

III. Fast / Ultra Fast / Super Fast Recovery Rectifier

1.0A Fast Recovery Rectifier

FR101~FR107

(Package: DO-41)

<p>FEATURES</p> <ul style="list-style-type: none"> • 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 : 250 /10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3 kg) tension <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • 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 : 0.27 grams 	<p>Case: DO-41 Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	FR101	FR102	FR103	FR104	FR105	FR106	FR107	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_a=75$	I_o	1.0							Amps
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 1.0A	V_F	1.3							Volts
Maximum DC reverse current $T_a=25$ at rated DC blocking voltage $T_a=100$	I_R	5.0 50.0							μA
Maximum reverse recovery time (Note1)	T_{rr}	150				250	500		ns
Typical junction capacitance (Note 2)	C_j	15.0							PF
Typical thermal resistance (Note 3)	R_{th-JA}	50.0							/ W
Operating junction and storage temperature range	T_j, T_{stg}	-65 to +150							

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

Ratings and Characteristic Curves of FR101~FR107

