

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 50--- 600 V

CURRENT: 3.0 A

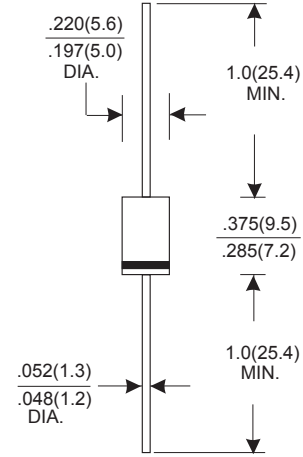
FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- High speed switching

MECHANICAL DATA

- Case: JEDEC DO-27, molded plastic
- Terminals: Axial lead, solderable per
- MIL- STD-202, Method 208
- Polarity: Color band denotes cathode
- Mounting position: Any

DO-27



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted) Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate by 20%.

		SF31	SF32	SF33	SF34	SF35	SF36	SF37	SF38	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current, 375"(9.5mm) Lead Length at $T_A=75^\circ\text{C}$	$I_{F(AV)}$	3.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125.0								A
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.0			1.3		1.7			V
Maximum reverse current at rated DC blocking voltage	@ $T_A=25$	5.0								μA
	@ $T_A=100$	50.0								
Maximum reverse recovery time (Note1)	t_{rr}	35								ns
Typical junction capacitance (Note2)	C_J	40				30				pF
Typical thermal resistance(Note3)	$R_{\theta JA}$	50								$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_j	-65 ---- + 125								$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 ---- + 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.

RATINGS AND CHARACTERISTIC CURVES

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

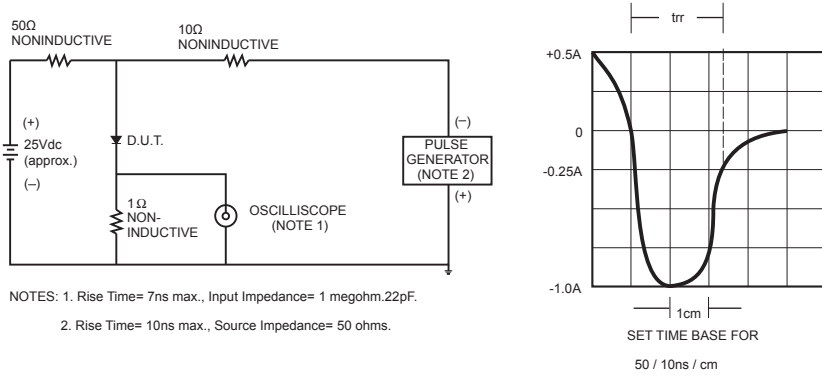


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

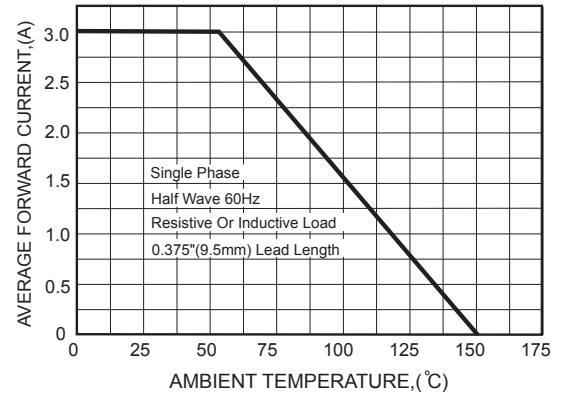


FIG.3-TYPICAL FORWARD CHARACTERISTICS

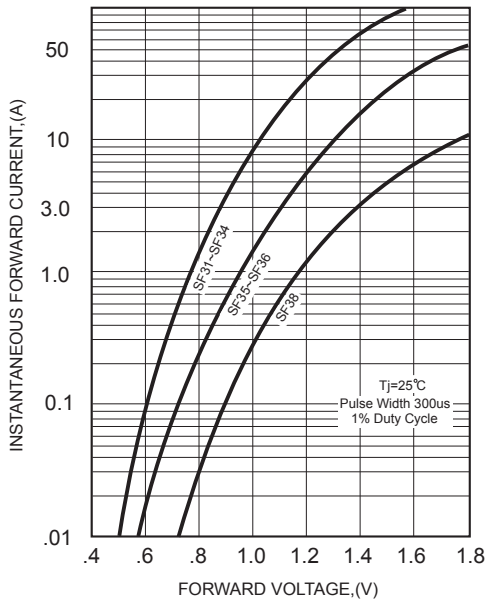


FIG.4-TYPICAL REVERSE CHARACTERISTICS

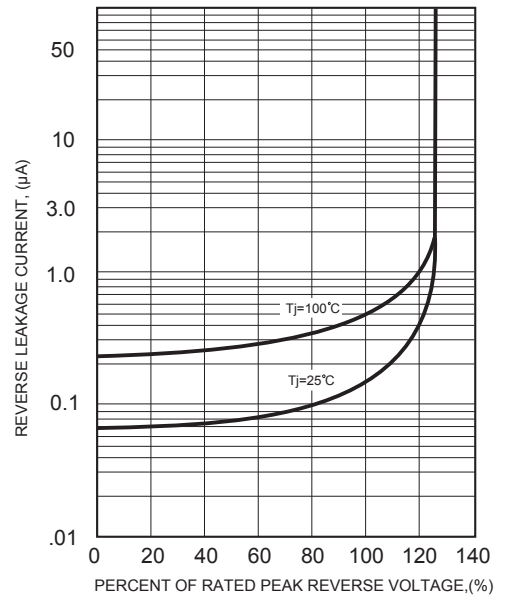


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

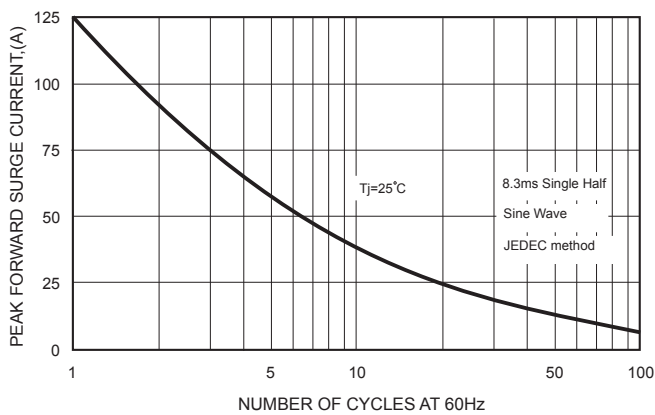


FIG.6-TYPICAL JUNCTION CAPACITANCE

