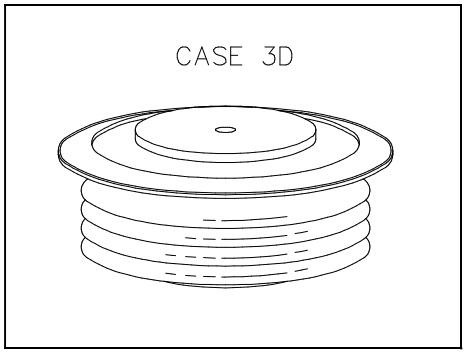
E L E C T R O P O W E R

MEP0859LC16 - Fast Recovery Rectifier

600 - 1500 V_{RRM}; 600 A avg

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HIGH POWER FAST RECOVERY RECTIFIER



Features:

- **All Diffused Structure**
- **Fast Switching Performance**
- **Blocking capabilty up to 1500 volts**
- **Soft Reverse Recovery**
- **Rugged Ceramic Hermetic Package**
- **Pressure Assembled Device**

ELECTRICAL CHARACTERISTICS AND RATINGS

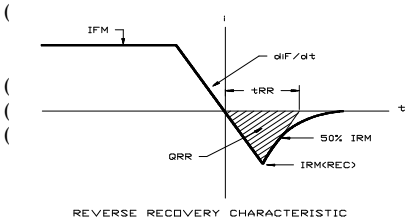
Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
MEP0859LC16M	1600	1700

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 °C unless otherwise stated.



REVERSE RECOVERY CHARACTERISTIC

Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state current	$I_{F(AV)}$		859		A	Sinewave,180° conduction,T_c =65 °C
RMS value of on-state current	I_{FRMS}		900		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		10000 92000		A A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, T_j = 125 °C 10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, T_j = 125 °C
I square t	I^2t		415000		A^2s	8.3 msec and 10.0 msec
Peak on-state voltage	V_{FM}		1.80		V	I_{FM} = 2000 A; Duty cycle ≤0.01%;
Reverse Recovery Current (4)	$I_{RM(REC)}$		*	60	A	I_{FM} = 1000 A; dI_F/dt = 25 A/µs; Tjmax
Reverse Recovery Charge (4)	Q_{rr}		*	110	µC	I_{FM} = 1000 A; dI_F/dt = 25 A/µs; Tjmax
Reverse Recovery Time (4)	t_{RR}		*	3.50	µs	I_{FM} = 1000 A; dI_F/dt = 25 A/µs; Tjmax

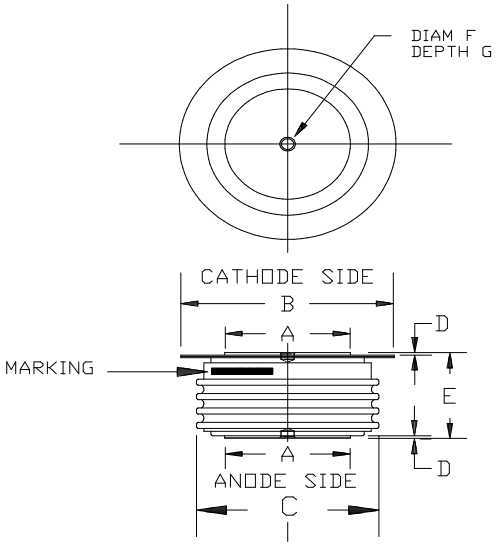
* For guaranteed maximum values, contact factory

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Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		°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	3500 15.5	4500 19.9		lb. kN	
Weight	W			9 225	oz. 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.

ELECTRO POWER

MEP0859LC16 - Fast Recovery Rectifier

Electro Power Enterprise
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