

### TYPE: R920B...F SERIES

Hockey Puk Version

#### FAST RECOVERY DIODES

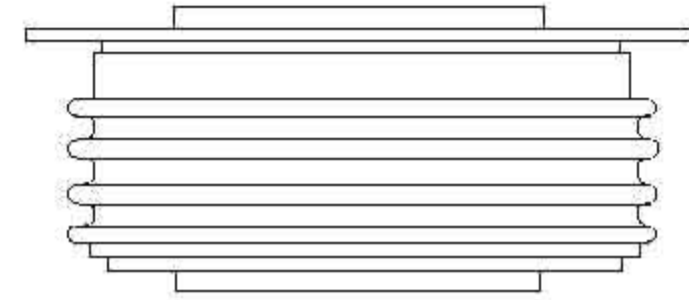
##### Features

- High power FAST recovery diode series
- High voltage ratings up to 3000V
- High current capability
- Optimized turn on and turn off characteristics
- Low forward recovery
- Fast and soft reverse recovery
- Press-puk encapsulation
- Case style conform to JEDEC DO-200AB (B-PUK)
- Maximum junction temperature 150°C
- RoHS Compliant

##### Typical Applications

- Snubber diode for GTO
- High voltage free-wheeling diode
- Fast recovery rectifier applications

920A



case style DO-200AB (B-PUK)

#### Major Ratings and Characteristics

Parameters	R920B...F	Units
$I_{F(AV)}$	920	A
@ $T_{hs}$	55	°C
$I_{F(RMS)}$	1445	A
$I_{FSM}$ @ 50Hz	13000	A
$V_{RRM}$ range	1800 to 3000	V
$t_{rr}$	4.5	µs
@ $T_J$	25	°C
$T_J$	- 40 to 150	°C

## SILICON RECTIFIERS

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### ELECTRICAL SPECIFICATIONS

#### Voltage Ratings

Type number	Voltage Code	$V_{RRM}$ , maximum repetitive peak reverse voltage V	$V_{RSM}$ , maximum non-repetitive peak rev. voltage V	$I_{RRM}$ max. @ $T_J = T_J$ max. mA
R920B...F	18	1800	1900	50
	22	2200	2300	
	25	2500	2600	
	28	2800	2900	
	30	3000	3100	

#### Forward Conduction

Parameter	R920B...F	Units	Conditions
$I_{F(AV)}$ Max. average forward current @ heatsink temperature	920	A	180° conduction, half sine wave
	55	°C	Double side cooled
$I_{F(RMS)}$ Max. RMS forward current	1445	A	@ 55°C heatsink temperature double side cooled
$I_{FSM}$ Max. peak, one-cycle forward, non-repetitive surge current	13000	A	t = 10ms  Sinusoidal half wave, Initial $T_J = T_J$ max.
$I^2t$ Maximum $I^2t$ for fusing	845	KA <sup>2</sup> s	t = 10ms
$I^2\sqrt{t}$ Maximum $I^2\sqrt{t}$ for fusing	8450	KA <sup>2</sup> √s	t = 0.1 to 10ms, no voltage reapplied
$V_{F(TO)}$ Threshold voltage	1.51	V	$T_J = T_J$ max.
$r_f$ Forward slope resistance	0.80	mΩ	$T_J = T_J$ max.
$V_{FM}$ Max. forward voltage drop	2.26	V	$I_{pk} = 1500A$ , $T_J = T_J$ max, $t_p = 10ms$ sinusoidal wave
$t_{rr}$ Reverse Recovery time	4.5	us	IFM=1000A, di/dt=100A/us

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### Thermal and Mechanical Specifications

Parameter	R920B...F	Units	Conditions
T <sub>J</sub> Max. junction operating temperature range	-40 to 150	°C	
T <sub>stg</sub> Max. storage temperature range	-40 to 150		
R <sub>thJ-hs</sub> Max. thermal resistance, case junction to heatsink	0.031	K/W	DCoperation double side cooled
F Mounting force, ± 10%	14700 (1500)	N (Kg)	
wt Approximate weight	255	g	
Case style	DO-200AB(B-PUK)		See Outline Table

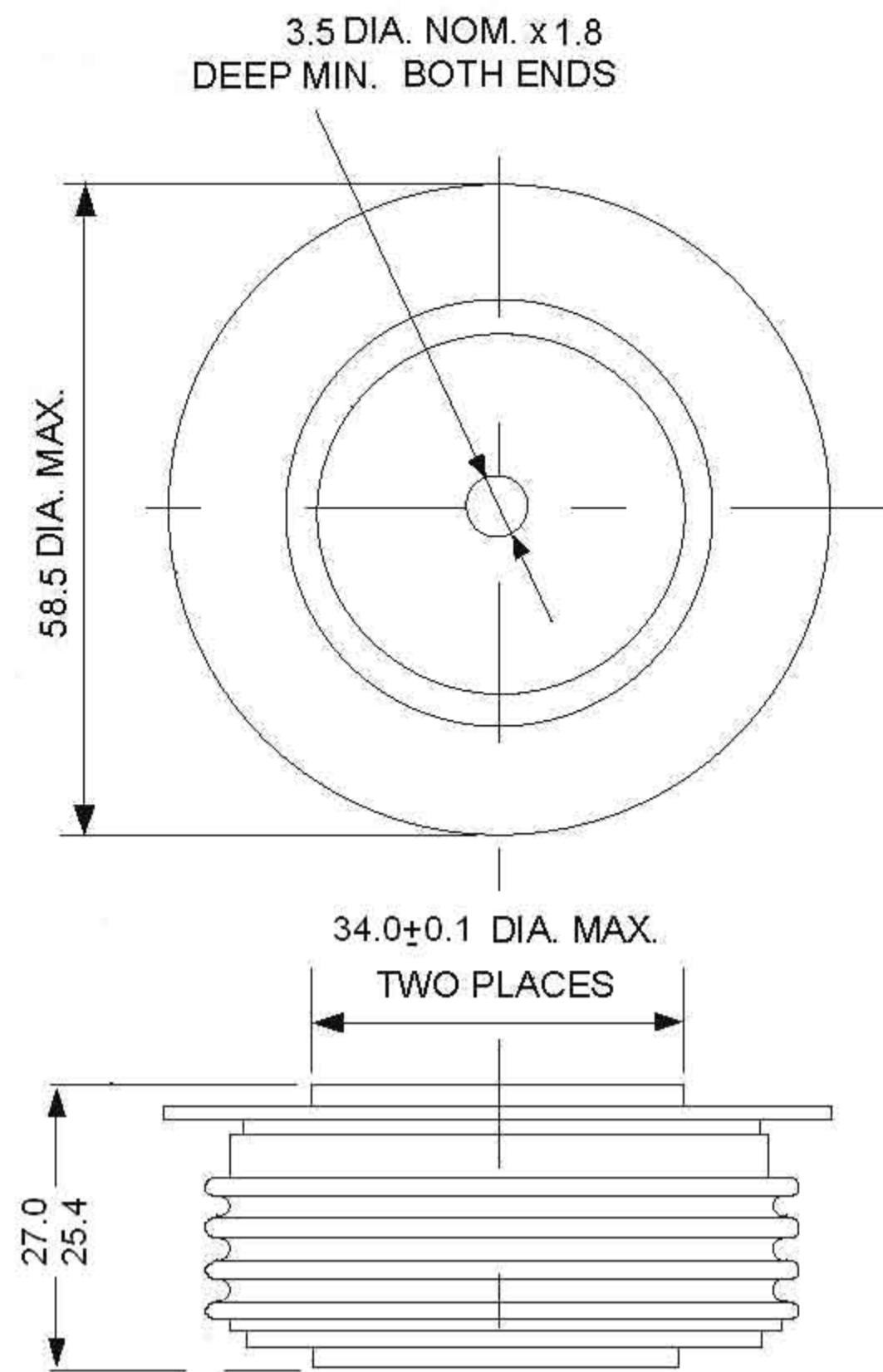
### Ordering Information Table

Device Code	
R	920
B	30
C	F
1	2
3	4
5	6
<b>1</b> - R = Diode <b>2</b> - Essential part number <b>3</b> - B= Puk Case: Do-200AB <b>4</b> - Voltage code: Code x 100 = V <sub>RRM</sub> (See Voltage Ratings table) <b>5</b> - C = Ceramic Puk <b>6</b> - F = Fast recovery	

# SILICON RECTIFIERS

R920B...F SERIES

OUTLINE TABLE



CASE STYLE : DO-200AB (B-PUK)  
ALL DIMENSION IN MM.