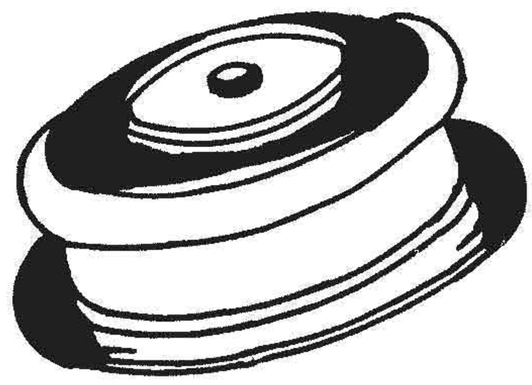
Ruttonsha International Rectifier Ltd.

STANDARD RECOVERY DIODES

High Power Diodes
Hockey Puk Version
R5000 S...C Series

TYPE:- R5000S...C

R5000S (S-PUK)



FEATURES

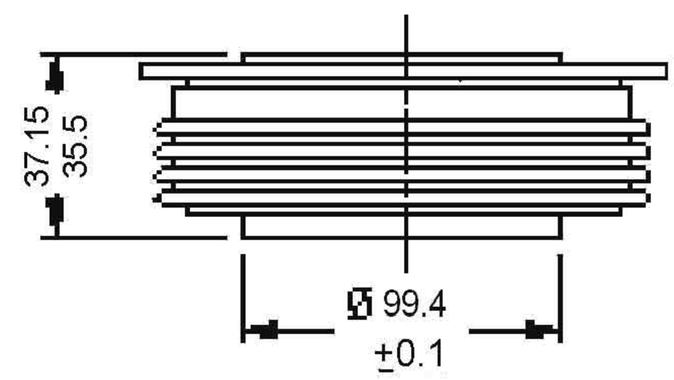
- ∉ *Wide current range*
- ∉ *High voltage ratings up to 5000 V*
- ∉ *High surge current capabilities*
- ∉ *Case style S-PUK*

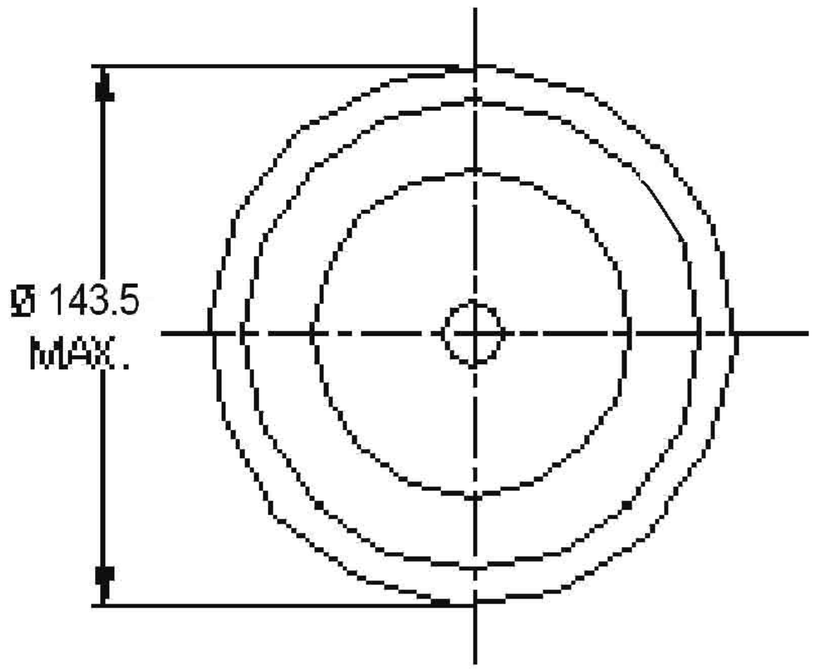
TYPICAL APPLICATIONS

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

MAJOR RATINGS & CHARACTERISTICS

Parameters		R5000S	Units
$I_{F(AV)}$		5000	A
	@ T_{hs}	55	°C
$I_{F(RMS)}$		7850	A
	@ T_{hs}	55	°C
I_{FSM}	@ 50 Hz	55000	A
I^2t	@ 50 Hz	15125	KA^2s
V_{RRM} range		4500 to 5000	V
T_J		-40 to 160	°C





ALL DIMENSION IN MILLIMETERS

STANDARD RECOVERY DIODES

R 5000 S

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_{RRM} max. @ $T_J = T_J$ max. mA
R5000 S	45	4500	4600	150
	50	5000	5100	

FORWARD CONDUCTION

	Parameter	R5000 S	Units	Conditions	
$I_{F(AV)}$	Max. average Forward current	5000	A	180^0 conduction, half sine wave	
	@ heat sink temperature	55	^{0}C	double side cooled	
$I_{F(RMS)}$	Max. RMS Forward current	7850	A	@55^{0}C heat sink temperature (double side cooled)	
I_{FSM}	Max. peak one cycle Forward non-repetitive surge current	55000		t = 10ms	Sinusodial half wave, Initial $T_J = T_J$ max.
I^2t	Maximum I^2t for fusing	15125	kA^2s	t = 10ms	
V_{FM}	Max.peak Forward voltage drop	1.20	V	I_{pk} = 2000A, $T_J = T_J$ max., t_p = 10ms sine pulse	
Vo	Threshold voltage	0.8	V	Tj=Tj max	
ro	Forward slop resistance	0.18	m ohm	Tj=Tj max	

THERMAL AND MECHANICAL SPECIFICATION

	Parameter	R5000S	Units	Conditions
T_J	Max. operating temperature range	-40 to 160	^{0}C	
T_{stg}	Max. storage temperature range	-40 to 160		
R_{thJ-hs}	Max. thermal resistance, junction to heat sink	0.007	K/W	DC operation double side cooled
F	Mounting force	65	KN	
w t	Approximate weight	3000	g	
	Case style	(S-PUK)		See outline