

## SILICON RECTIFIERS

### 320 Ampere Silicon Power Diodes

#### FEATURES

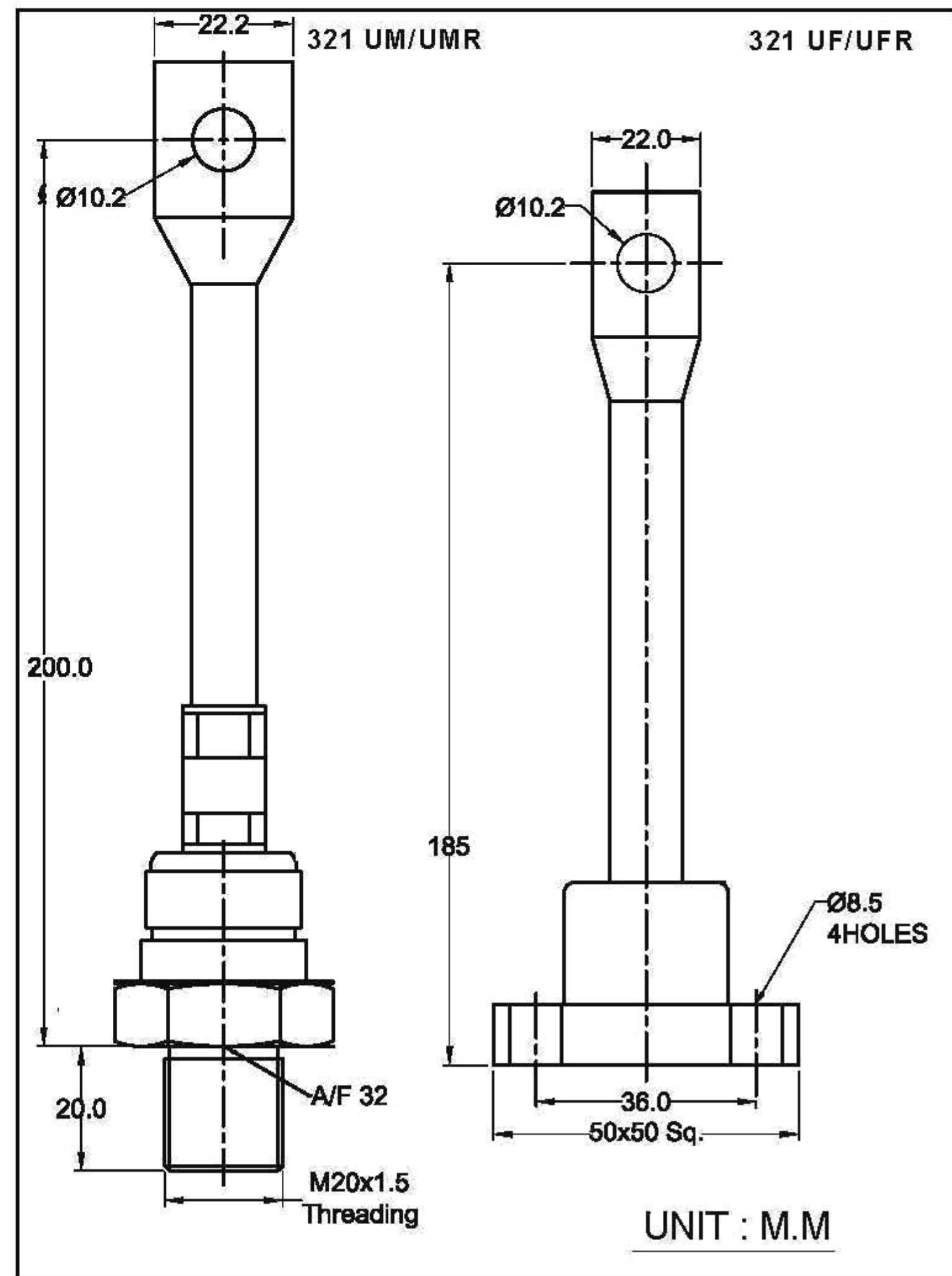
- ❖ All diffused alloyed series.
- ❖ Mainly available in reverse polarity.
- ❖ Device conforms to IS 3700 (III) & IS 4400 (III).
- ❖ Device outline (321 UM/UMR) conforms to IS 5000 (Do.9).

#### ELECTRICAL SPECIFICATIONS

$I_{F(AV)}$	Maximum average forward current $T_c = 130^\circ\text{C}$ $T_c$ : 321 UM = $115^\circ\text{C}$ 321 UMR = $130^\circ\text{C}$ $T_c$ : 321 UF = $115^\circ\text{C}$ 321 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 <sup>2</sup> Sec
$V_{F(TO)}$	Max, value of threshold voltage	0.72 V
$r_f$	Max, value of forward slope resistance	0.53 m $\Omega$

#### THERMAL MECHANICAL SPECIFICATIONS

$\theta_{J-C}$	Maximum thermal resistance junction to case	321UM/UF 0.15 <sup>o</sup> C/W 321UMR/UFR 0.12 <sup>o</sup> C/W
$\theta_{C-H}$	Contact thermal resistance	321UM/UMR 0.08 <sup>o</sup> C/W 321UF/UFR 0.02 <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	321 UM/UMR 3.2 M-Kg min. 3.75 M-Kg max. 321 UF/UFR 0.7 M-Kg min. 0.86 M-Kg max. (Non-lubricated threads)
$W$	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

<b>3</b>	<b>03U</b>	<b>M/F</b>	<b>R</b>	<b>100</b>	<b>G</b>
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

