



Ruttonsha International Rectifier Ltd.

SILICON RECTIFIERS

85 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).*

ELECTRICAL SPECIFICATIONS

$I_{F(AV)}$	Maximum average forward current $T_c = 140^\circ\text{C}$	85 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.	1700 A
I_{FRM}	Maximum repetitive peak forward current	500 A
I^2t	Max. I^2t rating (non-rep.) 10 msec.	14500 A ² Sec

THERMAL MECHANICAL SPECIFICATIONS

θ_{J-C}	Maximum thermal resistance junction to case	0.35° 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.

ELECTRICAL RATINGS

TYPE NUMBER	85 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 @ $V_{RRM}, T_j = 175^\circ\text{C}$ (mA)	15	15	15	9	9	9	9	5	5

SILICON RECTIFIERS

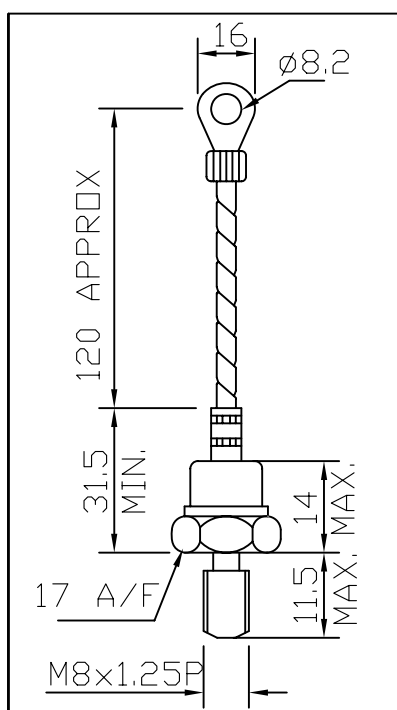
ORDER INFORMATION TABLE

85 H	M/F	R	40	G	M6
①	②	③	④	⑤	⑥

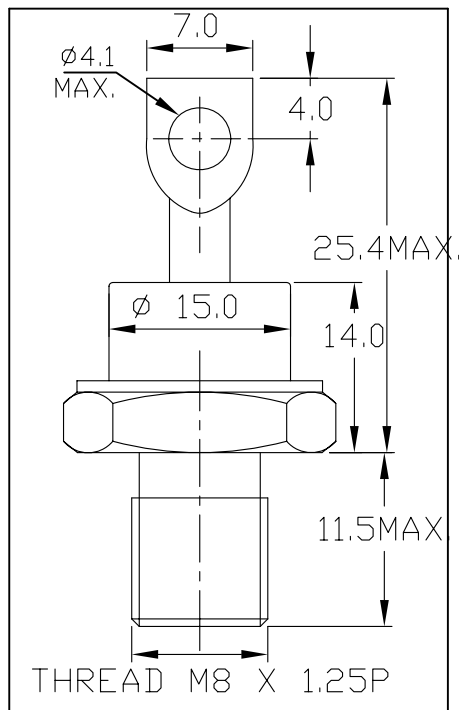
- ① - 85 H - without external lead
86 H - with external lead
- ② - M - stud with Metric threading
F - Stud with 1/4"UNF threading
- ③ - None - Normal polarity
R - Reverse polarity
- ④ - Voltage Rating (See table)
- ⑤ - None - Normal seal
G - Rotating seal
- ⑥ - None - M8 Metric Threading
M6 - M6 Metric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

OUTLINE DIAGRAM

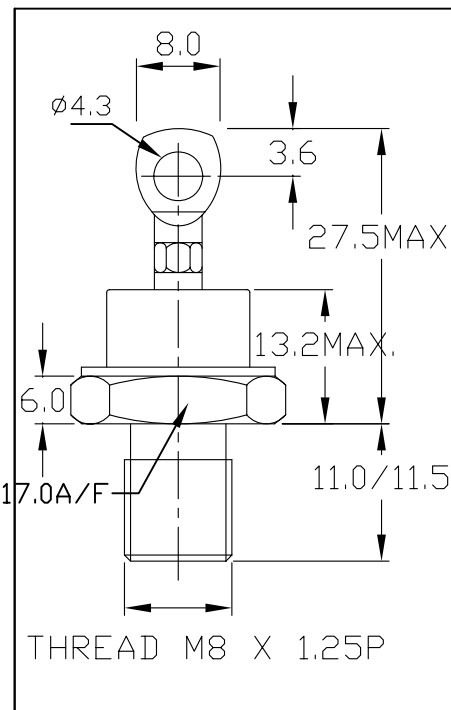
86HM



85HM



85HM..G



SILICON RECTIFIERS

85 HM / MHR SERIES

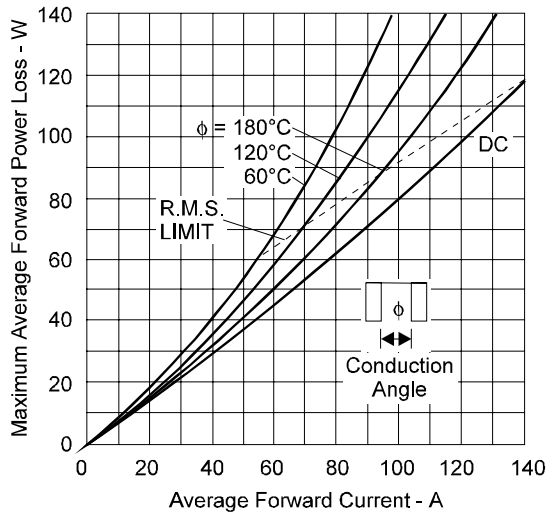


Fig. 1 - Current Ratings Rectangular Waveforms

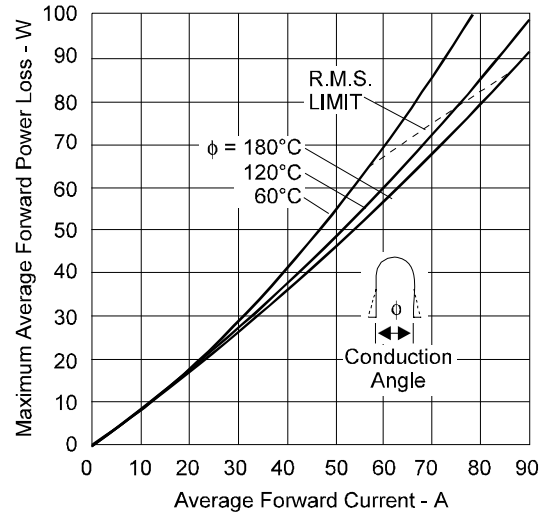


Fig. 2 - Current Ratings Sinusoidal Waveforms

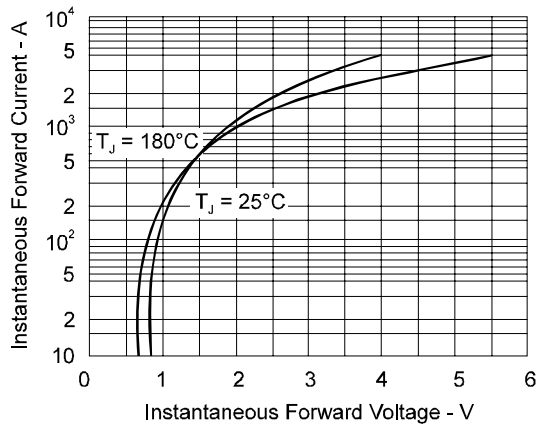


Fig. 3 - Forward Characteristics

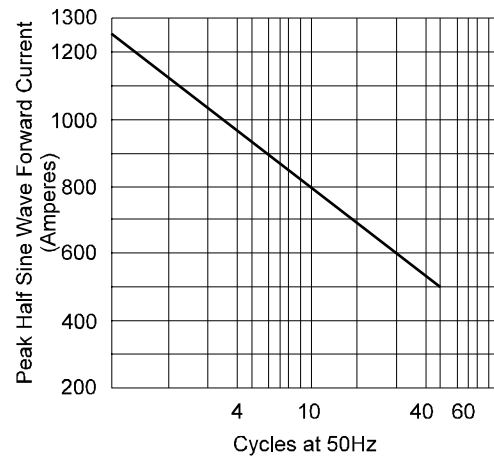


Fig. 4 - Non-Repetitive Surge Ratings

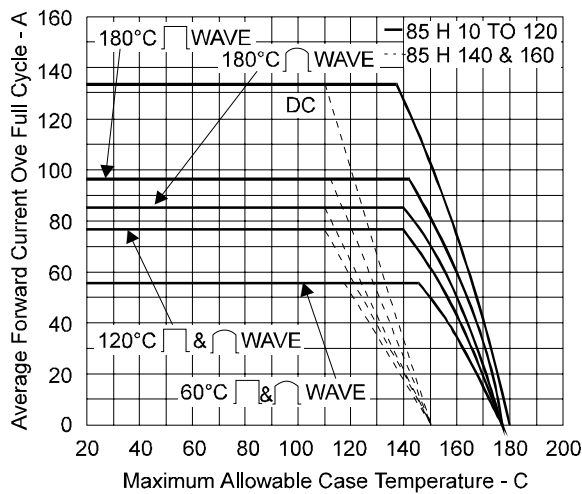


Fig. 5 - Case Temperature Ratings

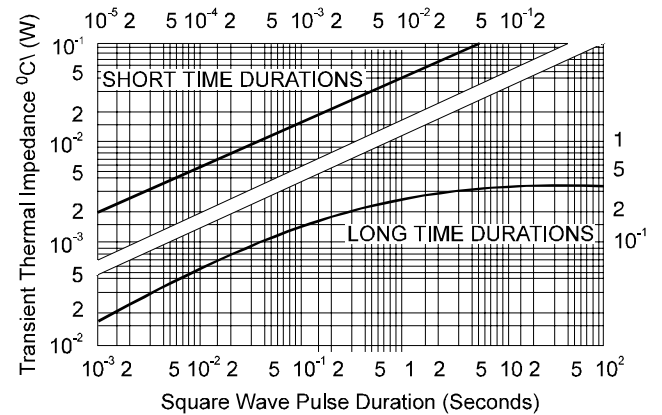


Fig. 6 - Transient Thermal Resistance

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