

Features

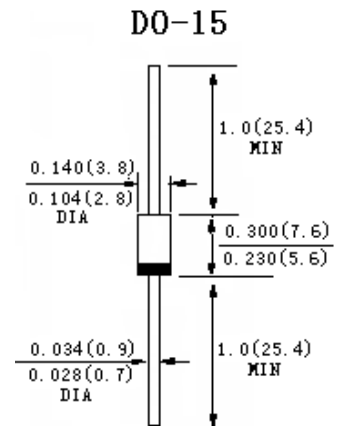
- Low reverse leakage
- High forward surge capability
- High reliability
- High temperature soldering guaranteed: 260°C/10seconds, 9.5mm lead length
- Lead and body according with RoHS standard

Mechanical Data

Case: DO-15 Molded plastic

Epoxy: UL 94V-0 rate flame retardant

Lead: Pure tin plated, lead free



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	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	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 9.5mm lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current, 8.3ms single half-wave superimposed on rated load (JEDEC method)	I_{FSM}	50							A
Maximum instantaneous forward voltage at 1.5A	V_F	1.3							V
Maximum reverse recovery time (Note: 1)	T_{rr}	150			250		500		nS
Maximum DC reverse current at rated DC blocking voltage	$T_a=25^\circ\text{C}$	I_{R1}							μA
	$T_a=100^\circ\text{C}$	I_{R2}							μA
Operating junction temperature range	T_J	-55to+150							$^\circ\text{C}$
Storage temperature range	T_{stg}	-55to+150							$^\circ\text{C}$

Note: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$.

Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

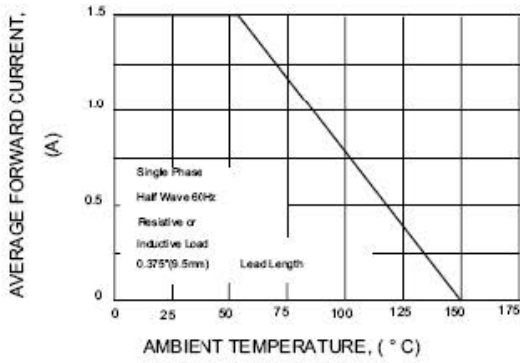


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

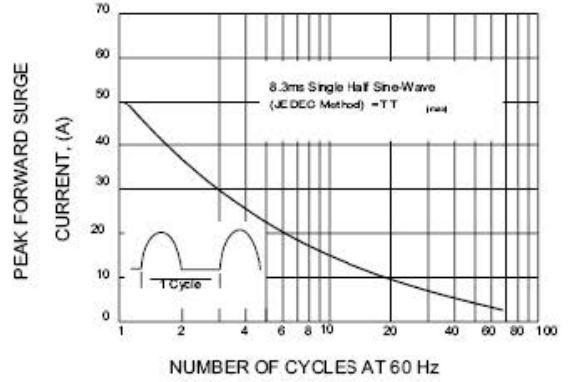


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

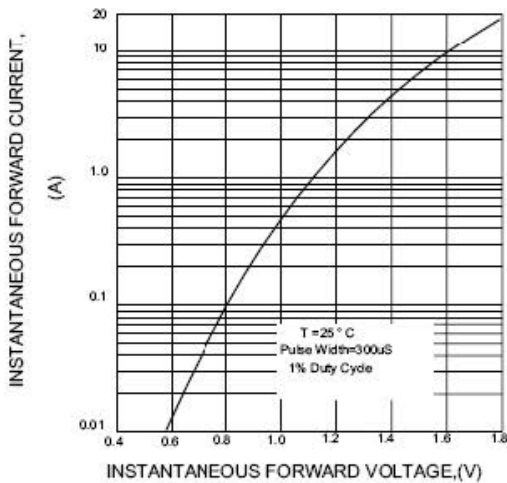


FIG.4-TYPICAL REVERSE CHARACTERISTICS

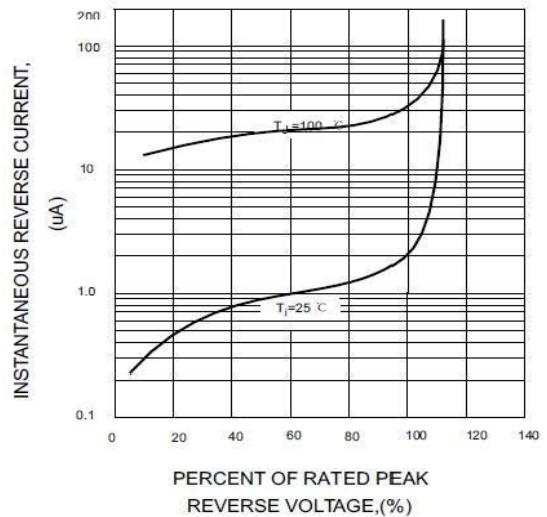


FIG.5-TYPICAL JUNCTION CAPACITANCE

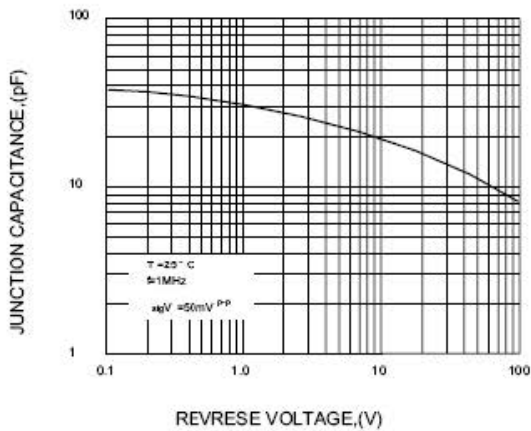


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

