



VOLTAGE RANGE: 50 --- 200 V

CURRENT: 2.0 A



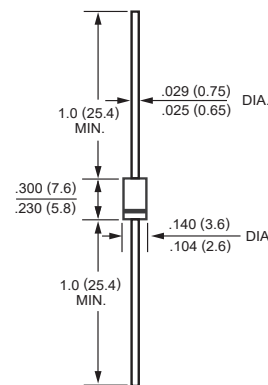
Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

Mechanical Data

- ◇ Case: JEDEC DO-15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting position: Any

DO-15



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate by 20%.

Type Number	Symbol	USF21	USF22	USF23	USF24	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	2.0				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	75.0				A
Maximum instantaneous forward voltage @ 2.0A	V_F	0.92				V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	10.0 350.0				μA
Maximum reverse recovery time (Note1)	t_{rr}	20				ns
Typical junction capacitance (Note2)	C_J	15				pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	40				$^\circ C/W$
Operating junction temperature range	T_J	- 55 ----- + 150				$^\circ C$
Storage temperature range	T_{STG}	- 55 ----- + 150				$^\circ C$

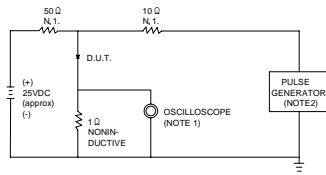
NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

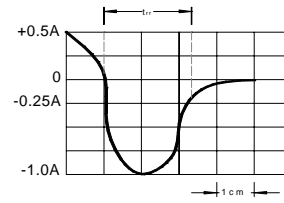
3. Thermal resistance from junction to ambient.



Ratings AND Characteristic Curves

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC


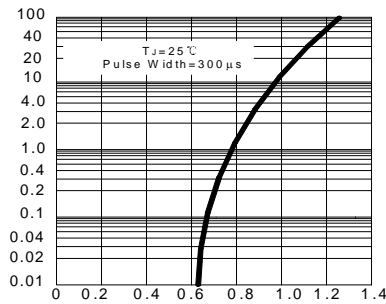
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.



SET TIME BASE FOR 10/20 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

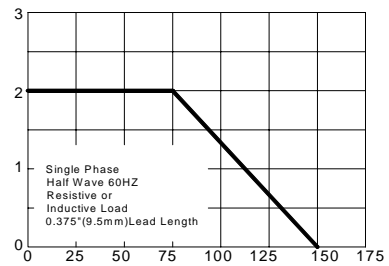
INSTANTANEOUS FORWARD CURRENT, AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 – FORWARD DERATING CURVE

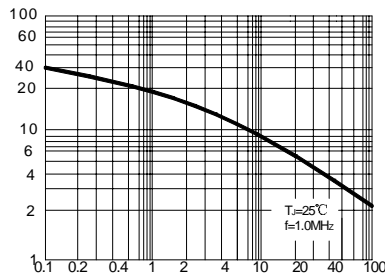
AVERAGE FORWARD CURRENT AMPERES



AMBIENT TEMPERATURE, °C

FIG.4 – TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE,pF



REVERSE VOLTAGE, VOLTS

FIG.5 – PEAK FORWARD SURGE CURRENT

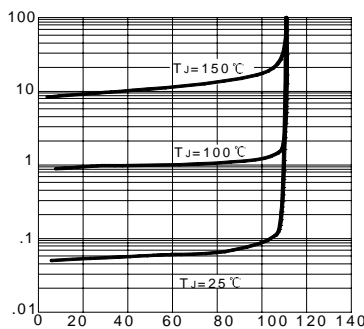
PEAK FORWARD SURGE CURRENT, AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.6 – TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



PERCENT OF RATED PEAK REVERSE VOLTAGE, %

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-15	3000/AMMO	30000	42X28X31	12.00	10.00