Ruttonsha International Rectifier Ltd.

STANDARD RECOVERY DIODES

High Power Diode
Hockey Puk Version
R750 B...C Series

Types : R750 B 320 to R750 B 440

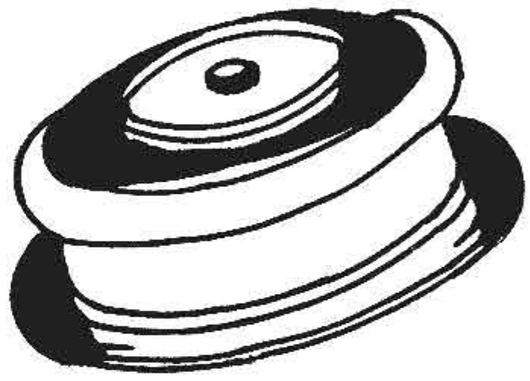
FEATURES

- *Wide current range*
- *High voltage ratings up to 4400 V*
- *High surge current capabilities*
- *Case style DO- 200AB (B-PUK)*

TYPICAL APPLICATIONS

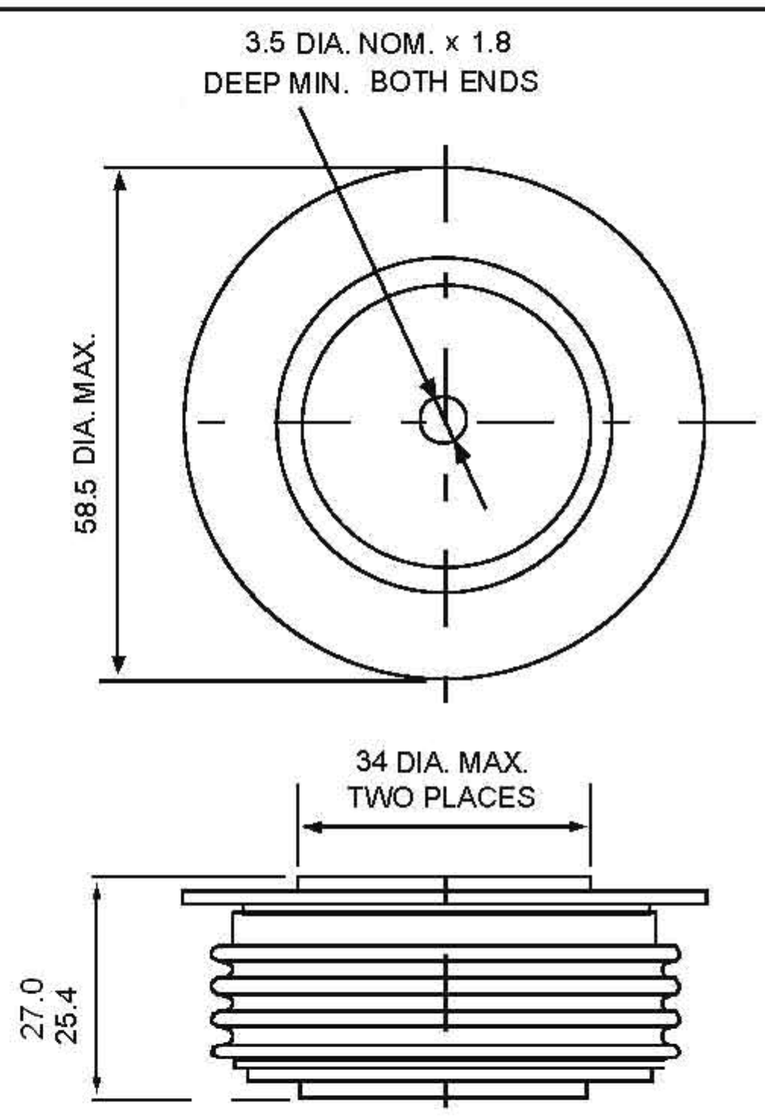
- *Converters*
- *High power drives*
- *Power supplies*
- *Traction Application*

R750 B (B - PUK)



MAJOR RATINGS & CHARACTERISTICS

Parameters		R750 B	Units
$I_{F(AV)}$		750	A
	@ T_{hs}	85	℃
$I_{F(RMS)}$		1177	A
	@ T_{hs}	85	℃
I_{FSM}	@ 50 Hz	10	KA
I^2t	@ 50 Hz	500	KA^2s
V_{RRM} range		3200 to 4400	V
T_J		-40 to 160	℃



Case Style DO-200AB (B-PUK)
All dimensions in millimeters (inches)

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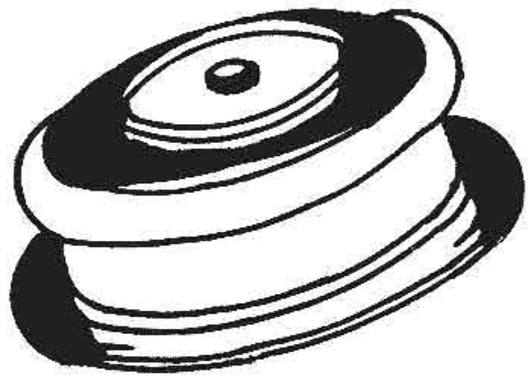
R750 B (B - PUK)



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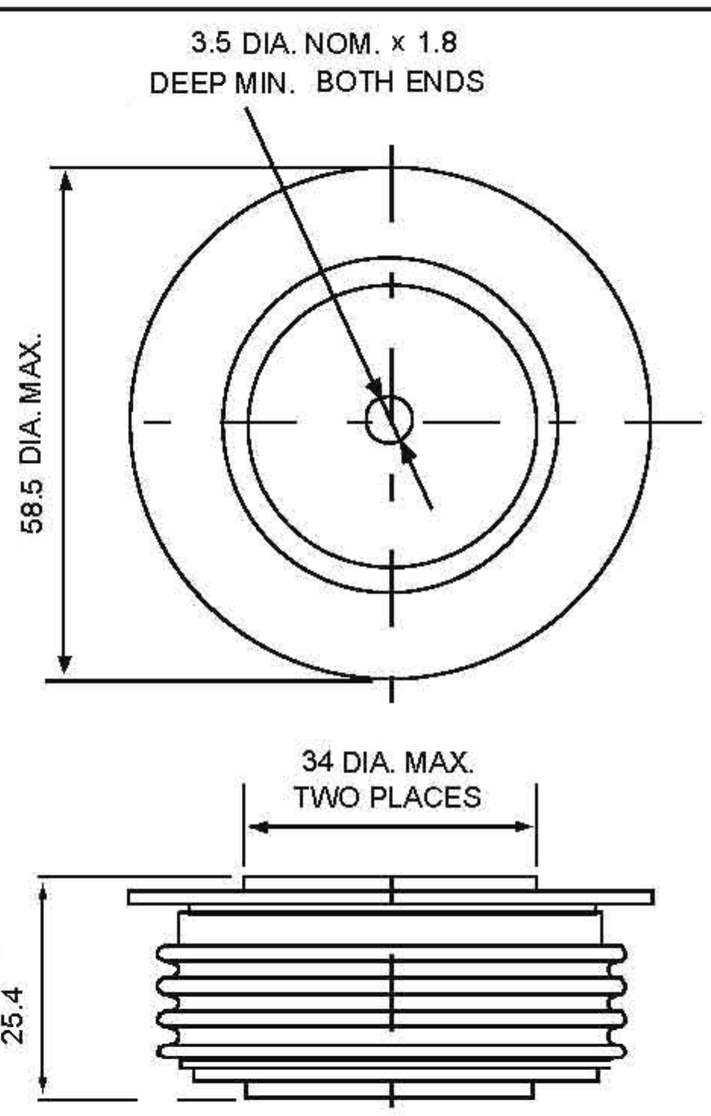
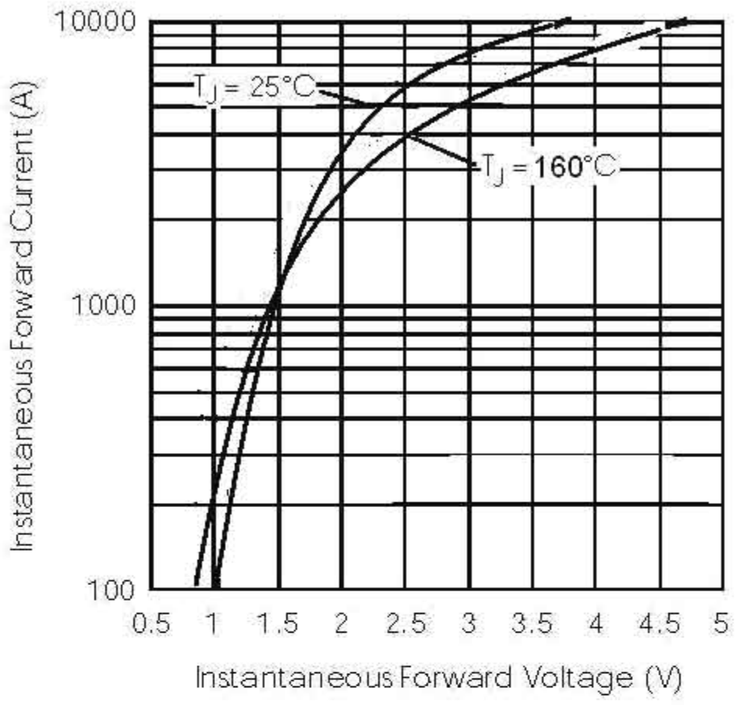


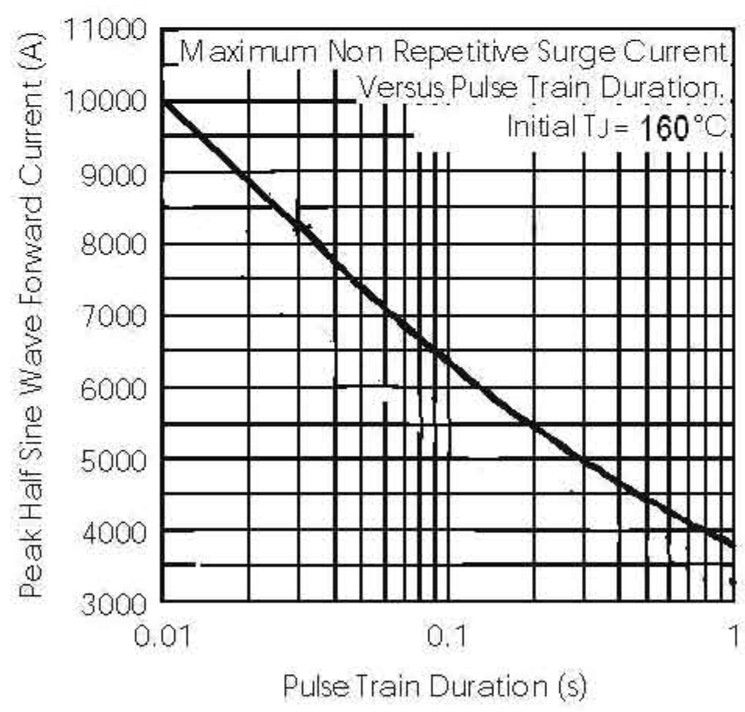
Case Style DO-200AB (B-PUK)
All dimensions in millimeters (inches)

STANDARD RECOVERY DIODES

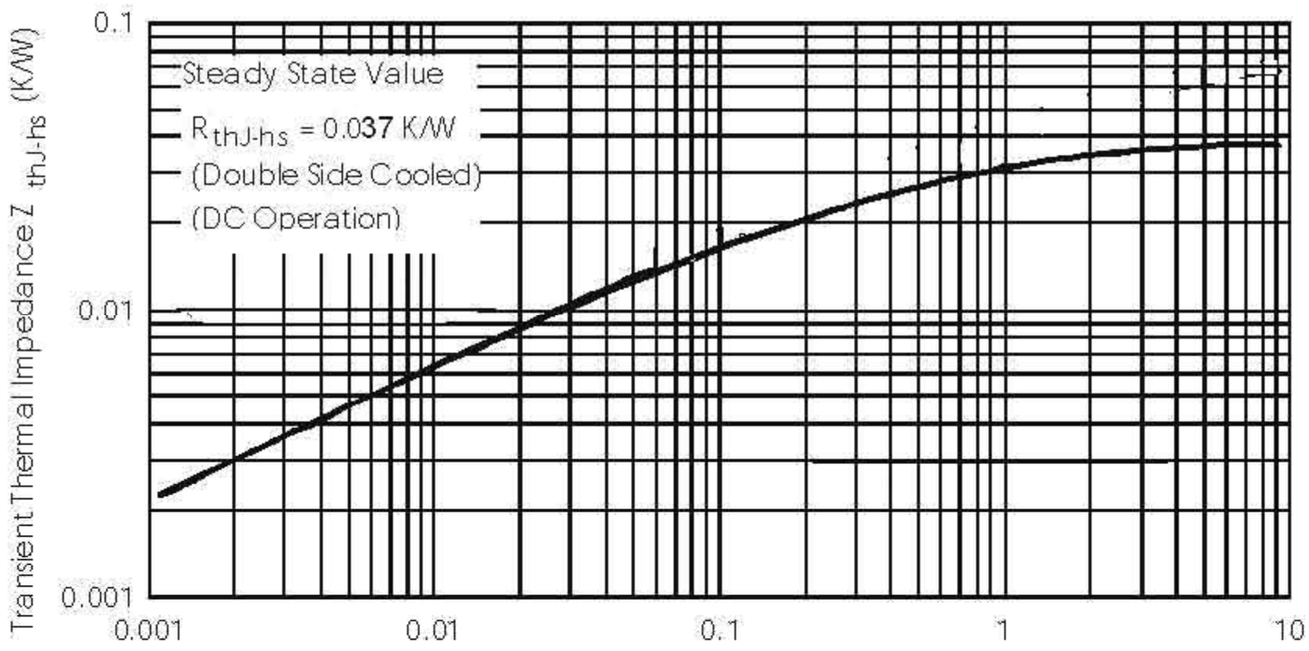
R750B...C Series



Forward Voltage Drop Characteristics



Maximum Non-Repetitive Surge Current
Double Side Cooled



Thermal Impedance Z_{thJC} Characteristics

STANDARD RECOVERY DIODES

R750 B

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
R750 B	320	3200	3250	50
	340	3400	3450	
	360	3600	3650	
	380	3800	3850	
	400	4000	4050	
	420	4200	4250	
	440	4400	4250	

FORWARD CONDUCTION

	Parameter	R750 B	Units	Conditions	
$I_{F(AV)}$	Max. average Forward current	750	A	180^0 conduction, half sine wave	
	@ heat sink temperature	85	°C	double side cooled	
$I_{F(RMS)}$	Max. RMS Forward current	1177	KA	@85°C heat sink temperature (double side cooled)	
I_{FSM}	Max. peak one cycle Forward non-repetitive surge current	10		t = 10ms	Sinusodial half wave, Initial $T_J = T_J$ max.
I^2t	Maximum I^2t for fusing	500	kA^2s	t = 10ms	
$I^2\sqrt{t}$	Maximum $I^2\sqrt{t}$ for fusing	5000	$kA^2\sqrt{s}$	t = 0.1 to 10ms. No voltage reapplied.	
V_O	Threshold voltage	0.80	V	$T_J = T_J$ max.	
r_O	Slope resistance	1.0	mΩ	$T_J = T_J$ max.	
V_{FM}	Max. Forward voltage drop	1.45	V	I_{pk} = 1000A, $T_J = T_J$ max., t_p = 10ms sine pulse	

THERMAL AND MECHANICAL SPECIFICATION

	Parameter	R750 B	Units	Conditions
T_J	Max. operating temperature range	-40 to 160	°C	
T_{stg}	Max. storage temperature range	-55 to 170		
R_{thJ-hs}	Max. thermal resistance, junction to heat sink	0.037	K/W	DC operation double side cooled
F	Mounting force, ±10%	14700 (1500)	N (kg)	
w t	Approximate weight	255	g	
	Case style	DO-200AB(B-PUK)		See outline