



FR151S - FR157S

1.5 AMPS. Fast Recovery Rectifiers

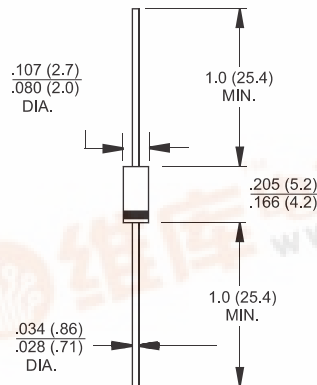
DO-41

Features

- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- Low power loss.

Mechanical Data

- Cases: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Pure tin plated, Lead free., solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 260 °C /10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: 0.32 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	FR 151S	FR 152S	FR 153S	FR 154S	FR 155S	FR 156S	FR 157S	Units
Maximum Recurrent 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 .375"(9.5mm) Lead Length @T _A = 55 °C	I _(AV)	1.5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	50							A
Maximum Instantaneous Forward Voltage @ 1.5A	V _F	1.2							V
Maximum DC Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =125 °C	I _R	5.0 150							uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150				250	500		nS
Typical Junction Capacitance (Note 2)	C _j	30							pF
Typical thermal Resistance (Note 3)	R _{θJA}	60							°C/W
Operating Temperature Range T _J	T _J	-65 to +150							°C
Storage Temperature Range T _{STG}	T _{STG}	-65 to +150							°C

- Notes:
1. Reverse Recovery Test Conditions: $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
 3. Mount on Cu-Pad Size 10mm x 10mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (FR151S THRU FR157S)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

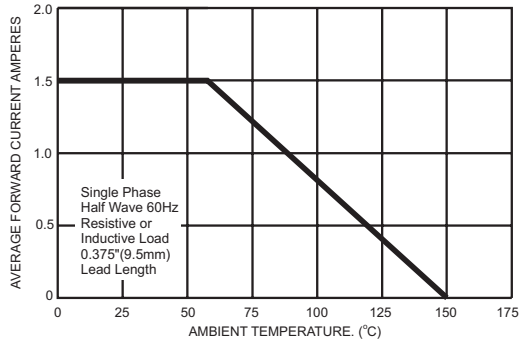


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

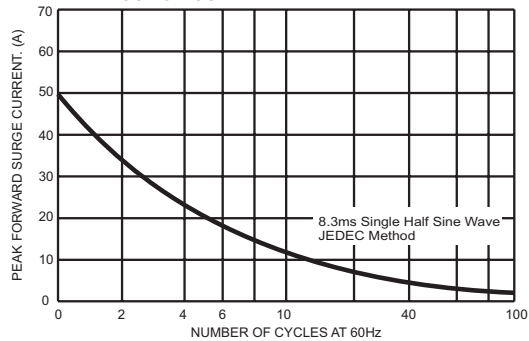


FIG.4- TYPICAL JUNCTION CAPACITANCE

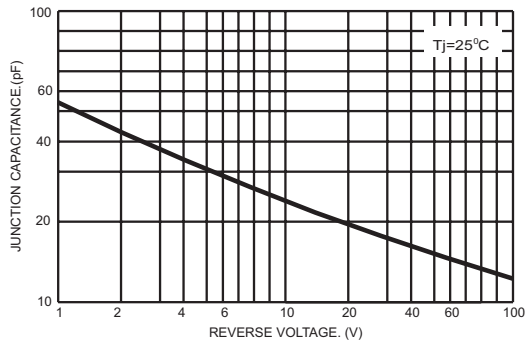


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

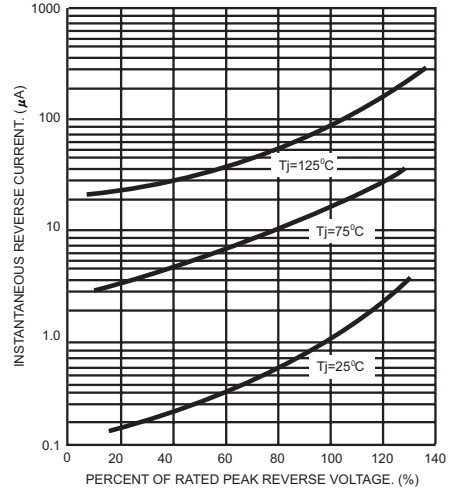


FIG.5- TYPICAL FORWARD CHARACTERISTICS

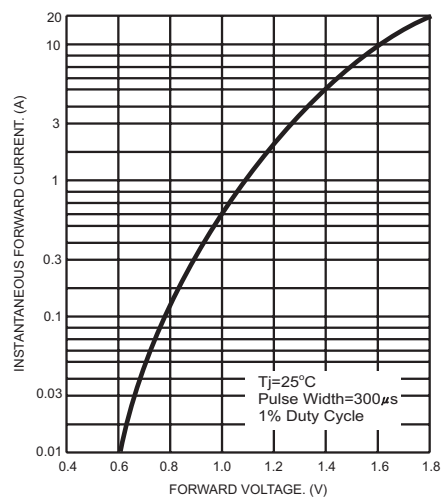


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

