1F10 - 1F20

FAST RECOVERY RECTIFIER DIODES

VOLTAGE RANGE: 1000 - 2000V
CURRENT: 0.5 A

Features

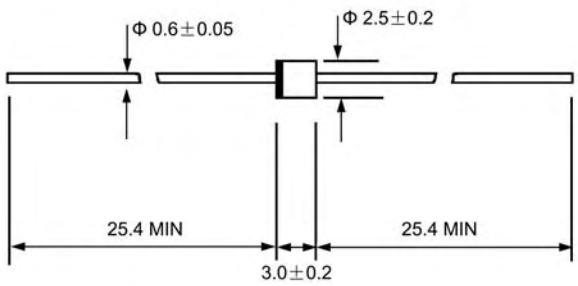
- Fast switching
- Diffused junction
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with alcohol,Isopropanol and
- similar solvents

Mechanical Data

- Case: JEDEC R--1,molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.007ounces, 0.20 grams
- Mounting position: Any

RoHS COMPLIANT

R - 1



Dimensions in millimeters

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	1F10	1F12	1F14	1F15	1F16	1F18	1F20	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	1000	1200	1400	1500	1600	1800	2000	V
Maximum RMS voltage	V_{RMS}	700	840	980	1050	1120	1260	1400	V
Maximum DC blocking voltage	V_{DC}	1000	1200	1400	1500	1600	1800	2000	V
Maximum average forward rectified current 9.5mm lead length, @T_A=75℃	$I_{F(AV)}$	0.5							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load T_J=125℃	I_{FSM}	25.0							A
Maximum instantaneous forward voltage @ 0.5 A	V_F	1.8							V
Maximum reverse current @T_A=25℃	I_R	5.0							μA
at rated DC blocking voltage @T_A=100℃		100.0							
Maximum reverse recovery time (NOTE1)	t_{rr}	300							ns
Typical junction capacitance (NOTE2)	C_J	15							pF
Operating junction temperature range	T_J	-55 ---- + 150							℃
Storage temperature range	T_{STG}	-55 ---- + 150							℃

NOTE: 1. Reverse recovery test conditions: I_F=0.5A, I_R=-1.0A, I_{RR}=-0.25A.
2. Mersured at 1MH_Z and applied reverse voltage of 4.0V.

FIG.1 -- FORWARD DERATING CURVE

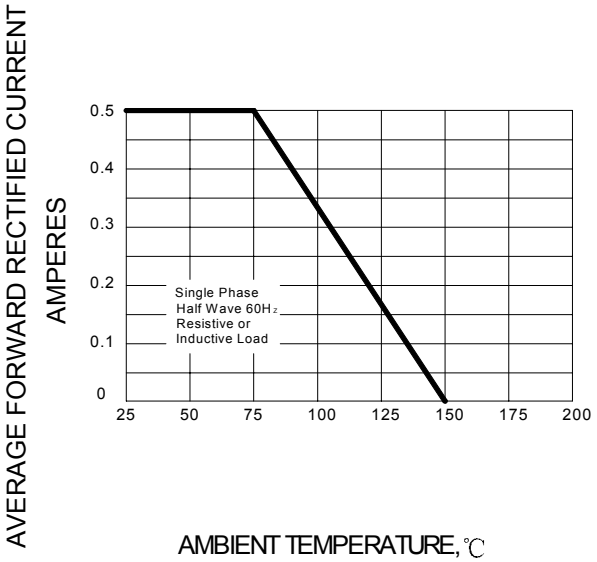


FIG.2 -- PEAK FORWARD SURGE CURRENT

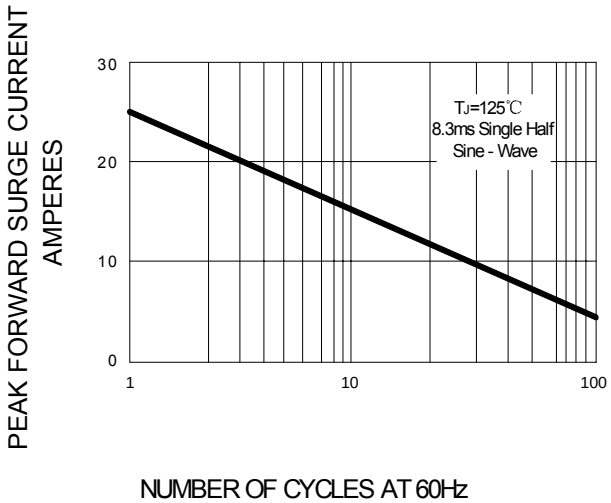
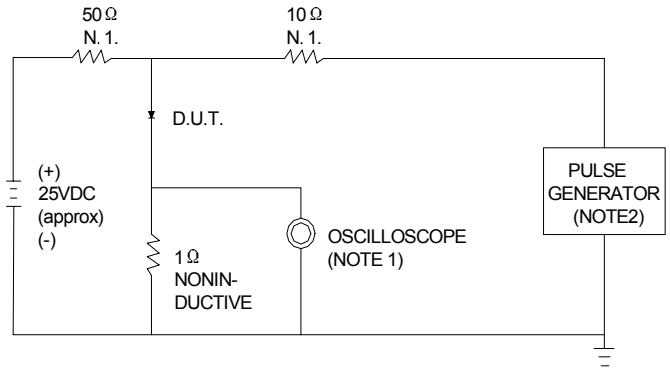
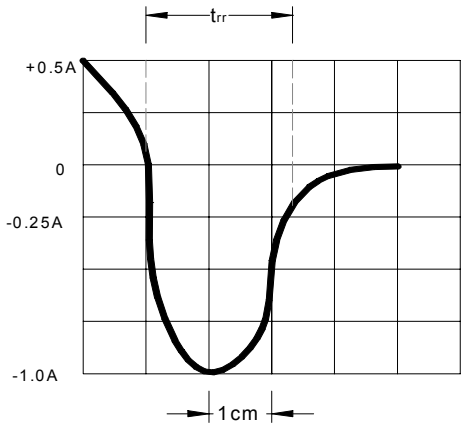


FIG.3 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE =1MΩ. 22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.



SET TIME BASE FOR 50/100 ns/cm