

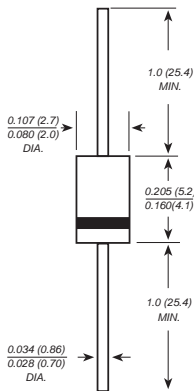


R2500 THRU R5000

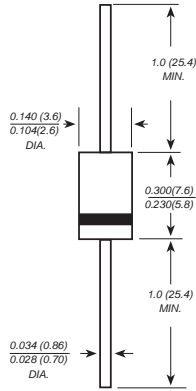
HIGH VOLTAGE RECTIFIER

Reverse Voltage - 2500 to 5000 Volts Forward Current - 0.2 Ampere

DO-41



DO-15



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-41/DO-15 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 ounce, 0.33 grams (DO-41)
0.014 ounce, 0.40 grams (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 current derate by 20%.

MDD Catalog Number	SYMBOLS	R2500	R3000	R4000	R5000	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	2500	3000	4000	5000	VOLTS
Maximum RMS voltage	V_{RMS}	1750	2100	2800	3500	VOLTS
Maximum DC blocking voltage	V_{DC}	2500	3000	4000	5000	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig.1)	I_{AV}	0.2				Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0				Amps
Maximum instantaneous forward voltage at 0.2 A	V_F	3.0	4.0	5.0		Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 50				μA
Typical junction capacitance (NOTE 1)	C_J	15.0				pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0				$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175				$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

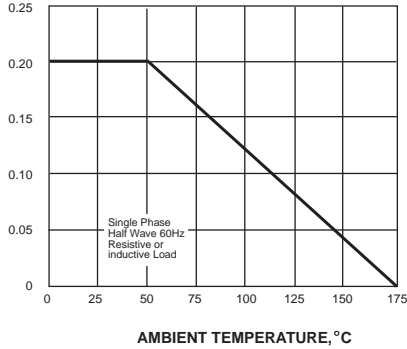
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES R2500 THRU R5000

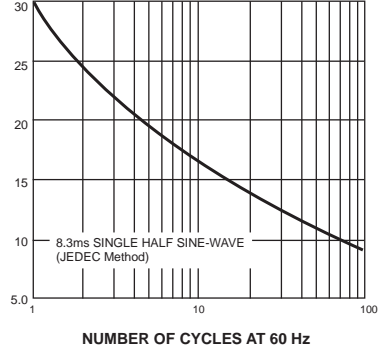
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



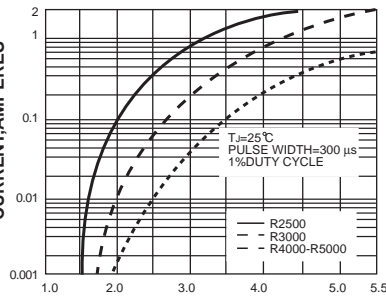
PEAK FORWARD SURGE CURRENT,
AMPERES

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



INSTANTANEOUS FORWARD CURRENT, AMPERES

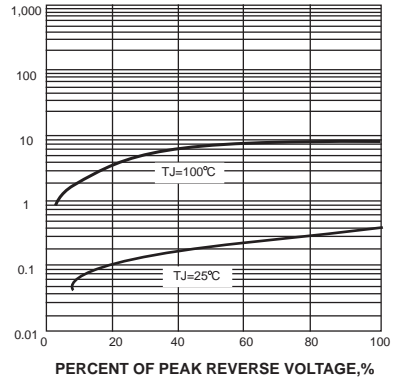
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

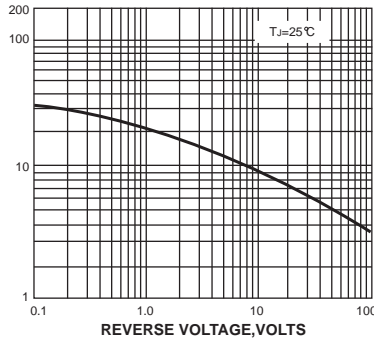
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

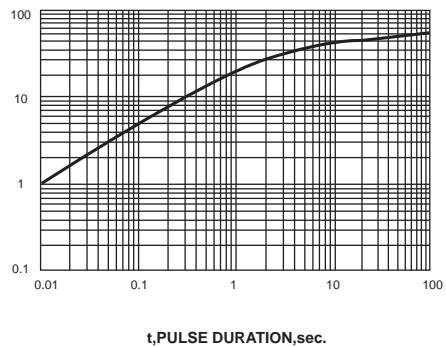
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE,
 $^\circ\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.