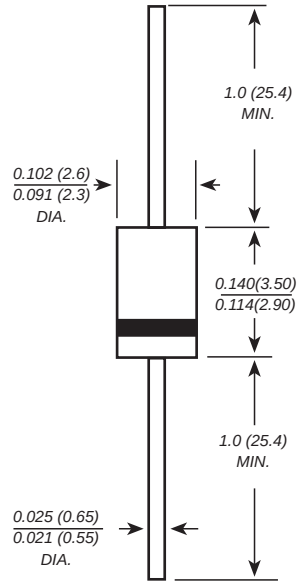
1F1 THRU 1F7

FAST RECOVERY RECTIFIERS

Features

1. The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
2. Fast switching for high efficiency
3. Low reverse leakage
4. High forward surge current capability
5. High temperature soldering guaranteed: 250°C/10 seconds,0.375”(9.5mm) lead length, 5 lbs. (2.3kg) tension

R-1



Dimensions in inches and (millimeters)

Mechanical

Case : JEDEC R-1 Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.007 ounce, 0.20 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwisespecified.Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

parameter	SYMBOLS	1F1	1F2	1F3	1F4	1F5	1F6	1F7	UNITS
Marking code		1F1	1F2	1F3	1F4	1F5	1F6	1F7	
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=25°C	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 1.0A	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							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	150				250	500		ns
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	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=0.5A,I_R=1.0A,Irr=0.25A
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

FIG. 1- FORWARD CURRENT DERATING CURVE

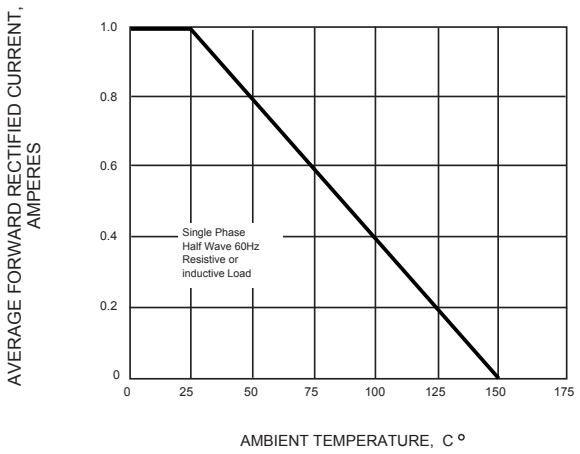


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

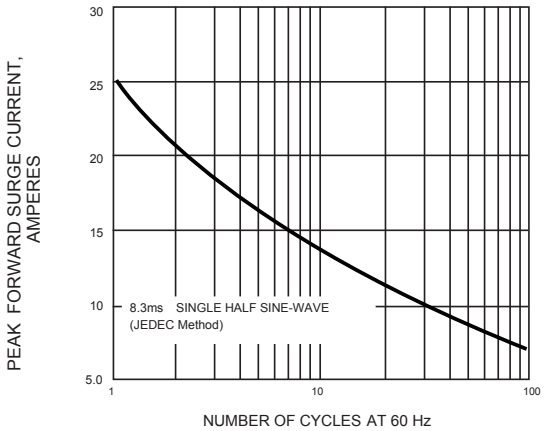


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

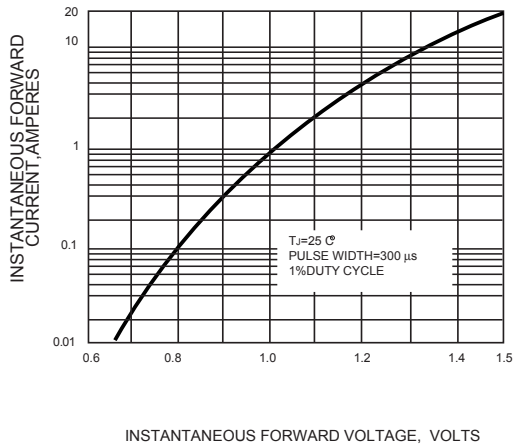


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

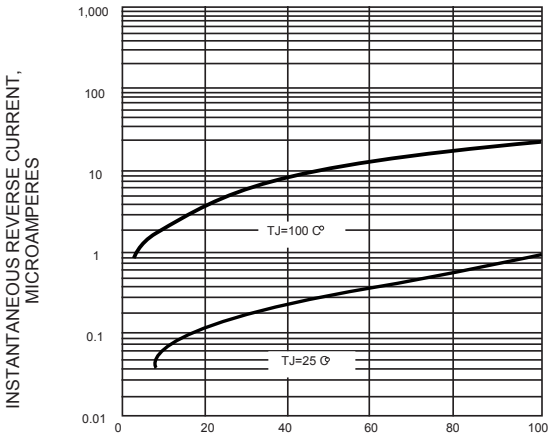


FIG. 5-TYPICAL JUNCTION CAPACITANCE

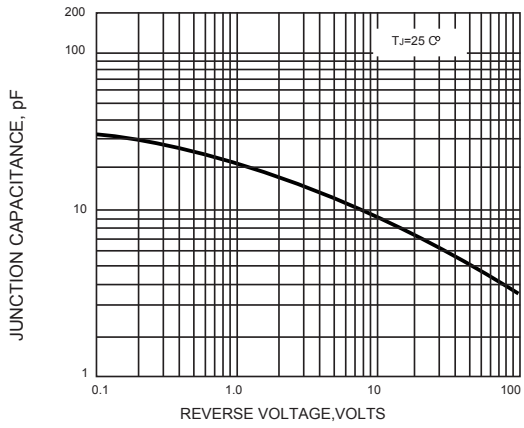


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

