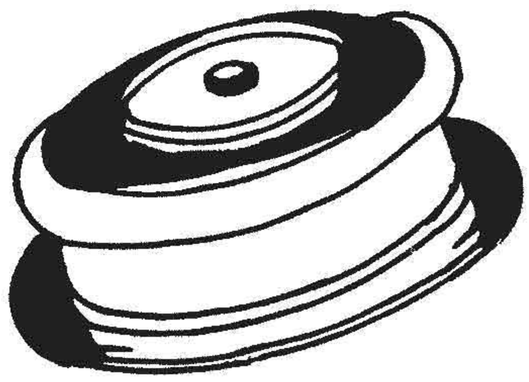
Ruttonsha International Rectifier Ltd.

STANDARD RECOVERY DIODES

High Power Diode
Hockey Puk Version
R920 E...C Series

R920E (E - PUK)



FEATURES

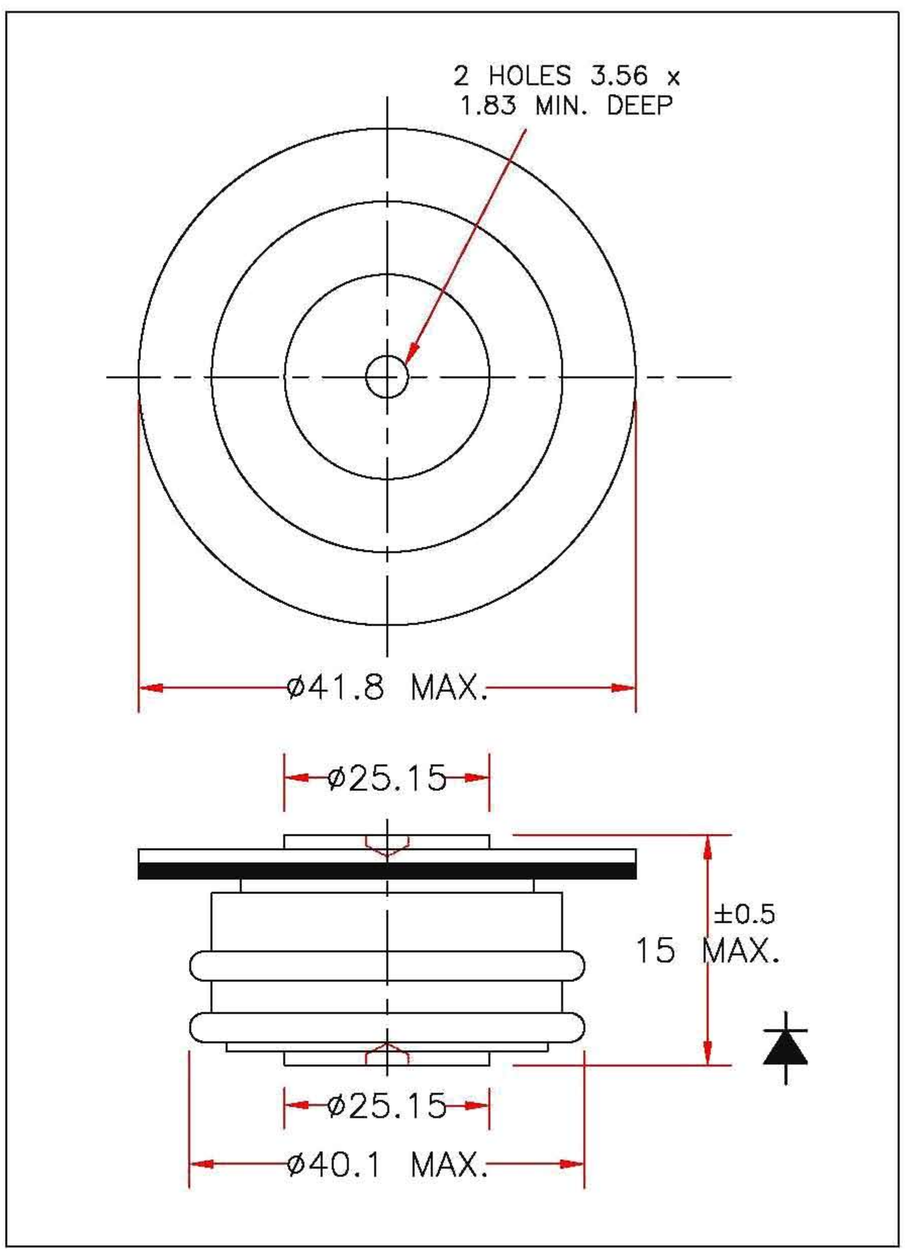
- *Wide current range*
- *High surge current capabilities*
- *Case style DO- 200AB (E-PUK)*

TYPICAL APPLICATIONS

- *Converters*
- *High power drives*
- *Power supplies*
- *Traction Application*

MAJOR RATINGS & CHARACTERISTICS

Parameters		R920 E	Units
$I_{F(AV)}$		920	A
	@ T_{hs}	55	°C
$I_{F(RMS)}$		1444	A
	@ T_{hs}	55	°C
I_{FSM}	@ 50 Hz	5600	A
I^2t	@ 50 Hz	157	KA^2s
V_{RRM} range		2600 TO 3400	V
T_J		-40 TO 160	°C



STANDARD RECOVERY DIODES

R920 E

ELECTRICAL SPECIFICATION

VOLTAGE RATINGS

Type Number	Voltage Code	V_{RRM} , max. repetitive peak reverse voltage V	V_{RRM} , max. non- repetitive peak reverse voltage V	I_{DRM} max. @ $T_J = T_J$ max. mA
R920 E	26	2600	2700	50
	28	2800	2900	
	30	3000	3100	
	32	3200	3300	
	34	3400	3500	

FORWARD CONDUCTION

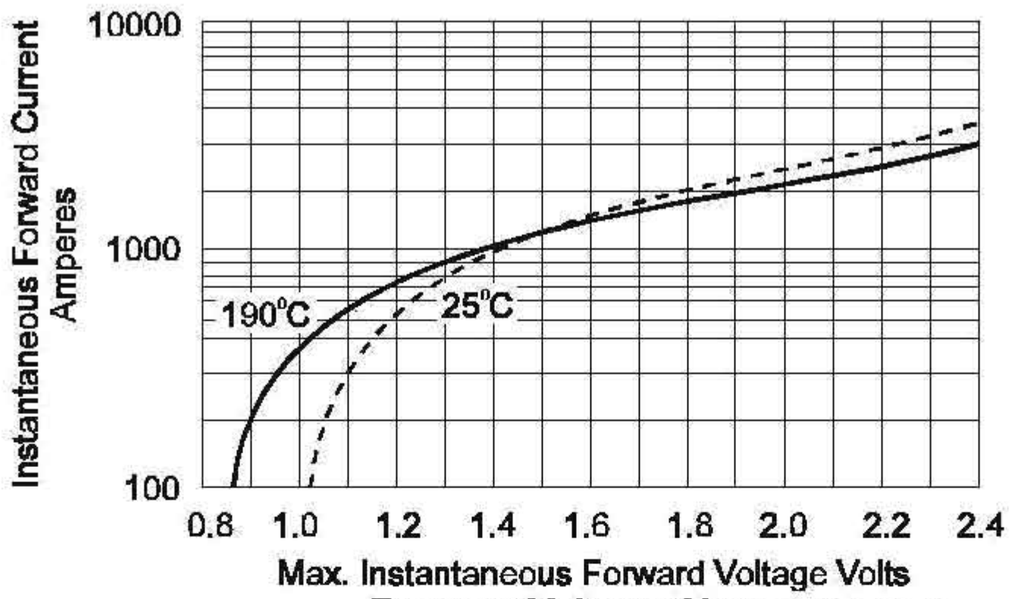
	Parameter	R920E	Units	Conditions	
$I_{F(AV)}$	Max. average Forward current	920	A	180^0 conduction, half sine wave	
	@ heat sink temperature	55	°C	double side cooled	
$I_{F(RMS)}$	Max. RMS Forward current	1444	A	@55°C heat sink temperature (double side cooled)	
I_{FSM}	Max. peak one cycle Forward non-repetitive surge current	5600	A	t = 10ms	Sinusodial half wave, Initial $T_J = T_J$ max.
I^2t	Maximum I^2t for fusing	157	kA^2s		
$V_{F(TO)}$	Threshold voltage	0.70	V	$T_J = T_J$ max.	
r_f	Forward slope resistance	0.70	mΩ		
V_{FM}	Max. Forward voltage drop	1.38	V	I_{pk} = 1000A, $T_J = T_J$ max., t_p = 10ms sine pulse	

THERMAL AND MECHANICAL SPECIFICATION

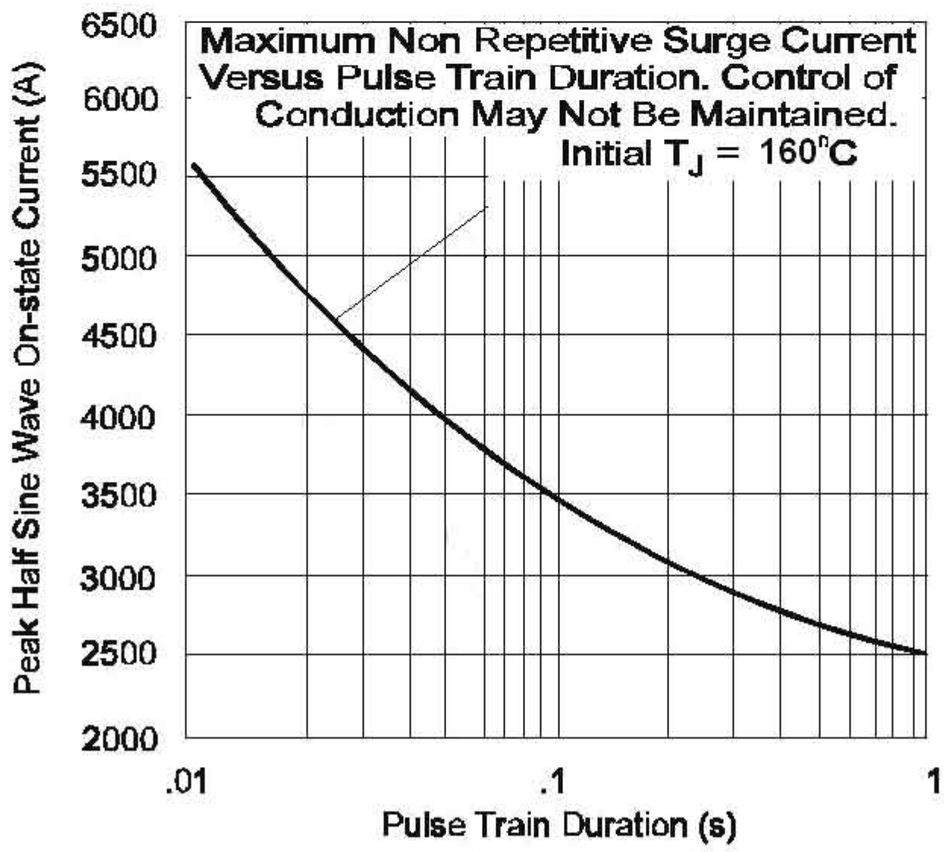
	Parameter	R920E	Units	Conditions
T_J	Max. operating temperature range	-40 TO 160	°C	
T_{stg}	Max. storage temperature range	-40 TO 160		
R_{thJ-hs}	Max. thermal resistance, junction to heat sink	0.05	°C/W	DC operation double side cooled
F	Mounting force, ±10%	9800 (1000)	N (kg)	
w t	Approximate weight	85	g	
	Case style	E-PUK		See outline

SILICON RECTIFIERS

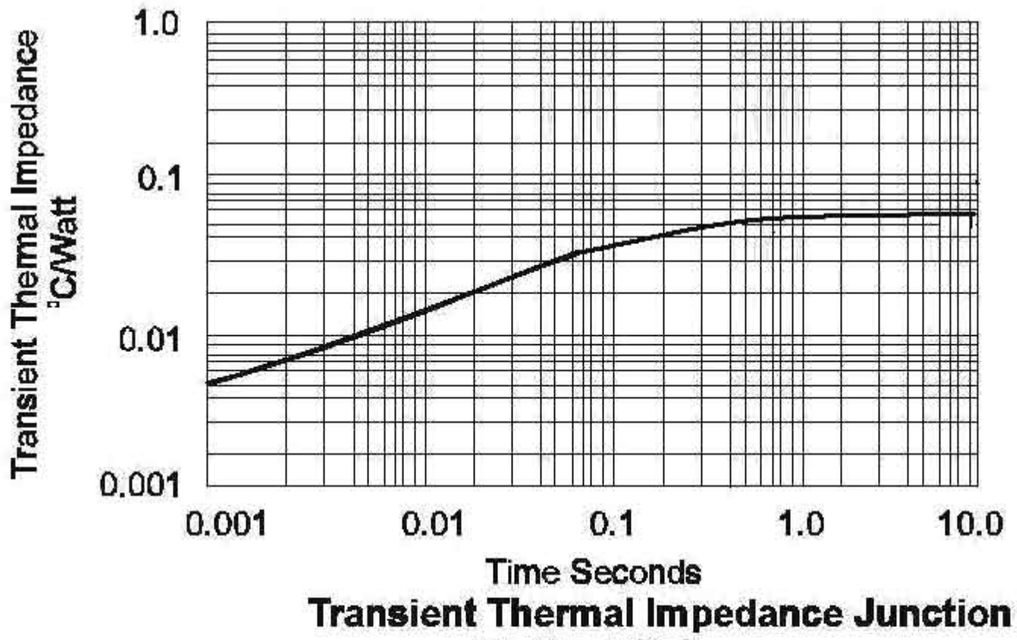
R920E



Forward Voltage Characteristics



Maximum Non-Repetitive Surge Current



Transient Thermal Impedance Junction To Heat Sink