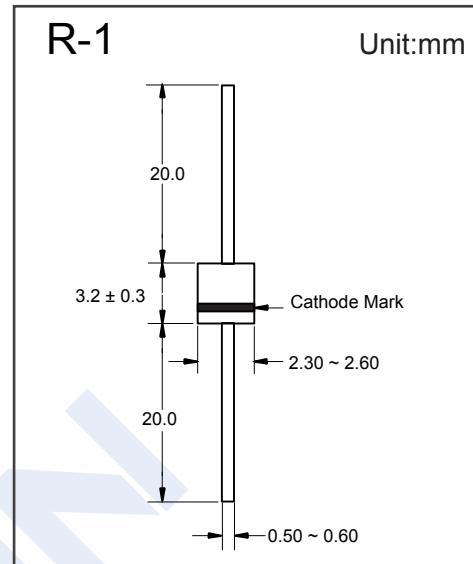


## Fast Recovery Diodes

## 1F1 ~ 1F7

## ■ Features

- High Current Capability
- Low Leakage
- Fast Switching for High Efficiency
- 1.0 Ampere operation at  $T_a=55^\circ\text{C}$  with no thermal runaway

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	1F1	1F2	1F3	1F4	1F5	1F6	1F7	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	
DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	
Averaged Forward Current $T_c=55^\circ\text{C}$	$I_{FAV}$	1							A
Peak Forward Surge Current @ 8.3ms half sine	$I_{FSM}$	30							
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	67							$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150							$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to 150							

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_{FM} = 1.0\text{A}, T_c = 25^\circ\text{C}$			1.3	V
Reverse voltage leakage current	$I_R$	$T_c = 25^\circ\text{C}$			5	$\mu\text{A}$
		$T_c = 100^\circ\text{C}$			500	
Typical Junction Capacitance	$C_J$	$V_R=4\text{V}, f=1\text{MHz}$			12	pF
Reverse Recovery Time	$t_{rr}$	1F1-1F4 $I_F=0.5\text{A}$			150	ns
		1F5 $I_F=1\text{A}$			250	
		1F6-1F7 $I_F=0.25\text{A}$			500	

# Fast Recovery Diodes

## 1F1 ~ 1F7

### ■ Typical Characteristics

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

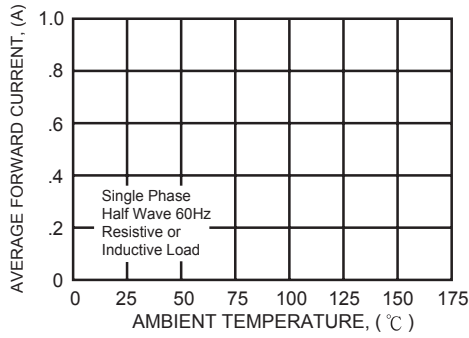


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

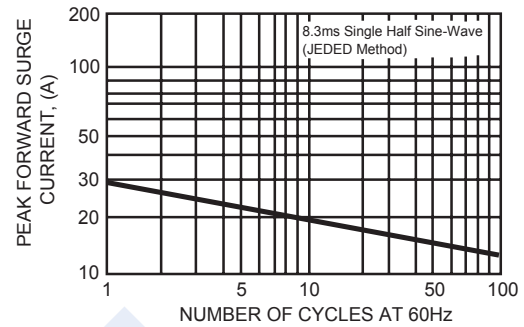


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

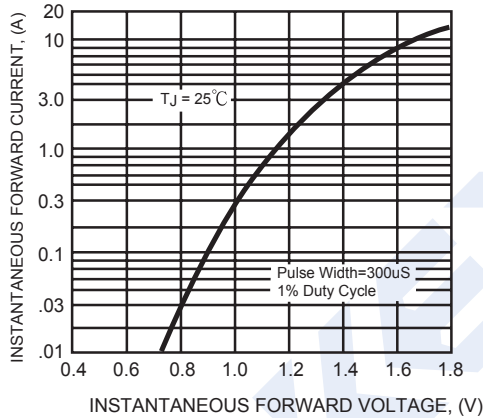


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

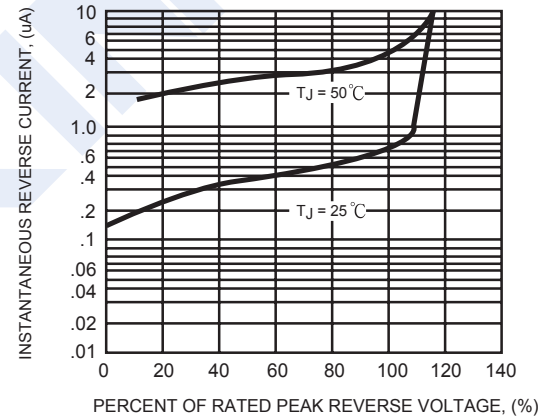


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

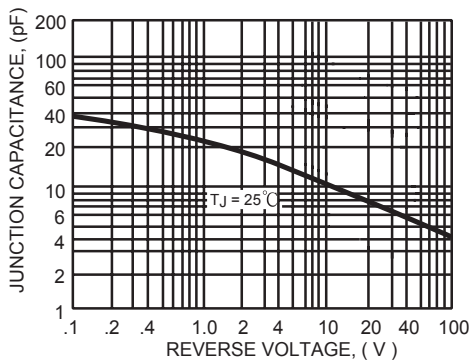


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

