

X00187

SDR 1004 thru SDR 1010

100 AMPS

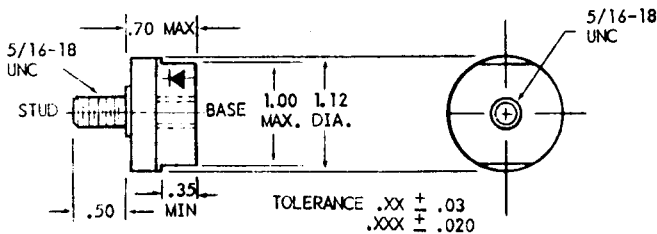
ULTRA FAST RECOVERY RECTIFIER

400-1000 VOLTS



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CASE STYLE



FEATURES

- PIV 400 TO 1000 VOLTS
- ULTRA FAST SWITCHING 60 NSEC TYPICAL
- LOW REVERSE LEAKAGE
- LOW THERMAL IMPEDANCE
- HIGH SURGE CAPABILITY
- REVERSE POLARITY UNITS CAN BE SUPPLIED, ADD SUFFIX "R" TO PART NUMBER

MAXIMUM RATINGS

Rating		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR 1004	$V_{RM} (rep)$		Volts
	SDR 1006	V_R	400	
	SDR 1008		600	
	SDR 1010		800	
RMS Reverse Voltage	SDR 1004	V_r	280	Volts
	SDR 1006		420	
	SDR 1008		560	
	SDR 1010		700	
Average 1/2 Wave Rectified Forward Current (Resistive Load, 60 Hz, $T_C = 25^\circ C$)		I_0	100	Amp
Peak Repetitive Forward Current ($T_C = 55^\circ C$)		$I_{FM} (rep)$	180	Amp
Peak Surge Current ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage)		$I_{FM} (surge)$	1250	Amp
Operating and Storage Temperature		T_J, T_{stg}	150	$^\circ C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient (typical printed circuit board mounting)	$R_{\theta JC}$.5	$^\circ C/W$

NOTE: All specifications subject to change without notice.

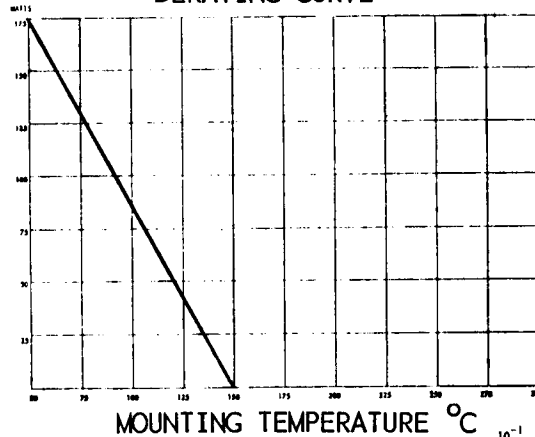
ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Average Forward Voltage Drop	$V_{F(AV)}$.85	Volts
Max Instantaneous Forward Voltage Drop ($I_F = 100$ Amps, $T_J = 25^\circ\text{C}$)	V_F	1.7	Volts
Max Reverse Current rated V_R , 60 Hz, $T_C = 100^\circ\text{C}$	I_R	2	mA
Max DC Reverse Current (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	50	μA

REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 500\text{ma}$, $I_R = 1\text{A}$, $I_{rr} = 250\text{ma}$)	t_{rr}	-	60	80	ns

DERATING CURVE



PEAK REPETITIVE SURGE TIME IN SECONDS

