

# FR101AT THRU FR107AT

## Fast Recovery Rectifiers

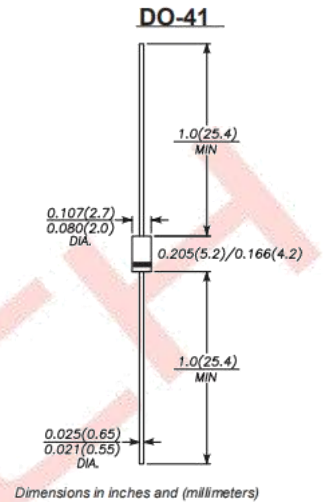
Reverse Voltage:50-1000V Forward Current:1.0A

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:260 C/10 seconds,0.375" (9.5mm) lead length,5 lbs. (2.3kg) tension

### Mechanical Data

- Case:A-405 molded plastic body
- Terminals:Plated axial leads, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight:0.008 ounce, 0.23 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%.

	Symbol	101	102	103	104	105	106	107	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_A=75\text{ C}$	$I_{(AV)}$	1.0							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 1.0A	$V_F$	1.3							V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	5.0 50.0							$\mu\text{A}$
Maximum reverse recovery time <sup>1</sup>	$t_{rr}$	150			250	400		ns	
Typical junction capacitance <sup>2</sup>	$C_J$	15.0							pF
Typical thermal resistance <sup>3</sup>	$R_{\theta JA}$	50.0							$^{\circ}\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^{\circ}\text{C}$

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

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

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## Ratings and Characteristic Curve

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

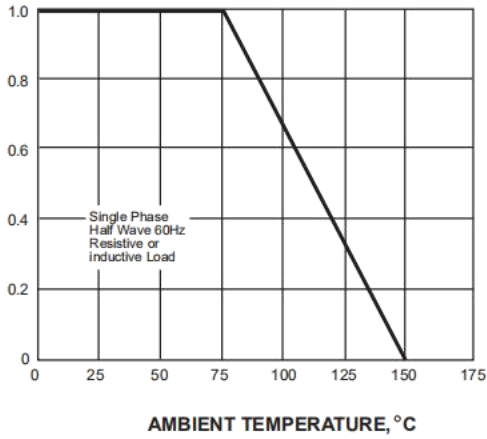


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

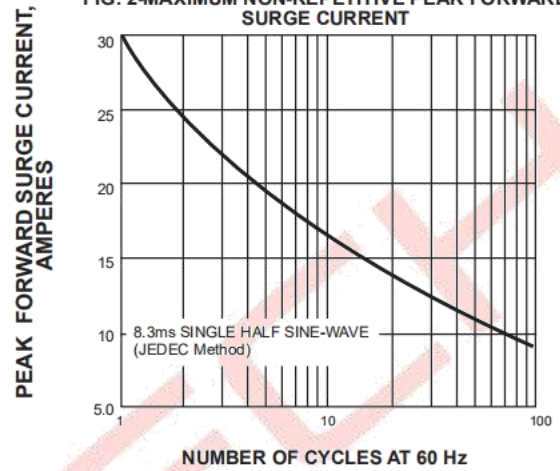


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

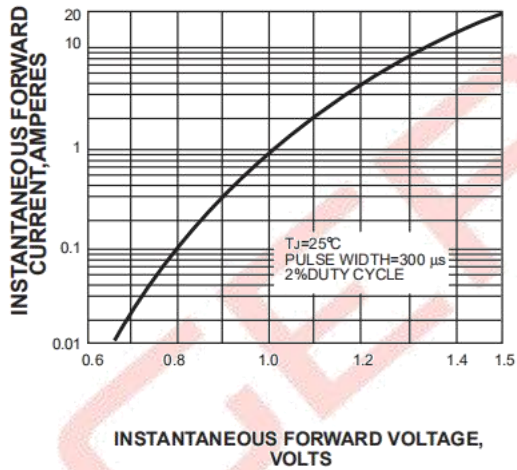


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

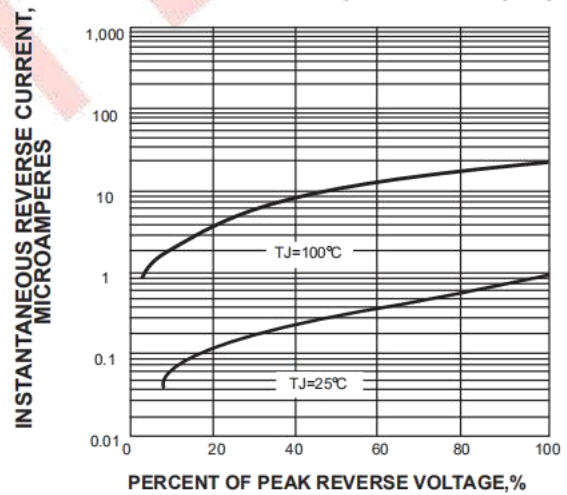


FIG. 5-TYPICAL JUNCTION CAPACITANCE

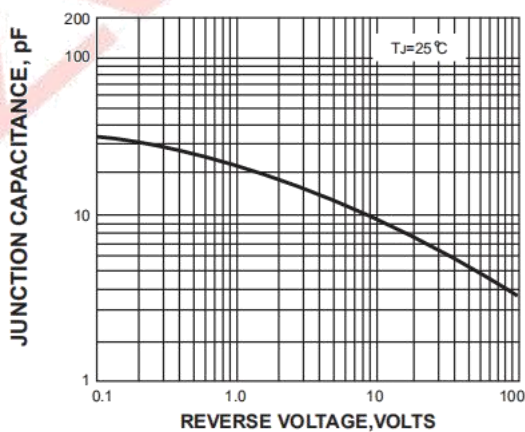
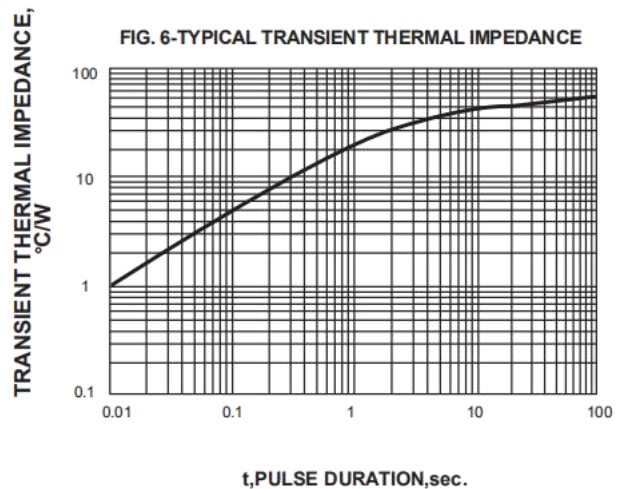


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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