

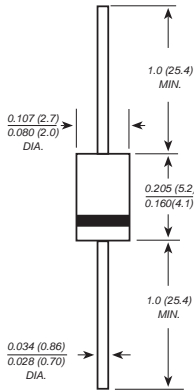


# R2500F THRU R5000F

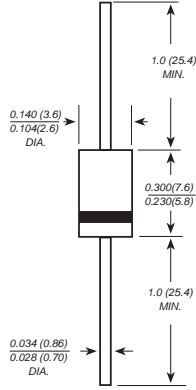
## HIGH VOLTAGE FAST RECOVERY RECTIFIER

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	R2500F	R3000F	R4000F	R5000F	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	$V_F$	4.0	5.0	6.5		Volts
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				$\mu A$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	500				ns
Typical junction capacitance (NOTE 2)	$C_J$	15.0				pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	50.0				$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150				$^\circ C$

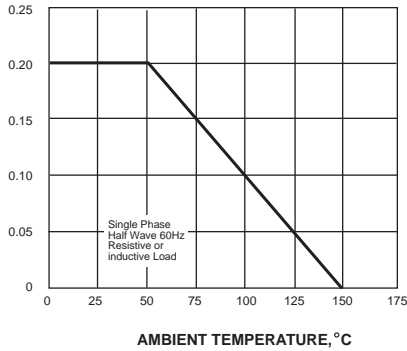
- Note:**1.Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$   
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3.Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted



# RATINGS AND CHARACTERISTIC CURVES R2500F THRU R5000F

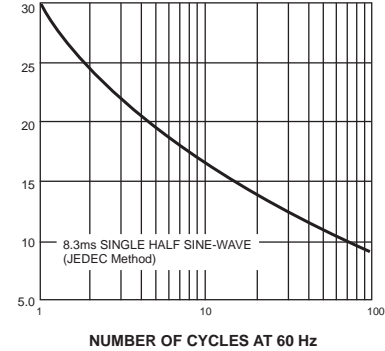
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



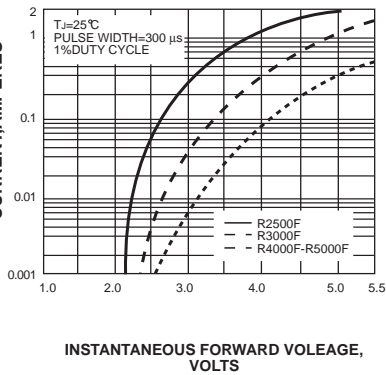
\*EAK FORWARD SURGE CURRENT,  
AMPERES

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



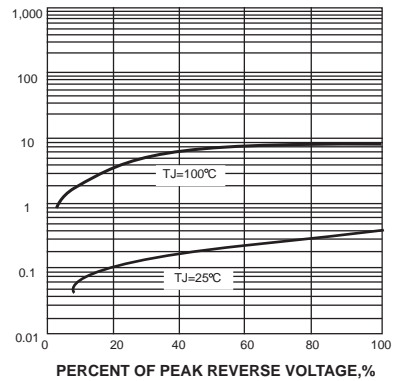
INSTANTANEOUS FORWARD  
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD  
CHARACTERISTICS



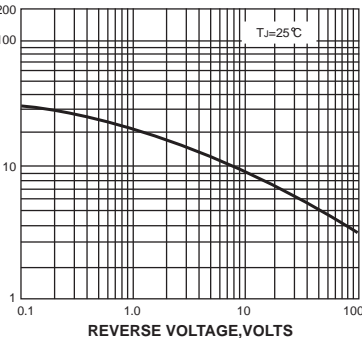
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



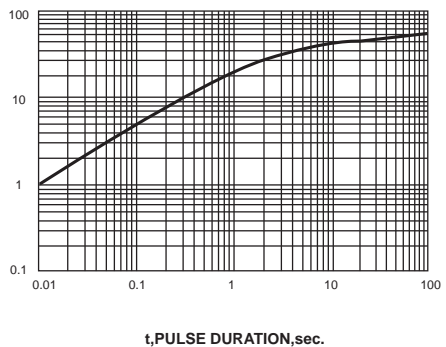
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!



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