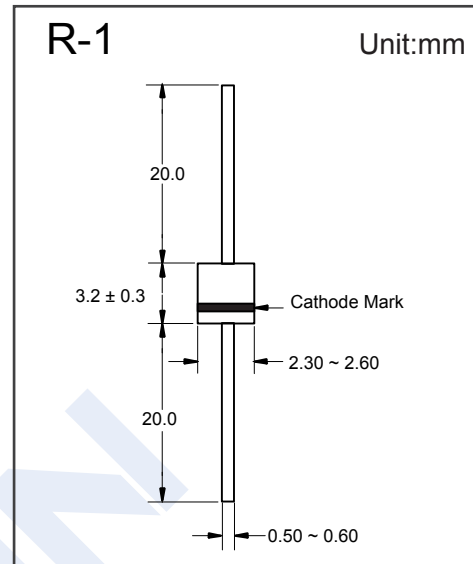


Fast Recovery Diodes

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	μA
		$T_c = 100^\circ\text{C}$			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

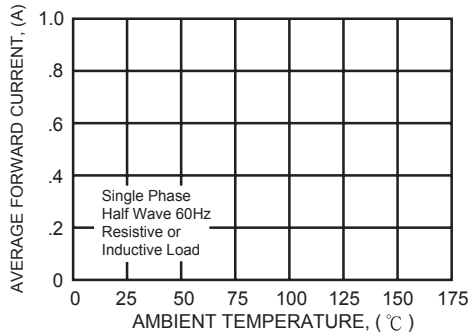


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

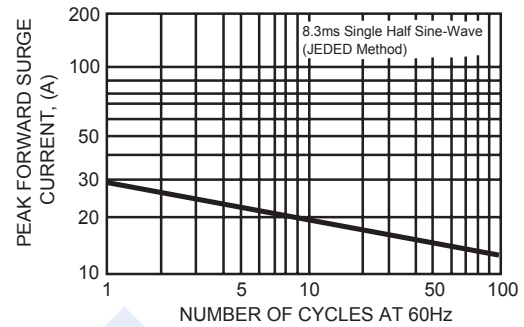


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

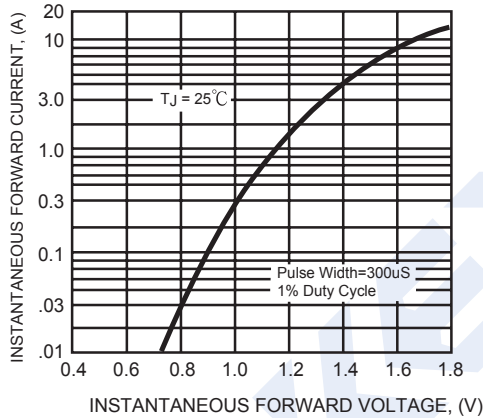


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

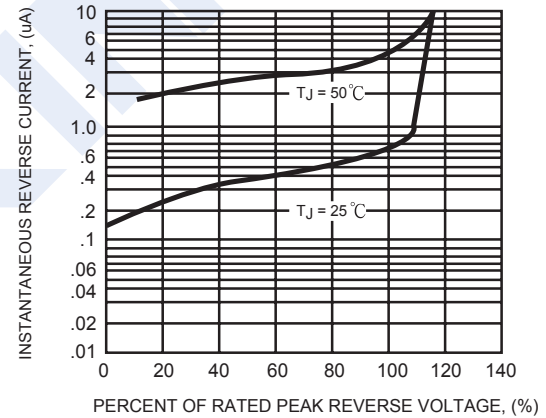


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

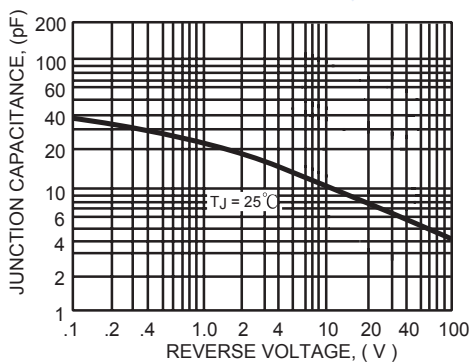


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

