

## SILICON RECTIFIERS

### 12 & 16 Ampere Silicon Power Diodes

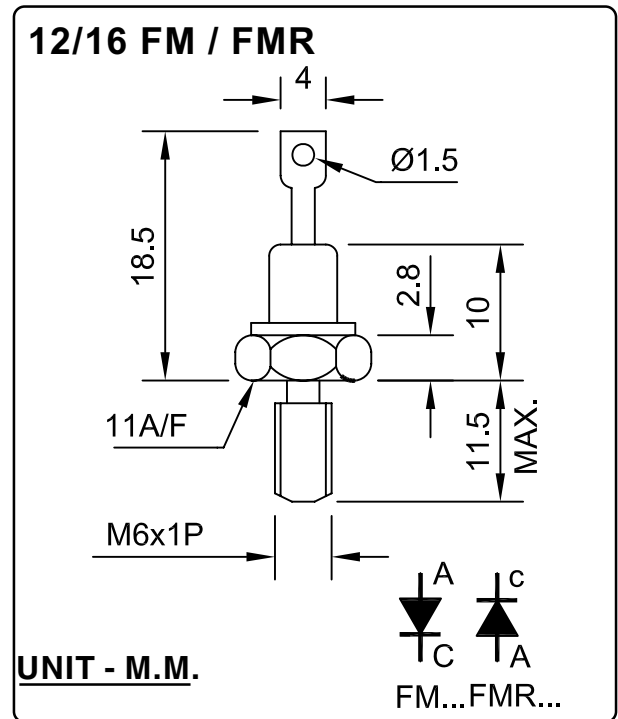
#### FEATURES

- ❖ All diffused series.
- ❖ Available in normal & reverse polarity.
- ❖ Device conforms to IS 3700 (III) & IS 4400 (III).
- ❖ Device outline conforms to IS 5000 (Do. 4) except stud.
- ❖ Available in avalanche characteristic.

ELECTRICAL SPECIFICATIONS		12 FM/FMR	16 FM/FMR
$I_{F(AV)}$	Maximum average forward current $T_c = 160^\circ\text{C}$	12A	16A
$V_{FM}$	Maximum peak forward voltage drop @ Rated $I_{F(peak)}$	1.3 V	1.2 V
$I_{FSM}$	Maximum peak one cycle (non-rep.) surge current 10 msec	265 A	350 A
$I_{FRM}$	Maximum repetitive peak forward current	60 A	80 A
$I^2t$	Max. $I^2t$ rating (non-rep.) for 10 msec.	351 A <sup>2</sup> Sec	612 A <sup>2</sup> Sec

#### THERMAL MECHANICAL SPECIFICATIONS

$\theta_{J-C}$	Maximum thermal resistance junction to case	2° C/W	1.6° C/W
$\theta_{C-H}$	Contact thermal resistance	0.5° C/W	
$T_J$	Operating junction temp.	-65°C to 175°C	
$T_{stg}$	Storage temperature	-65°C to 200°C	
	Mounting torque (Non-lubricated threads)	0.14 M-Kg min. 0.17 M-Kg max.	
W	Approx. weight	7 gms.	



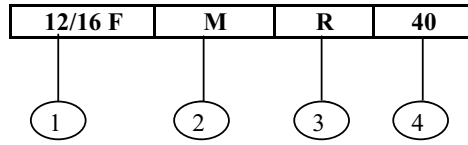
#### ELECTRICAL RATINGS

TYPE	NUMBER	12 FM/FMR 16 FM/FMR	10	20	40	60	80	100	120	140	160
$V_{RRM}$	Max. repetitive peak reverse voltage (V)		100	200	400	600	800	1000	1200	1400	1600
$V_{RSM}$	Max. non-repetitive peak reverse voltage (V)		150	300	500	700	900	1100	1300	1500	1700
$V_{R(RMS)}$	Max. R.M.S. reverse voltage (V)		70	140	280	420	560	700	840	980	1120
$V_R$	Max. D.C. Blocking voltage (V)		100	200	400	600	800	1000	1200	1400	1600
	Recommended R.M.S. working voltage (V)		40	80	160	240	320	400	480	560	640
$I_{RM}$	Max. Peak reverse leakage current @ $V_{RRM}, T_c$ (mA)		1	1	1	1	1	1	1	1	1

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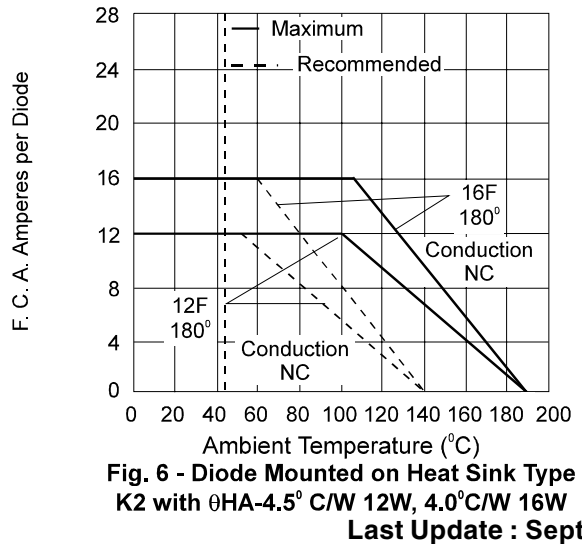
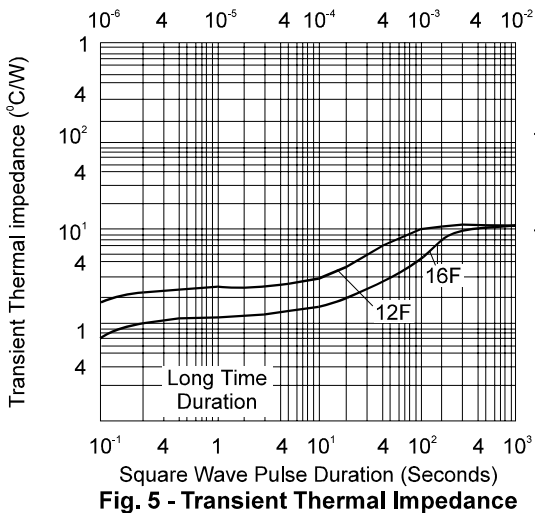
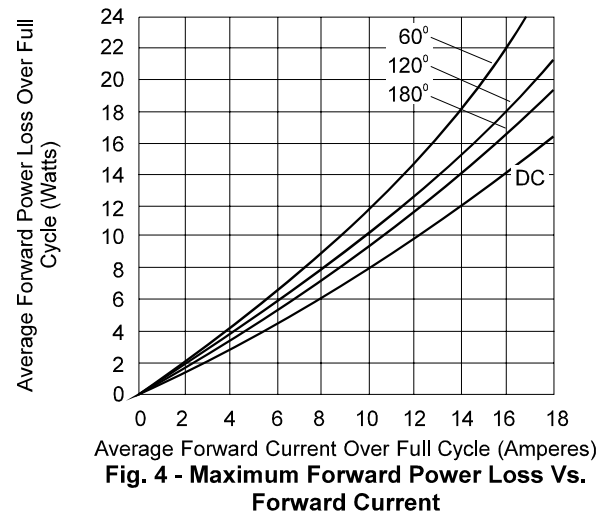
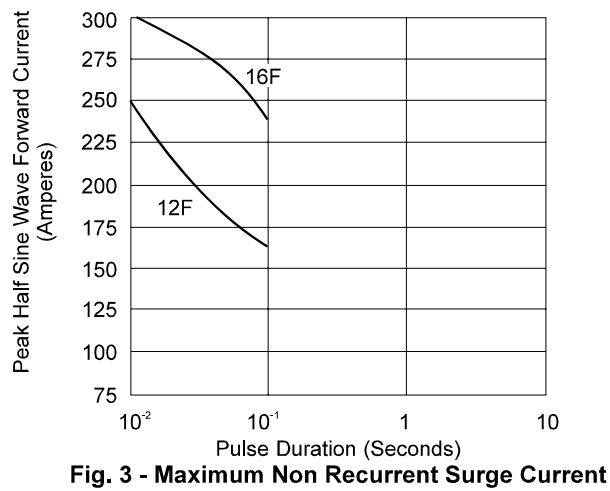
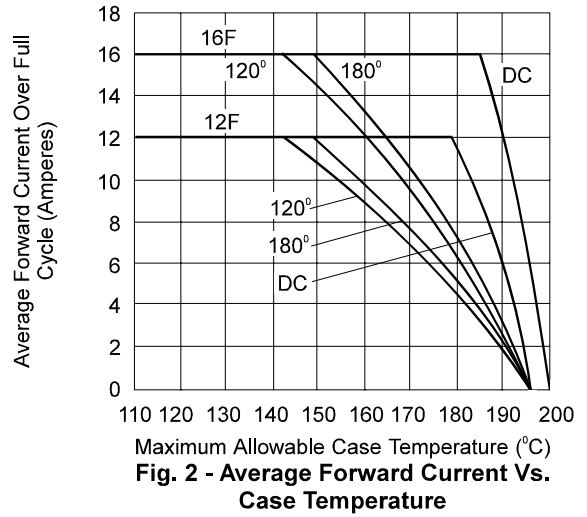
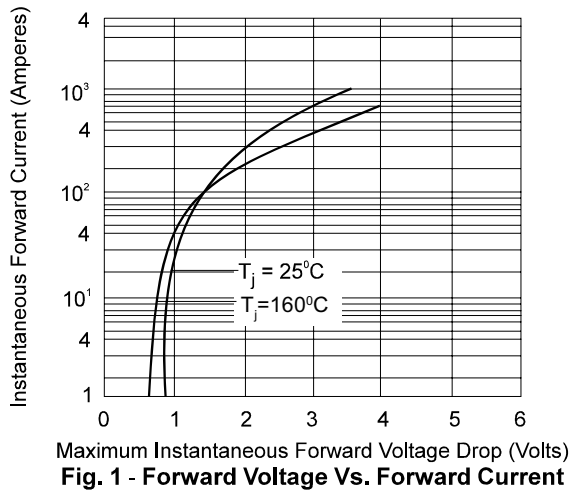
## Order Information Table



- |          |   |                             |   |
|----------|---|-----------------------------|---|
| <b>1</b> | - | 12/16 F -                   | Essential Part No.  |
| <b>2</b> | - | M -<br>None -               | Stud with 6mm Metric threading<br>Stud with 10-32 UNF threading |
| <b>3</b> | - | None-<br>R -                | Normal polarity<br>Reverse polarity                             |
| <b>4</b> | - | Voltage Rating ( See table) |   |

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## 12 FM / FMR & 16 FM / FMR SERIES



Last Update : Sept. 2007