

1.5Amp Fast Recovery Rectifiers

FR151 ~FR157

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:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

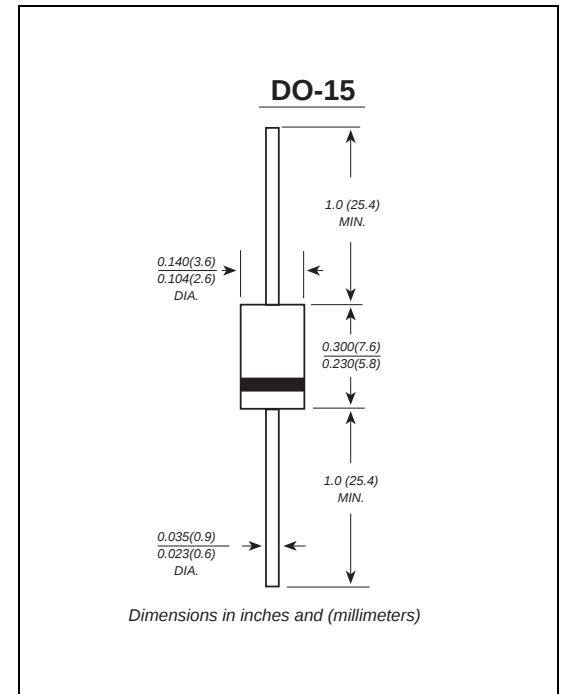
Case: JEDEC DO-15 molded plastic body

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight : 0.014 ounce, 0.40 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%.

	SYMBOLS	FR 151	FR 152	FR 153	FR 154	FR 155	FR 156	FR 157	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°C	I _(AV)	1.5							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	60.0							Amps
Maximum instantaneous forward voltage at 1.5A	V _F	1.3							Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 50.0							u A
Maximum reverse recovery time (Note 1)	T _{rr}	150				250	500		ns
Typical junction capacitance (Note 2)	C _J	30.0							pF
Typical thermal resistance (Note 3)	R _{qJA}	50.0							°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-65 to +150							°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

Ratings And Characteristic Curves

FR151 THRU FR157

FIG. 1- FORWARD CURRENT DERATING CURVE

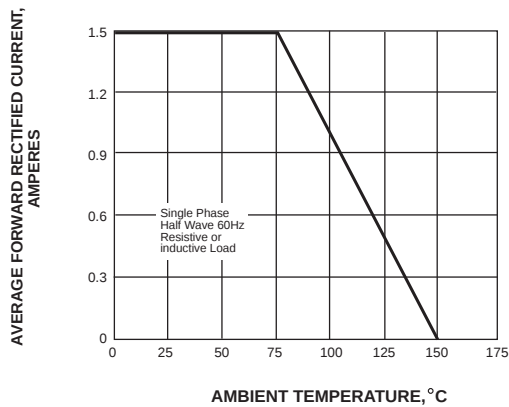


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

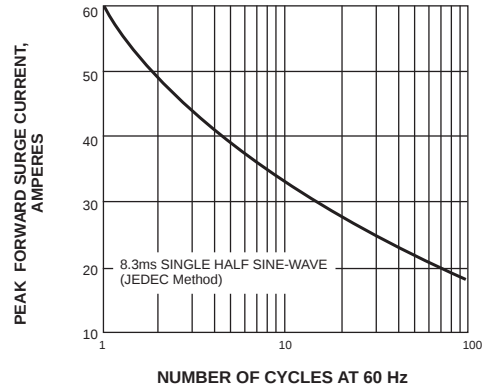


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

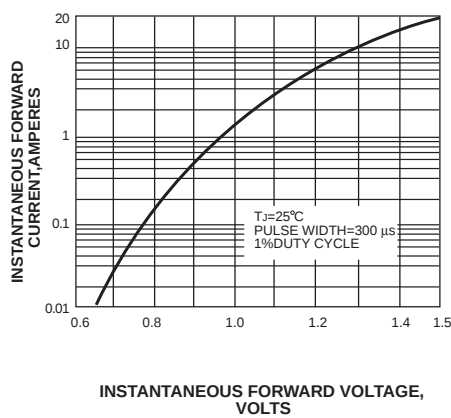


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

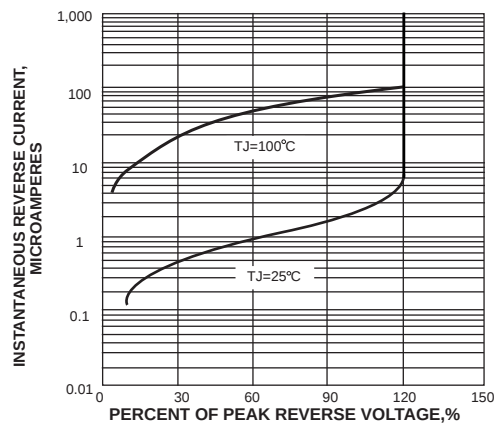


FIG. 5-TYPICAL JUNCTION CAPACITANCE

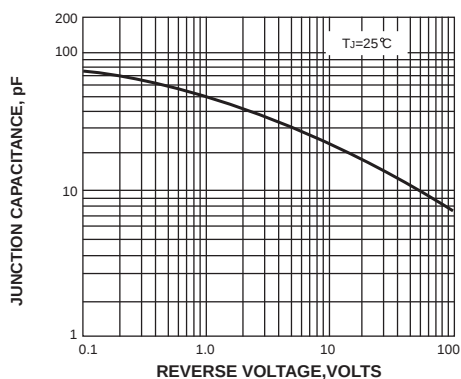


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

