

SILICON RECTIFIERS

320 Ampere Silicon Power Diodes

FEATURES

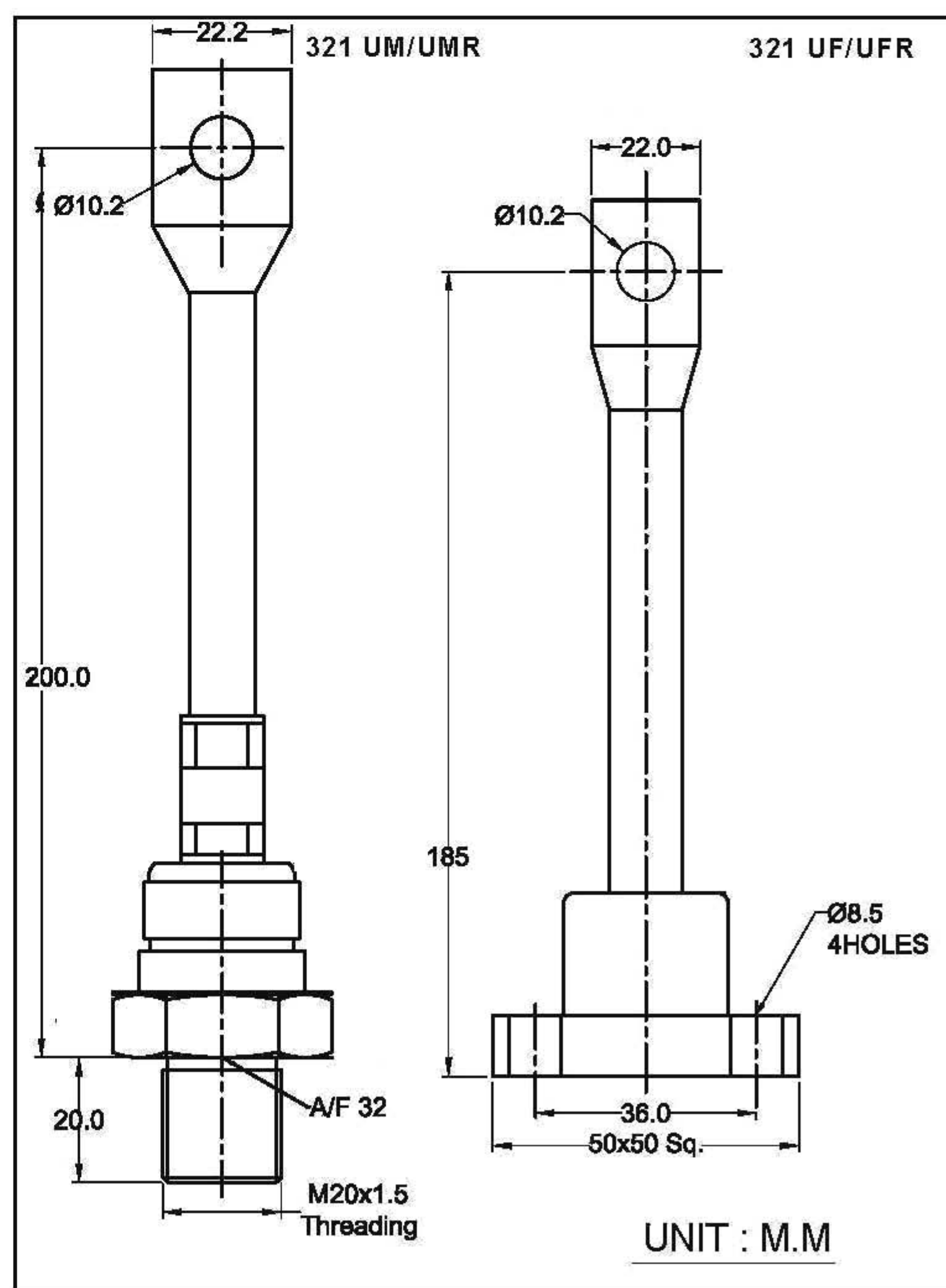
- ❖ All diffused alloyed series.
- ❖ Mainly available in reverse polarity.
- ❖ Device conforms to IS 3700 (III) & IS 4400 (III).
- ❖ Device outline (321 UM/UMR) conforms to IS 5000 (Do.9).

ELECTRICAL SPECIFICATIONS

$I_{F(AV)}$	Maximum average forward current $T_c = 130^\circ\text{C}$ $T_c: 321 \text{ UM} = 115^\circ\text{C}$ $321 \text{ UMR} = 130^\circ\text{C}$ $T_c: 321 \text{ UF} = 115^\circ\text{C}$ $321 \text{ UFR} = 130^\circ\text{C}$	320 A
V_{FM}	Maximum peak forward voltage drop @ Rated $I_{F(Peak)}$	1.65 V
I_{FSM}	Maximum peak one cycle (non-rep.) surge current 10 msec.	5500 A
I_{FRM}	Maximum repetitive peak forward current	1500 A
I^2t	Max. I^2t rating (non-rep.) 10 msec.	151 KA^2Sec
$V_{F(TO)}$	Max, value of threshold voltage	0.72 V
r_f	Max, value of forward slope resistance	0.53 $\text{m}\Omega$

THERMAL MECHANICAL SPECIFICATIONS

θ_{J-C}	Maximum thermal resistance junction to case	321UM/UF 0.15 $^\circ\text{C/W}$ 321UMR/UFR 0.12 $^\circ\text{C/W}$
θ_{C-H}	Contact thermal resistance	321UM/UMR 0.08 $^\circ\text{C/W}$ 321UF/UFR 0.02 $^\circ\text{C/W}$
T_J	Operating junction temp.	-65 $^\circ\text{C}$ to 175 $^\circ\text{C}$
T_{stg}	Storage temperature	-65 $^\circ\text{C}$ to 200 $^\circ\text{C}$
	Mounting torque 321 UM/UMR	3.2 M-Kg min. 3.75 M-Kg max.
	321 UF/UFR (Non-lubricated threads)	0.7 M-Kg min. 0.86 M-Kg max.
W	Approx. weight	330 gms.



ELECTRICAL RATINGS

TYPE	NUMBER	321 UM/UMR 321 UF/UFR	40	80	120	160	200	240	280
V_{RRM}	Max. repetitive peak reverse voltage (V)		400	800	1200	1600	2000	2400	2800
V_{RSM}	Max. non-repetitive peak reverse voltage (V)		500	900	1300	1700	2100	2500	2900
$V_{R(RMS)}$	Max. R.M.S. reverse voltage (V)		280	560	840	1120	1400	1680	1960
V_R	Max. D.C. Blocking voltage (V)		400	800	1200	1600	2000	2400	2800
	Recommended R.M.S. working voltage (V)		160	320	480	640	800	960	1120
I_{RM}	Max. Average reverse leakage current @ V_{RRM} T_c (mA)		20	30	20	20	20	20	20

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ORDER INFORMATION TABLE

3	03U	M/F	R	100	G
①	②	③	④	⑤	⑥

- ① - 3 - Essential Part no.
- ② - 02U - Top thread 1/4",28UNF-2A
03U - Top thread M10 x 1.5P
05U - Top thread 3/8",16UNC-2A
09U - Top thread 3/8",24UNF-2A
21U - With Pigtail
- ③ - None - Stud with 3/4",16UNF-2A Threading
M - Stud with M20 x 1.5P Metric Threading
F - 50 x 50 mm. Square flat base
- ④ - None - Normal polarity
R - Reverse polarity
- ⑤ - Voltage Rating (See table)
- ⑥ - G - With Aluminium cone
None - Without Aluminium cone

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321 UM / UMR & 321 UF / UFR SERIES

