FD1000A - Standard Rectifier

2000 - 2800 V_{RRM}; 1000 A avg

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GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- **. All Diffused Structure**
- **. High Surge rating**
- **. Blocking capabilty up to2800volts**
- **. Soft Reverse Recovery**
- **. Rugged Ceramic Hermetic Package**
- **. Pressure Assembled Device**

ELECTRICAL CHARACTERISTICS AND RATINGS

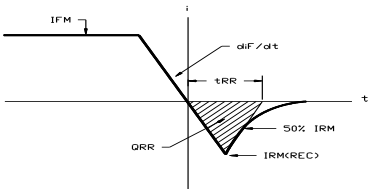
Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
FD1000A50	2500	2800
FD1000A56	2800	3100

V_{RRM} = Repetitive peak reverse voltage
V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage	I_{RRM}	10 mA 50 mA (3)

Notes:
All ratings are specified for Tj=25 ºC unless otherwise stated.
(1) All voltage ratings are specified for an applied



REVERSE RECOVERY CHARACTERISTIC

Conducting - on state

Parameter	Symbol	Min.	Max.	Typ	Units	Conditions
Average value of on-state current	$I_{F(AV)}$		1000		A	Sinewave,180º conduction,T_c =100ºC
RMS value of on-state current	I_{FRMS}		1570		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		25000		A	10.0 msec (50Hz), sinusoidal wave-shape, 180º conduction, T_j = 175 ºC
I square t	I^2t		$2.6x10^5$		A^2s	10 msec
Peak on-state voltage	V_{FM}		1.65		V	I_{FM} =2500 A; Duty cycle ≤ 0.01%; T_j = 160 ºC
Reverse Recovery Current (4)	$I_{RM(REC)}$		250		A	I_{FM} = 1000 A; dI_F/dt = 10 A/µs, Tj = 160 oC
Reverse Recovery Charge (4)	Q_{rr}		*		µC	
Reverse Recovery Time (4)	t_{RR}		*		µs	

***** For guaranteed maximum values, contact factory

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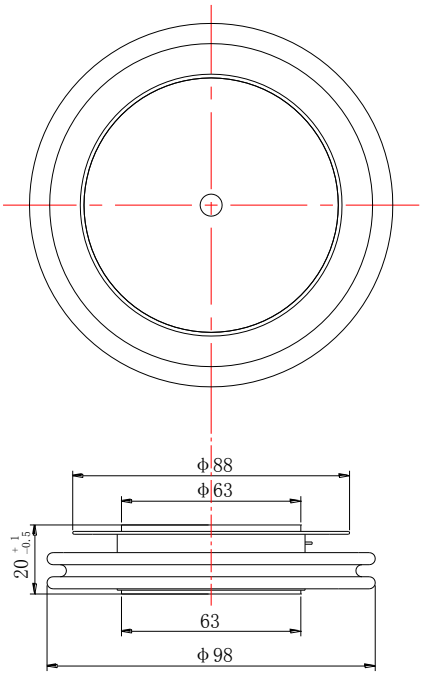
THERMAL AND MECHANICAL CHARACTERISTICS FD1000A- Standard Rectifier

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+150		°C	
Storage temperature	T_{stg}	-40	+150		°C	
Thermal resistance - junction to case	$R_{\Theta (j-c)}$		0.023		°C/W	Double sided cooled
Thermal resistance - case to sink	$R_{\Theta (c-s)}$		0.010		°C/W	Double sided cooled *
Mounting force	P		24		kN	
Weight	W			600	g	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS1



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