



SILICON RECTIFIERS

300 Ampere Silicon Power Diodes

FEATURES

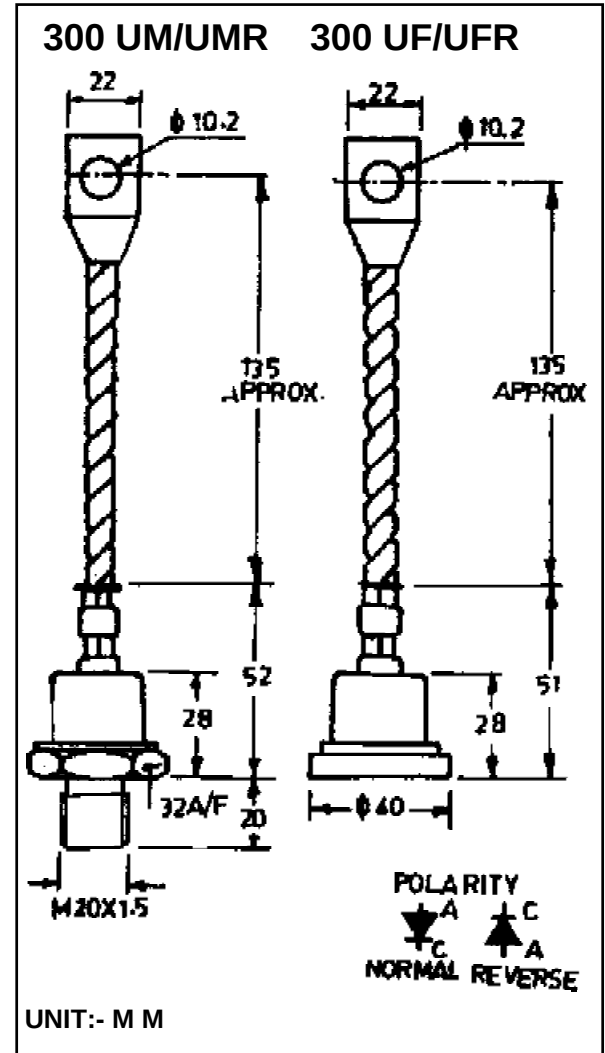
- ❖ Diffused series.
- ❖ Available in normal & reverse polarity.
- ❖ Device conforms to IS 3700 (III) & IS 4400 (III).
- ❖ Device outline (300 UM/UMR) conforms to IS 5000 (Do. 7).

ELECTRICAL SPECIFICATIONS

$I_{F(AV)}$	Maximum average forward current $T_c = 130^\circ\text{C}$	300 A
V_{FM}	Maximum peak forward voltage drop @ Rated $I_{F(AV)}$	1.35 V
I_{FSM}	Maximum peak one cycle (non-rep.) surge current 10 msec.	5000 A
I_{FRM}	Maximum repetitive peak forward current	1400 A
I^2t	Max. I^2t rating (non-rep.) for 5 to 10 msec.	125 KA ² Sec

THERMAL MECHANICAL SPECIFICATIONS

θ_{J-C}	Maximum thermal resistance junction to case	0.18 °C/W
θ_{C-H}	Contact thermal resistance	300UM/UMR 0.08 °C/W 300UF/UFR 0.05 °C/W
T_J	Operating junction temp.	-65 °C to 150 °C
T_{stg}	Storage temperature	-65 °C to 200 °C
	Mounting torque (Non-lubricated threads)	3.2 M-Kg min. 3.75 M-Kg max.
W	Approx. weight	260 gms.



ELECTRICAL RATINGS

TYPE	NUMBER	300 UM/UMR 300 UF/UFR	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. Average reverse leakage current @ V_{RRM} T_c (mA)		15	15	15	12	9	7	7	6	5

SILICON RECTIFIERS

300 UM / UMR & 300 UF / UFR SERIES

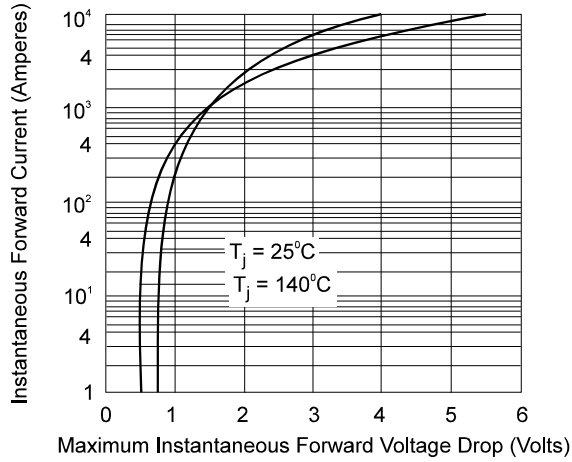


Fig. 1 - Forward Voltage Drop Vs. Forward Current

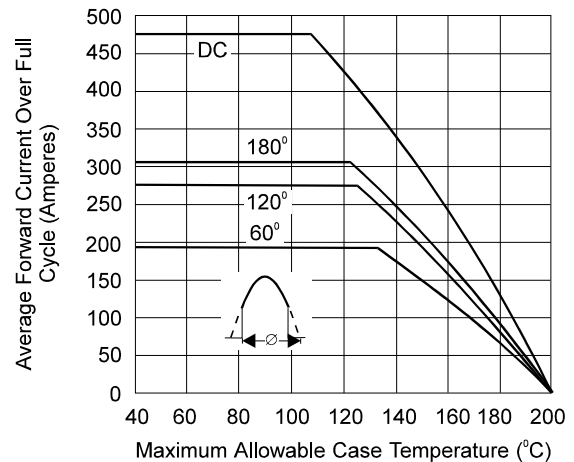


Fig. 2 - Average Forward Current Vs. Case Temperature

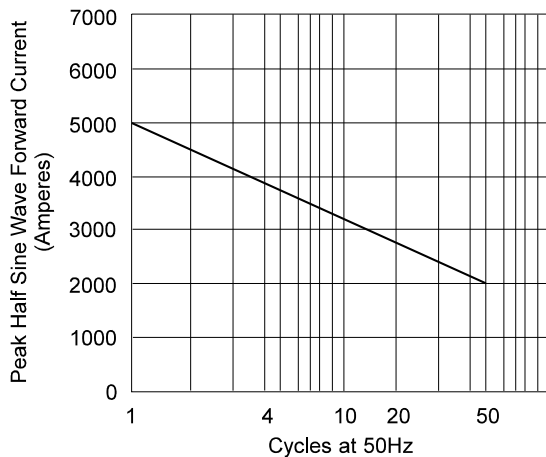


Fig. 3 - Maximum Non Recurrent Surge Current

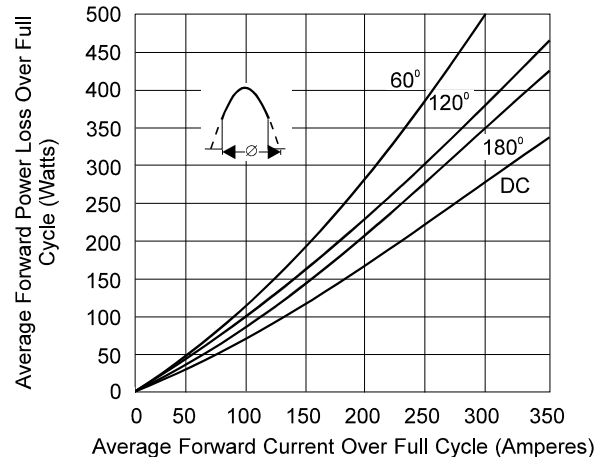


Fig. 4 - Maximum Forward Power Loss Vs. Forward Current

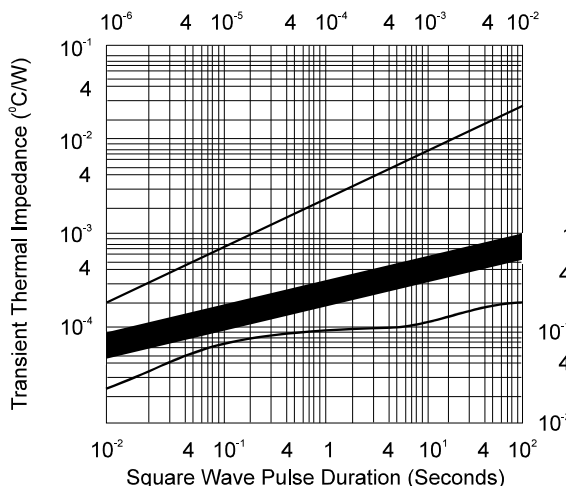


Fig. 5 - Transient Thermal Impedance

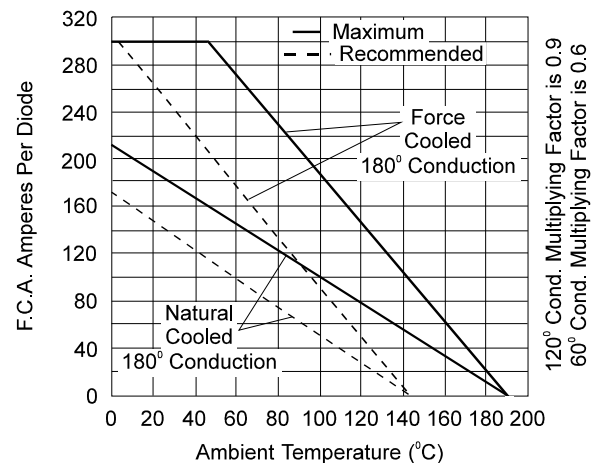


Fig. 6 - Diode Mounted on Heat Sink Type K5 with θ_{HA-NC} 0.55°C/W, FC 0.13°C/W

Last Update : July 2000

This document was created with Win2PDF available at <http://www.daneprairie.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.