

M 0 8 5 9 L C 1 6 0

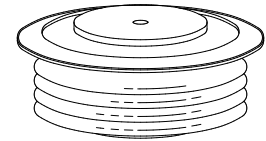
**- Soft Recovery Rectifier
1600 VRRM;**

HIGH POWER FAST RECOVERY RECTIFIER

Features:

- . All Diffused Structure
- . Fast Switching Performance
- . Blocking capability up to 1600 volts
- . Soft Reverse Recovery
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device

CASE 3D

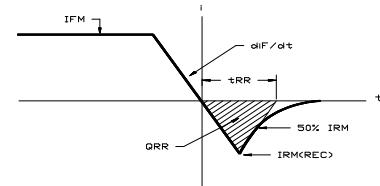


ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	VRRM (1)	VRRM (1)
M0859LC	1600	1700

VRRM = Repetitive peak reverse voltage
VRRM = Non repetitive peak reverse voltage (2)



REVERSE RECOVERY CHARACTERISTIC

Notes:

All ratings are specified for Tj=25 °C unless otherwise stated.

(1) All voltage ratings are specified for an applied

50Hz/60zHz sinusoidal waveform over the temperature range -40 to +150 °C.

(2) 10 msec. max. pulse width

(3) Maximum value for Tj = 150 °C.

(4) See parameter definition below :

Repetitive peak reverse leakage	IRRM	50 mA (3)
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Conducting - on state

Parameter	Symbol	Min.	Max.	Typ	Units	Conditions
Average value of on-state current	IF(AV)		859		A	Sinewave, 180° conduction, Ts = 55°C
RMS value of on-state current	IFRMS		1740		A	Nominal value
Peak one cycle surge (non repetitive) current	IFSM		11000		A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, Tj = 150 °C
I square t	I²t		605000		A²s	10.0 msec
Peak on-state voltage	VFM		1.50		V	IFM = 1200 A; Duty cycle ≤0.01%; Tj = 125 °C
Reverse Recovery Current (4)	IRM(REC)		80		A	IFM = 1000 A; dIF/dt = 25 A/μs; Tjmax
Reverse Recovery Charge (4)	Qrr		*	200	μC	IFM = 1000 A; dIF/dt = 25 A/μs; Tjmax
Reverse Recovery Time (4)	tRR		*	3.0	μs	

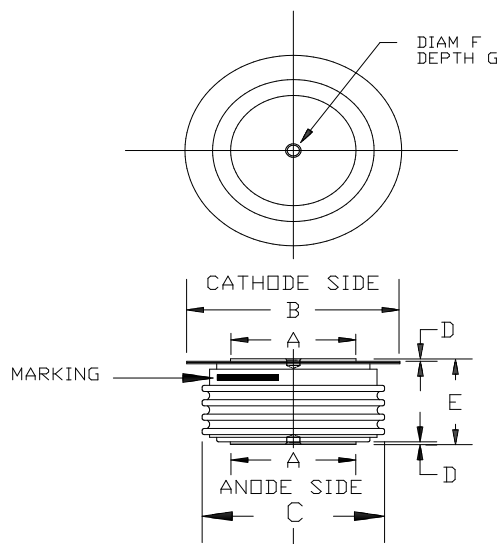
* For guaranteed maximum values, contact factory

THERMAL AND MECHANICAL CHARACTERISTICS M0859LC160- Soft Recovery 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	$R_{\theta(j-c)}$		0.043 0.086		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to sink	$R_{\theta(c-s)}$.015 .030		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P	10.5	19.9		kN	
Weight	W			340	g	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS



OUTLINE DIMENSIONS - CASE 3D				
DIMENSIONS	Min. mm	Max. mm	Min. In.	Max. In.
DIAM A	33.02	34.29	1.30	1.35
DIAM B	55.88	63.50	2.20	2.50
DIAM C	--	54.61	--	2.15
D	0.76	--	0.03	--
E	25.40	27.18	1.00	1.07
F	3.30	3.81	0.13	0.15
G	1.78	2.03	0.07	0.08

STRIKE DISTANCE = .73 INCH / 18.5 MM MIN.
CREEPAGE DISTANCE = 1.17 INCH / 29.7 MM MIN.