

### High Power Diode Hockey Puk Version R1300 B...C Series

Type: R1300B...12C to R1300B...26C

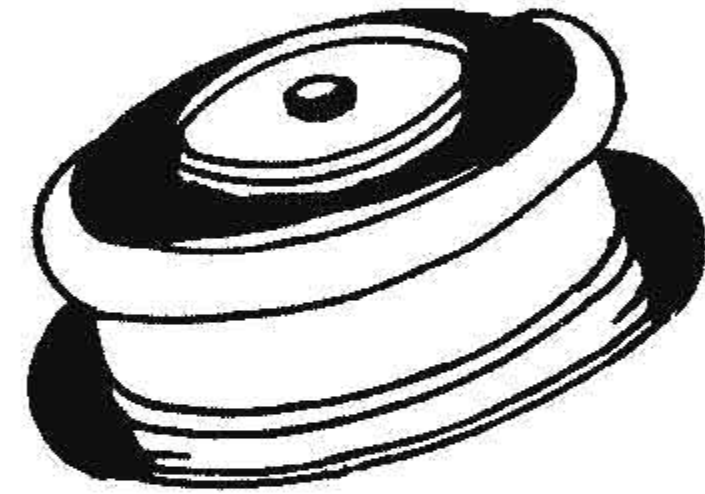
#### FEATURES

- € *Wide current range*
- € *High voltage ratings up to 2600 V*
- € *High surge current capabilities*
- € *Case style DO- 200AB ( B-PUK)*

#### TYPICAL APPLICATIONS

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

R1300B ( B - PUK )



#### MAJOR RATINGS & CHARACTERISTICS

Parameters	R1300B	Units
$I_{F(AV)}$	1300	A
$@ T_{hs}$	55	$^{\circ}C$
$I_{F(RMS)}$	2041	A
$@ T_{hs}$	25	$^{\circ}C$
$I_{FSM}$	15000	A
$@ 50 \text{ Hz}$		
$I^2t$	1125	$KA^2s$
$@ 50 \text{ Hz}$		
$V_{RRM}$ range	1200 to 2600	V
$T_J$	-40 to 160	$^{\circ}C$

# STANDARD RECOVERY DIODES

## R1300B

### 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
R1300B	12	1200	1300	50
	14	1400	1500	
	16	1600	1700	
	18	1800	1900	
	20	2000	2100	
	24	2400	2500	
	26	2600	2600	

#### FORWARD CONDUCTION

	Parameter	R1300B	Units	Conditions
$I_{F(AV)}$	Max. average Forward current @ heat sink temperature	1300(550)	A	180° conduction, half sine wave double side (single side) cooled
		55(85)	°C	
$I_{F(RMS)}$	Max. RMS Forward current	2041		@25°C heat sink temperature (double side cooled)
$I_{FSM}$	Max. peak one cycle Forward non-repetitive surge current	15000	A	t = 10ms No voltage reapplied
		12700		t = 10ms 50% $V_{RRM}$ reapplied
$I^2t$	Maximum $I^2t$ for fusing	1125	kA <sup>2</sup> s	t = 10ms No voltage reapplied
		806.5		t = 10ms 50% $V_{RRM}$ reapplied
$I^2\sqrt{t}$	Maximum $I^2\sqrt{t}$ for fusing	11250	kA <sup>2</sup> √s	t = 0.1 to 10ms. No voltage reapplied.
$V_{F(TO)}$	Low level value of threshold voltage	0.86	V	$T_J = T_J$ max.
$r_f$	Low level value of Forward slope resistance	0.50	mΩ	$T_J = T_J$ max.
$V_{FM}$	Max. Forward voltage drop	1.60	V	$I_{pk} = 4000A$ , $T_J = T_J$ max., $t_p = 10ms$ sine pulse

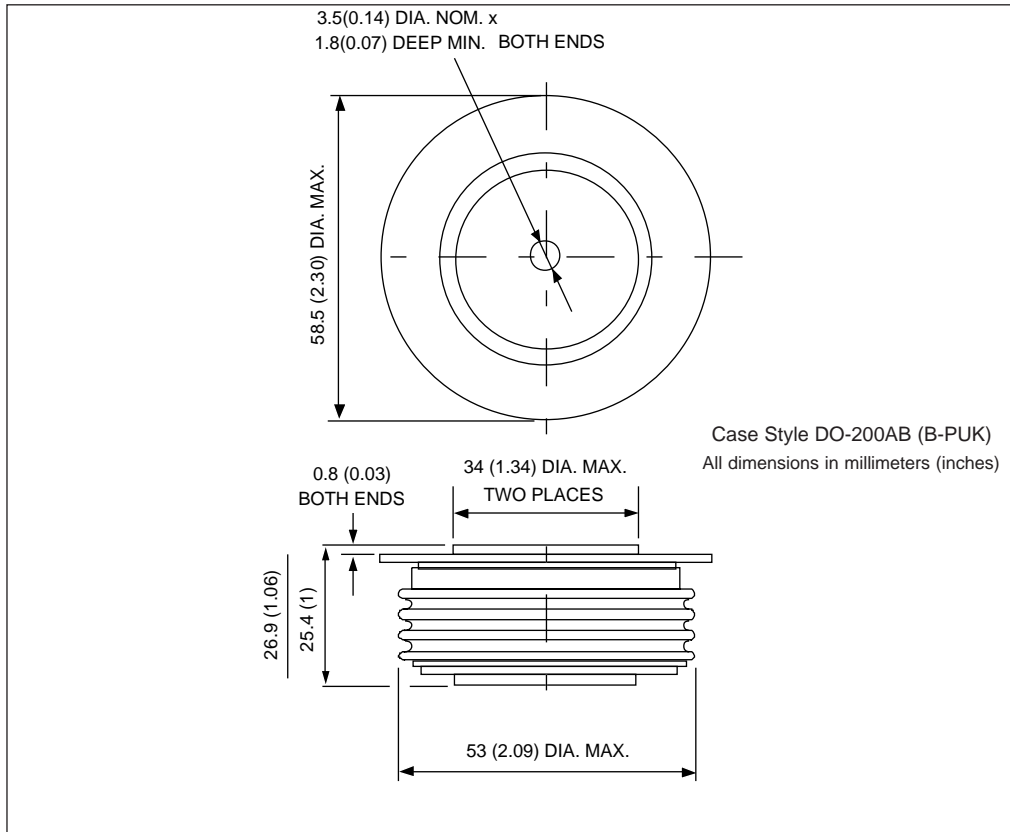
#### THERMAL AND MECHANICAL SPECIFICATION

	Parameter	R1300B	Units	Conditions
$T_J$	Max. operating temperature range	-40 to 160	°C	
$T_{stg}$	Max. storage temperature range	-55 to 160		
$R_{thJ-hs}$	Max. thermal resistance, junction to heat sink	0.065	K/W	DC operation single side cooled
		0.033		DC operation double side cooled
F	Mounting force, ±10%	15600 to 18700	N	
w t	Approximate weight	320	g	
	Case style	DO-200AB(B-PUK)		See outline

# STANDARD RECOVERY DIODES

## R1300B

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# SILICON RECTIFIERS

## R 1300 B SERIES

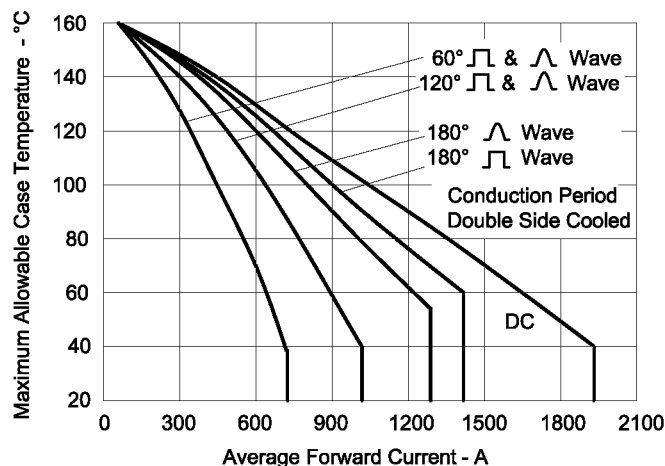


Fig. 1 - Case Temperature Ratings

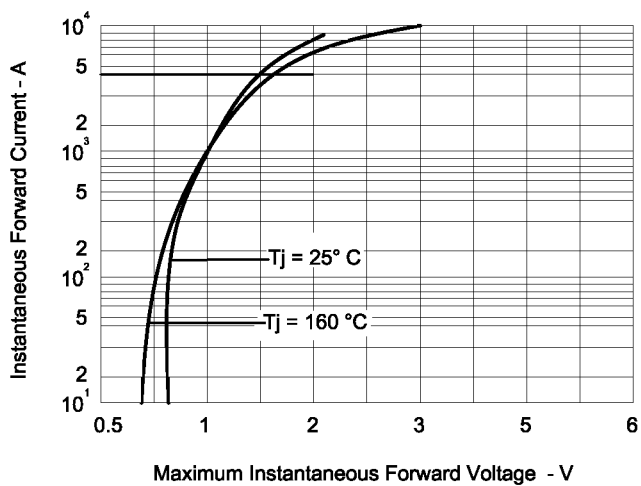


Fig. 2 - Forward Characteristics

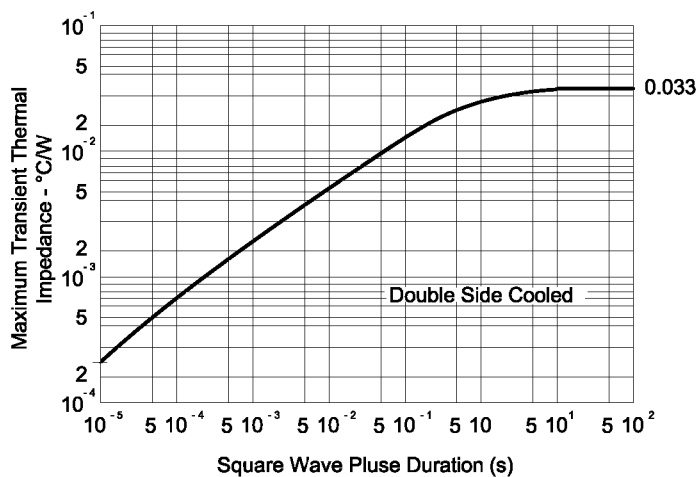


Fig. 3 Transient Thermal Impedance, Junction - To - Case

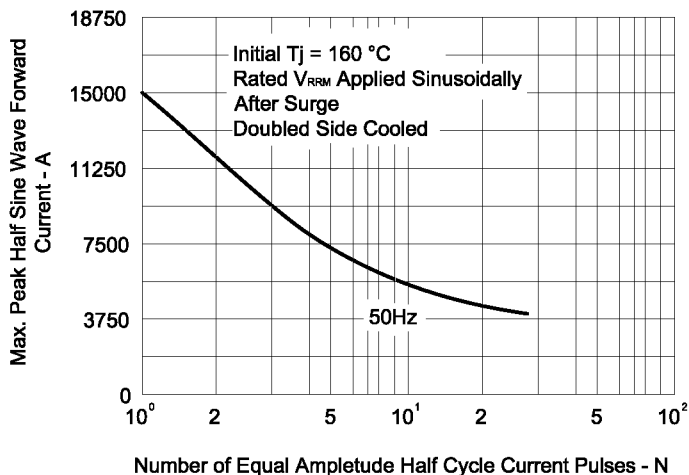


Fig. 4 - Non Repetitive Surge Current Ratings