



## SILICON RECTIFIERS

### 12 & 16 Ampere Silicon Power Diodes

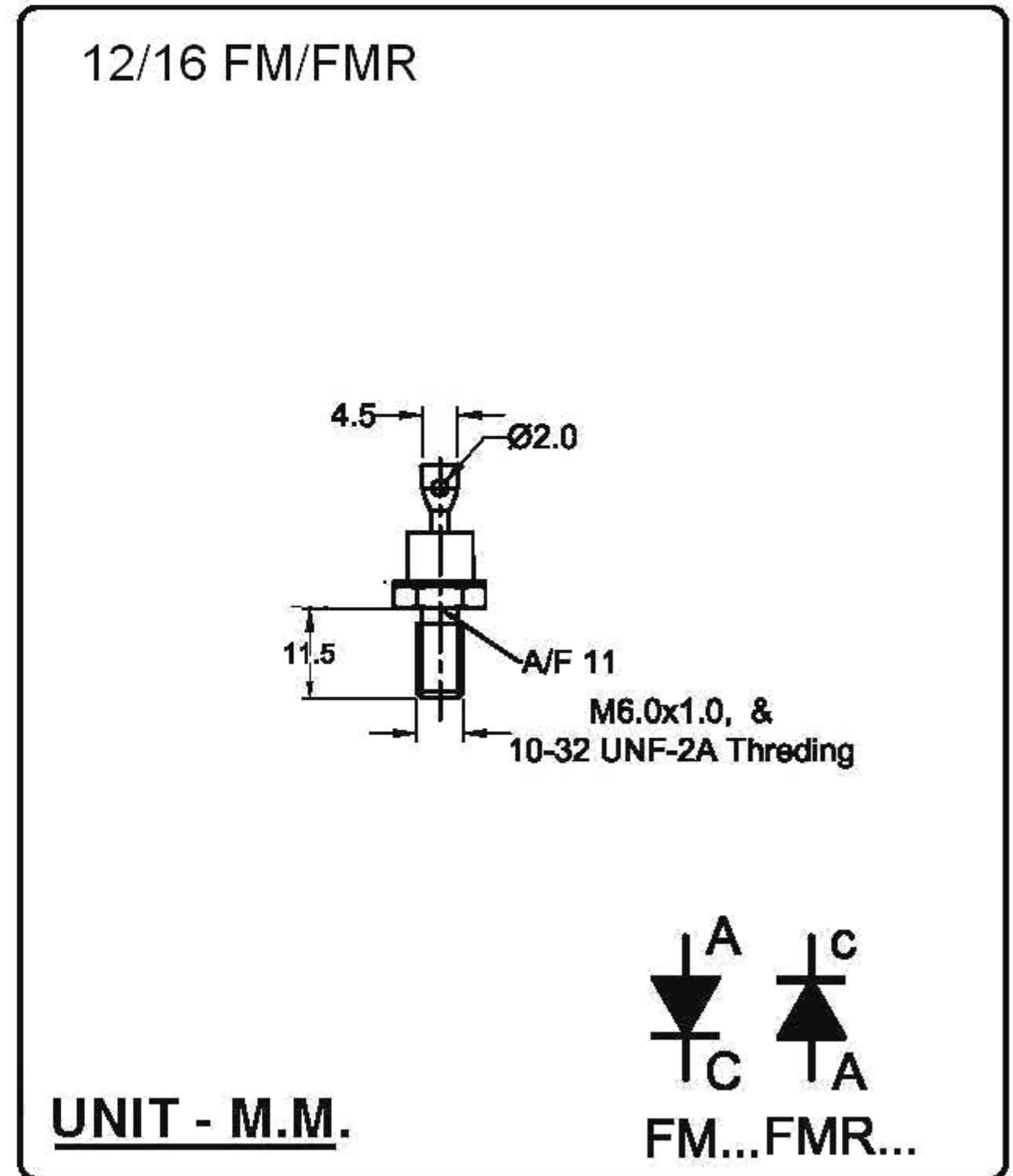
#### FEATURES

- ❖ 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 $T_c = 140^\circ\text{C}$	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	250A	300A
$I_{FRM}$	Maximum repetitive peak forward current	60 A	80 A
$I^2t$	Max. $I^2t$ rating (non-rep.) for 10 msec.	312 A <sup>2</sup> Sec	450 A <sup>2</sup> Sec
$V_{F(TO)}$	Max, value of threshold voltage	0.80V	
$r_f$	Max, value of forward slop resistance	6.8m $\Omega$	

#### THERMAL MECHANICAL SPECIFICATIONS

$\theta_{J-C}$	Maximum thermal resistance junction to heat sink	2 <sup>o</sup> C/W	1.6 <sup>o</sup> C/W
$\theta_{C-H}$	Contact thermal resistance	0.6 <sup>o</sup> C/W	
$T_J$	Operating junction temp.	-65 <sup>o</sup> C to 175 <sup>o</sup> C	
$T_{stg}$	Storage temperature	-65 <sup>o</sup> C to 200 <sup>o</sup> C	
	Mounting torque (Non-lubricated threads)	0.14 M-Kg min. 0.17 M-Kg max.	
W	Approx. weight	7 gms.	



**AVALANCHE RATING :** Avalanche versions available with 100,120,140 the reverse power rating only, to specify add prefix 'A' e.g. A 12 FMR 120 etc.

N. B. : All other Parameters are the same as 12 F & 16 F

		A 12F...	A 16F...	UNITS	CONDITIONS
$P_R$	Maximum non-repitive peak reverse power	7	15	KW	10 $\mu$ S Square pulse

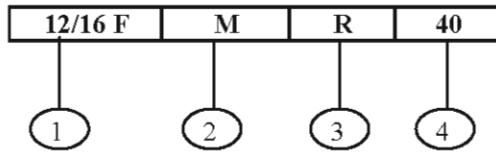
#### ELECTRICAL RATINGS

TYPE	NUMBER	12 FM/FMR 16 FM/FMR	40	60	80	100	120	140	160
$V_{RRM}$	Max. repetitive peak reverse voltage (V)		400	600	800	1000	1200	1400	1600
$V_{RSM}$	Max. non-repetitive peak reverse voltage (V)		500	700	900	1100	1300	1500	1700
$V_{R(RMS)}$	Max. R.M.S. reverse voltage (V)		280	420	560	700	840	980	1120
$V_R$	Max. D.C. Blocking voltage (V)		400	600	800	1000	1200	1400	1600
	Recommended R.M.S. working voltage (V)		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

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## Order Information Table



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

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

