



# R2500 THRU R5000

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

## HIGH VOLTAGE RECTIFIER



### 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

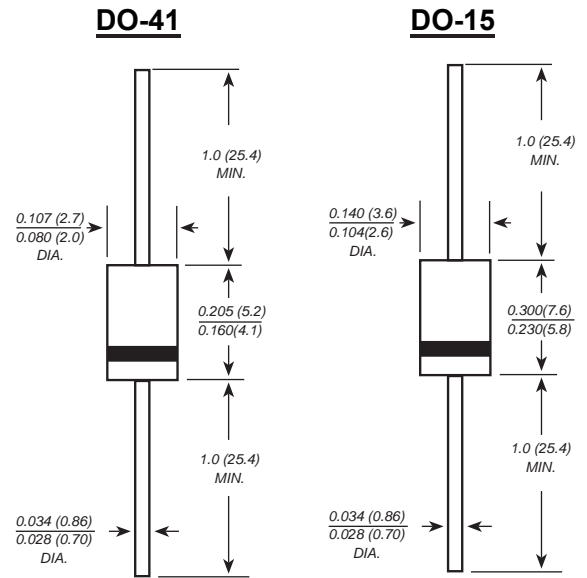
**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any

**Weight :** 0.012 ounce, 0.33 grams (DO-41)

0.014 ounce, 0.40 grams (DO-15)



Dimensions in inches and (millimeters)

### 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%.

Parameter	SYMBOLS	MDD R2500	MDD R3000	MDD R4000	MDD R5000	UNITS
Marking Code						
Maximum repetitive peak reverse voltage	$V_{RRM}$	2500	3000	4000	5000	V
Maximum RMS voltage	$V_{RMS}$	1750	2100	2800	3500	V
Maximum DC blocking voltage	$V_{DC}$	2500	3000	4000	5000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig. 1)	$I_{(AV)}$	0.2				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0				A
Maximum instantaneous forward voltage at 0.5A/0.2A	$V_F$	2.0	4.0	5.0		V
Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$	$I_R$	5.0 50.0				$\mu A$
Typical junction capacitance (NOTE 1)	$C_J$	15.0				pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0				$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175				$^\circ C$

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

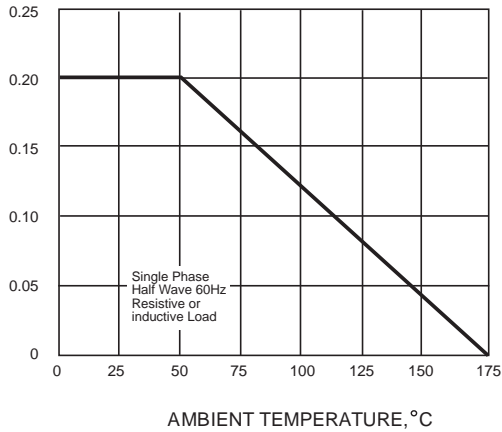
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



## Ratings And Characteristic Curves

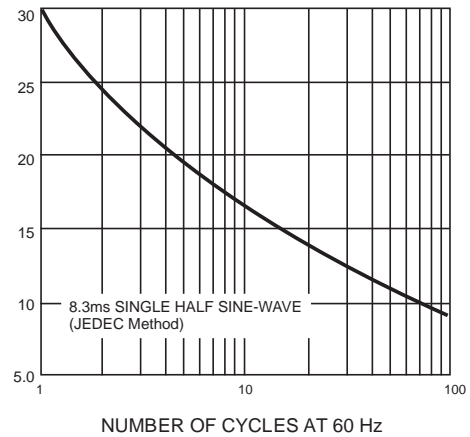
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



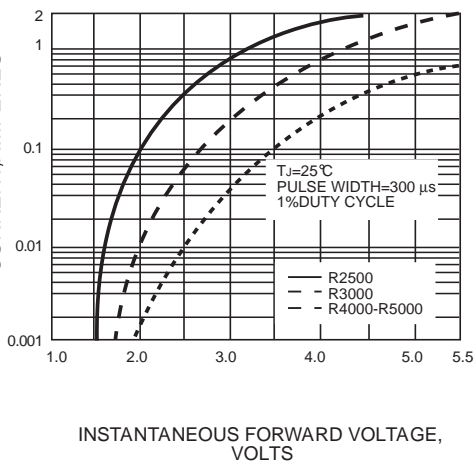
PEAK FORWARD SURGE CURRENT, AMPERES

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



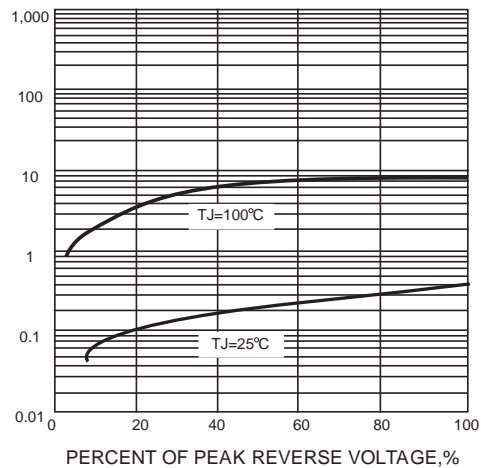
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



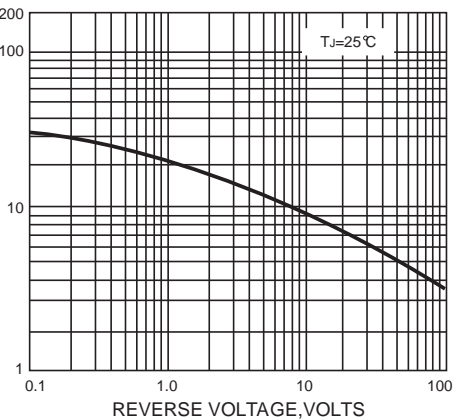
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



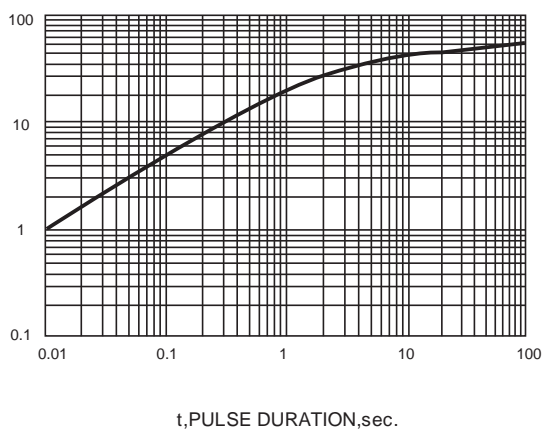
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.