



SILICON RECTIFIERS

60 Ampere Silicon Power Diodes

FEATURES

- ❖ *Diffused series.*
- ❖ *Available in normal & reverse polarity.*
- ❖ *Device conforms to IS 3700 (III) & IS 4400 (III).*
- ❖ *Device outline conforms to IS 5000 (Do. 5).*
- ❖ *Available in avalanche characteristic.*

ELECTRICAL SPECIFICATIONS

$I_{F(AV)}$	Maximum average forward current $T_c = 140^\circ\text{C}$	60 A
V_{FM}	Maximum peak forward voltage drop @ Rated $I_{F(Peak)}$	1.3 V
I_{FSM}	Maximum peak one cycle (non-rep.) surge current 10 msec.	860 A
I_{FRM}	Maximum repetitive peak forward current	300 A
I^2t	Max. I^2t rating (non-rep.) 10 msec.	3700 A ² Sec

THERMAL MECHANICAL SPECIFICATIONS

θ_{J-C}	Maximum thermal resistance junction to case	0.55° C/W
θ_{C-H}	Contact thermal resistance	0.25° C/W
T_J	Operating junction temp.	-65°C to 180°C
T_{stg}	Storage temperature	-65°C to 180°C
	Mounting torque (Non-lubricated threads)	0.4 M-Kg min. 0.6 M-Kg max.
W	Approx. weight	40 gms.

AVALANCHE RATING : Avalanche versions available with 100,120,140 the reverse power rating only, to specify add prefix 'A' e.g. A 61 HMR 120 etc.

N. B. : All other Parameters are the same as 61 H

		A 61 H	UNITS	CONDITIONS
P_R	Maximum non-repitive peak reverse power	16	KW	10 μ S Square pulse

ELECTRICAL RATINGS

TYPE NUMBER	61 HM/HMR	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)	15	15	15	9	9	9	9	5	5

SILICON RECTIFIERS

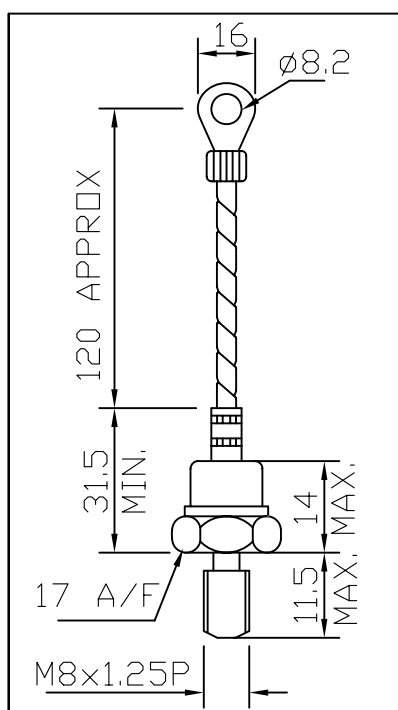
ORDER INFORMATION TABLE

60/70 H	M/F	R	40	G	M6
①	②	③	④	⑤	⑥

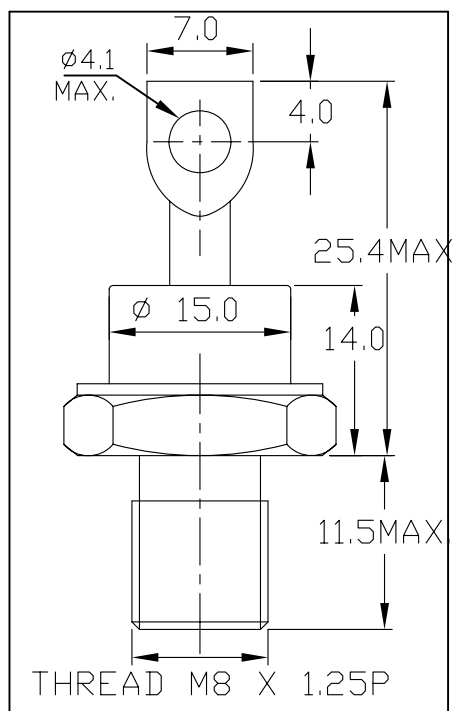
- ① - 60/70 H - without external lead
61/71 H - with external lead
- ② - M - stud with Metric threading
F - Stud with 1/4"UNF threading
- ③ - None - Normal polarity
R - Reverse polarity
- ④ - Voltage Rating (See table)
- ⑤ - None - Normal seal
G - Rotating seal
- ⑥ - None - M8 Metric Threading
M6 - M6 Metric threading

OUTLINE DIAGRAM

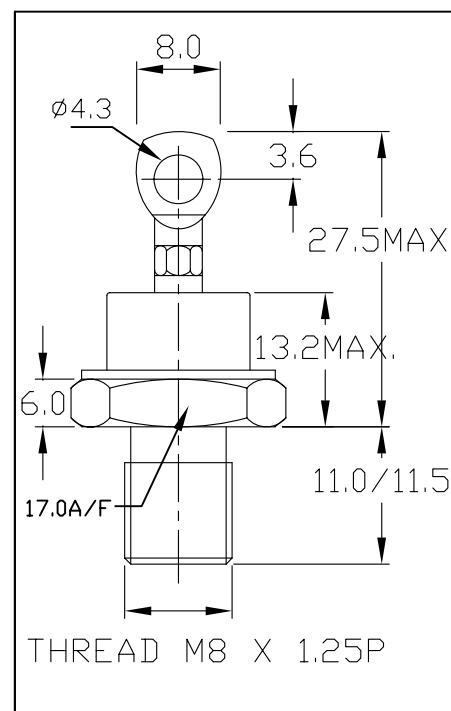
61/71HM



60/70HM



60/70HM



SILICON RECTIFIERS

61 HM / HMR SERIES

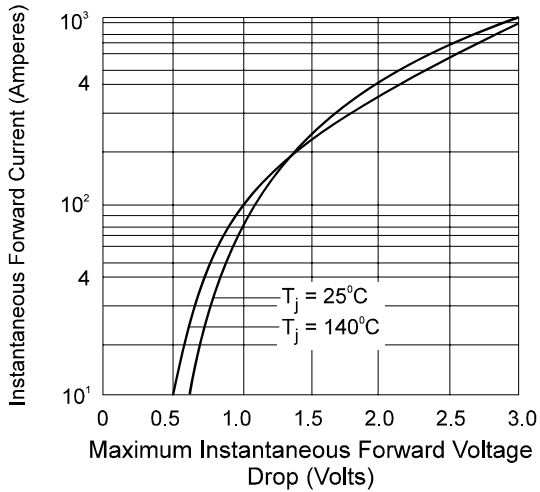


Fig. 1 - Forward Voltage Vs. Forward Current

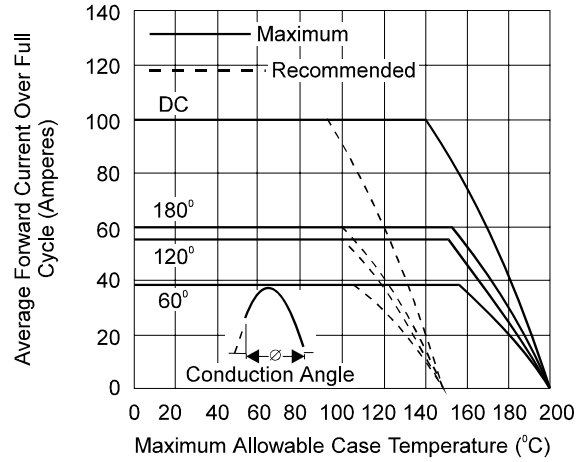


Fig. 2 - Average Forward Current Vs. Case Temperature

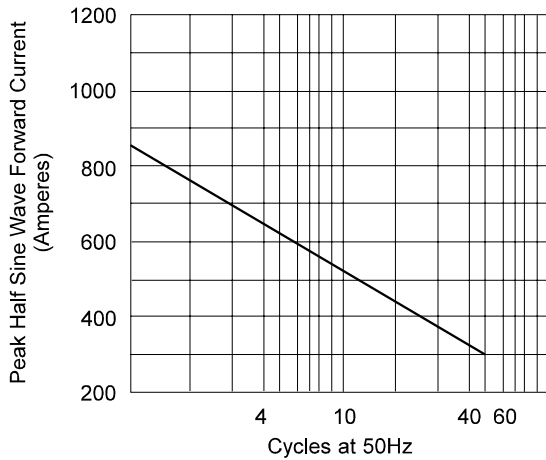


Fig. 3 - Maximum Non Recurrent Surge Current

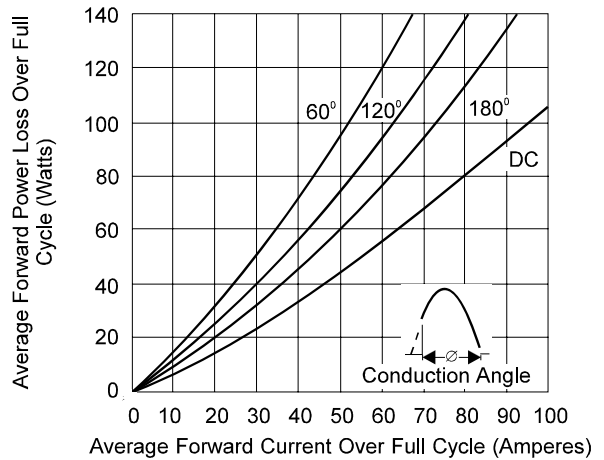


Fig. 4 - Maximum Forward Power Loss Vs. Forward Current

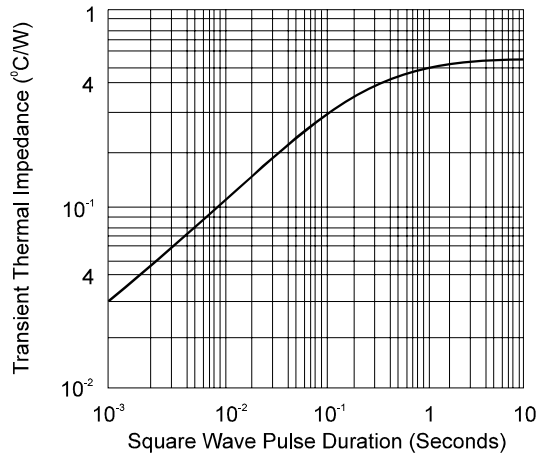


Fig. 5 - Transient Thermal Impedance

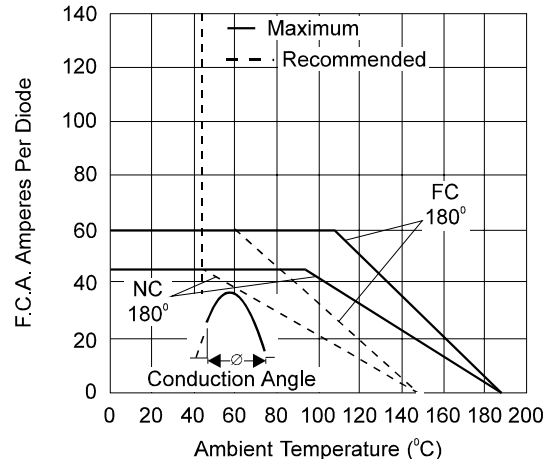


Fig. 6 - Diode Mounted on Heat Sink Type K4 with θ_{HA} 1.1° C/W NC, 0.3° C/W FC

Last Update : Sept. 2007