

HIGH VOLTAGE FAST RECOVERY RECTIFIER

Reverse Voltage - 2500V to 5000V

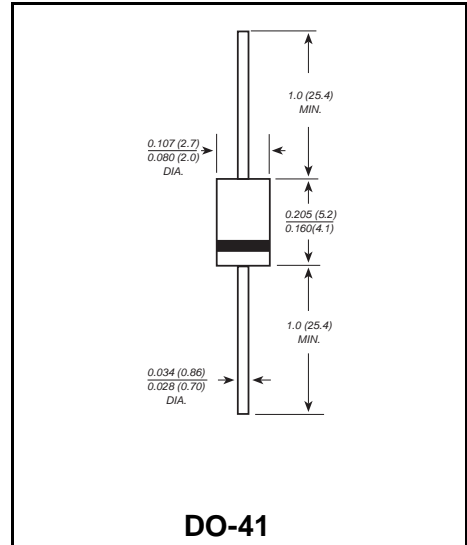
Forward Current – 0.2A

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 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



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	R2500F	R3000F	R4000F	R5000F	Units
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)	$I_{F(AV)}$	0.2				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30				A
Maximum instantaneous forward voltage at 0.2 A	V_F	4.0	5.0	6.5		V
Maximum DC reverse current at rated DC blocking voltage	I_R	5.0 50.0				μA
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				°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-65 to +150				°C

Note: 1. Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

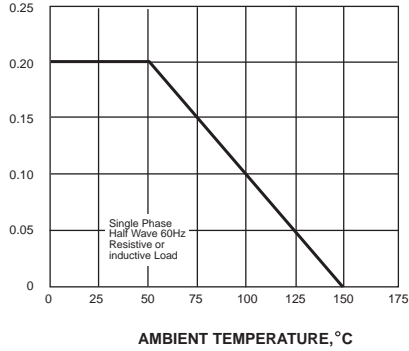
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

RATINGS AND CHARACTERISTICS 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

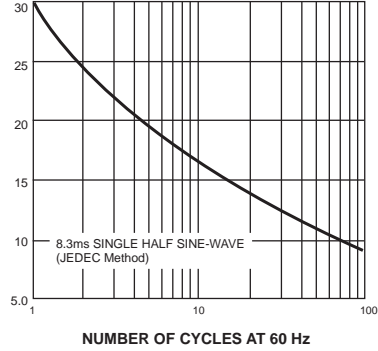


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

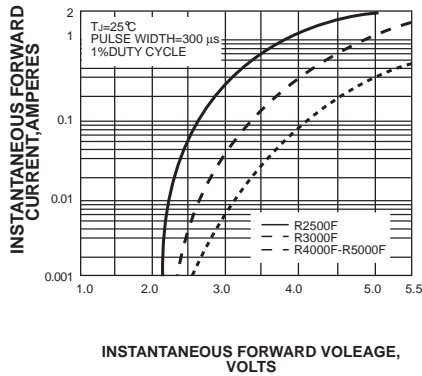


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

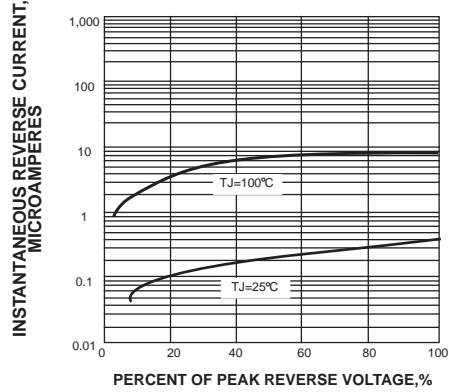
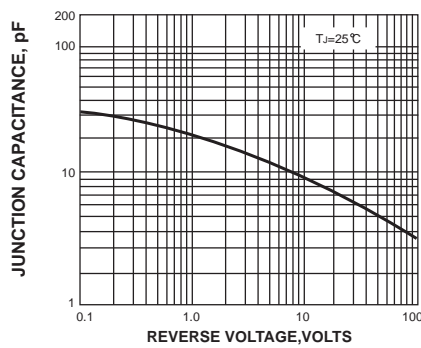
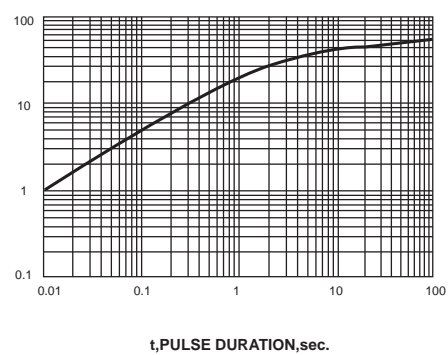


FIG. 5-TYPICAL JUNCTION CAPACITANCE

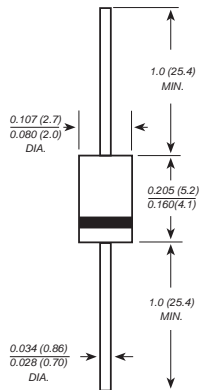


TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Package Outline DO-41



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-41	BOX	1000/5000	EIA-481-1

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