typically less than 1.0 ps from 0 volts to BV min.
- * Low Leakage < 5.0 μ A above 10 V.
- * **Pb / RoHS Free**

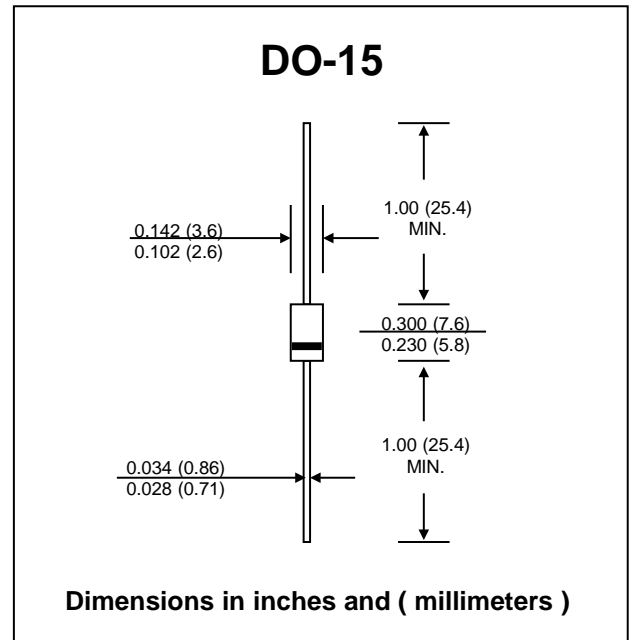
MECHANICAL DATA :

- * Case : DO-15 Molded plastic
- * Epoxy : UL94V-0 rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.4 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

AVALANCHE DIODE



RATING	SYMBOL	VALUE	UNIT
Peak Power Dissipation at T _P = 1 ms (Note 1)	P _{pk}	Minimum 600	W
Steady State Power Dissipation at T _L = 75 °C Lead Lengths 0.375" , (9.5mm) (Note 2)	P _D	5.0	W
Working Peak Reverse Voltage (Stand-off Voltage)	V _{RWM}	130	V
Minimum Avalanche Breakdown Voltage at I _T = 1mA (Note 3)	V _{BR(min)}	135	V
Maximum Avalanche Breakdown Voltage at I _T = 1mA (Note 3)	V _{BR(max)}	180	V
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 4)	I _{FSM}	75	A
Maximum Reverse Leakage at Working Peak Reverse Voltage	I _R	5.0	μ A
Maximum Non-Repetitive Peak Reverse Surge Current	I _{RSM}	2.6	A
Maximum Reverse Voltage (Clamping Voltage) at I _{RSM}	V _{RSM}	234	V
Maximum Voltage Temperature Variation of Breakdown Voltage		175	mV/°C
Junction Temperature Range	T _J	- 65 to + 175	°C
Storage Temperature Range	T _{STG}	- 65 to + 175	°C

Notes :

- (1) Non-Repetitive Current Pulse and Surge Current Waveform, per Fig. 6 and Derated above T_a = 25°C per Fig. 1.
- (2) Mounted on Copper Leaf area pf 1.57 in² (40 mm²)
- (3) V_{BR} measured after I_T applied for 300 μ s, I_T = Square Wave Pulse or equivalent.
- (4) 8.3 ms single half sine-wave, duty cycle = 4 pulses per Minutes maximum.

RATING AND CHARACTERISTIC CURVES (R2M)

FIG.1 - PULSE DERATING CURVE

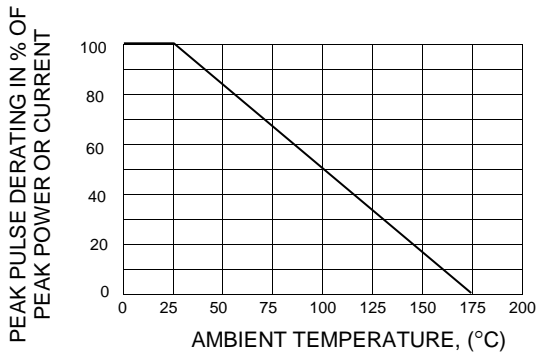


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

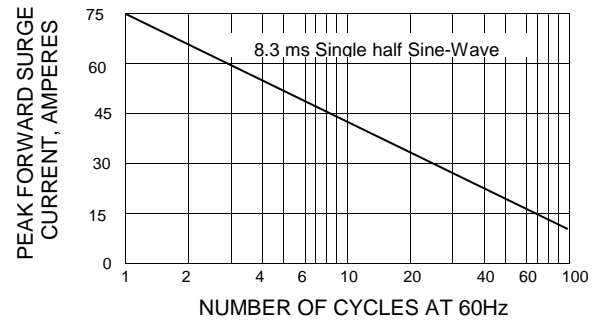


FIG.3 - PULSE RATING CURVE

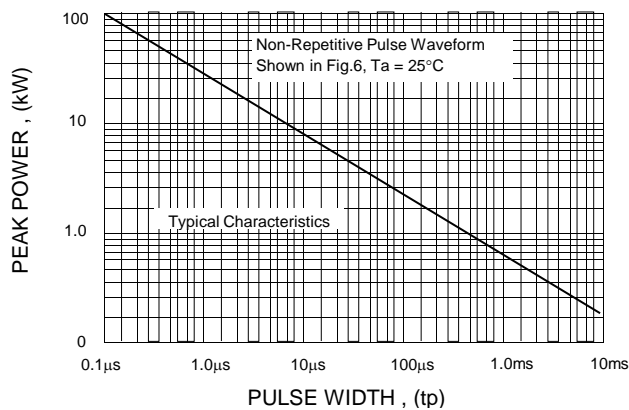


FIG.4 - TYPICAL JUNCTION CAPACITANCE

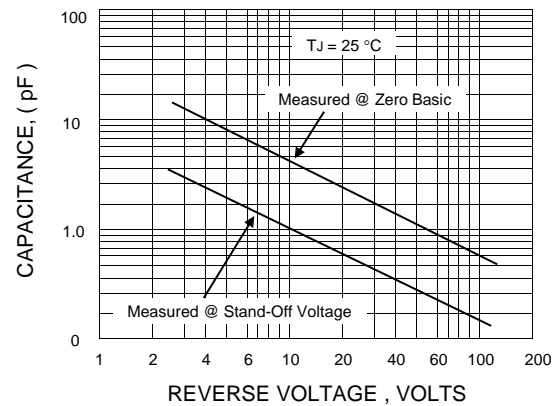


FIG. 5 - STEADY STATE POWER DERATING

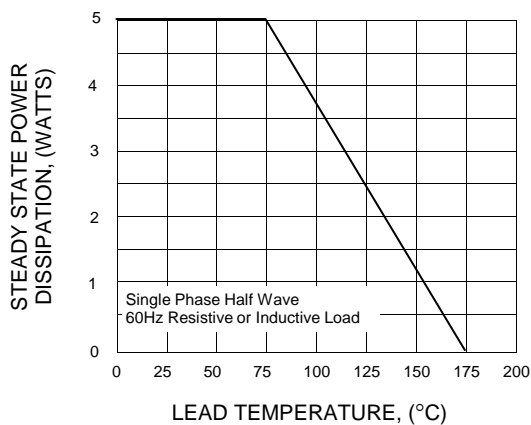


FIG.6 - MAXIMUM NON-REPETITIVE PEAK REVERSE SURGE CURRENT

