



Ruttonsha International Rectifier Ltd.

STANDARD RECOVERY DIODES

High Power Diodes Hockey Puk Version R1700 K...C Series

Types:-R1700K...32C to R1700K...42C

FEATURES

- € Wide current range
- € High voltage ratings up to 4200V
- € High surge current capabilities
- € Case style DO-200AC (K-PUK)

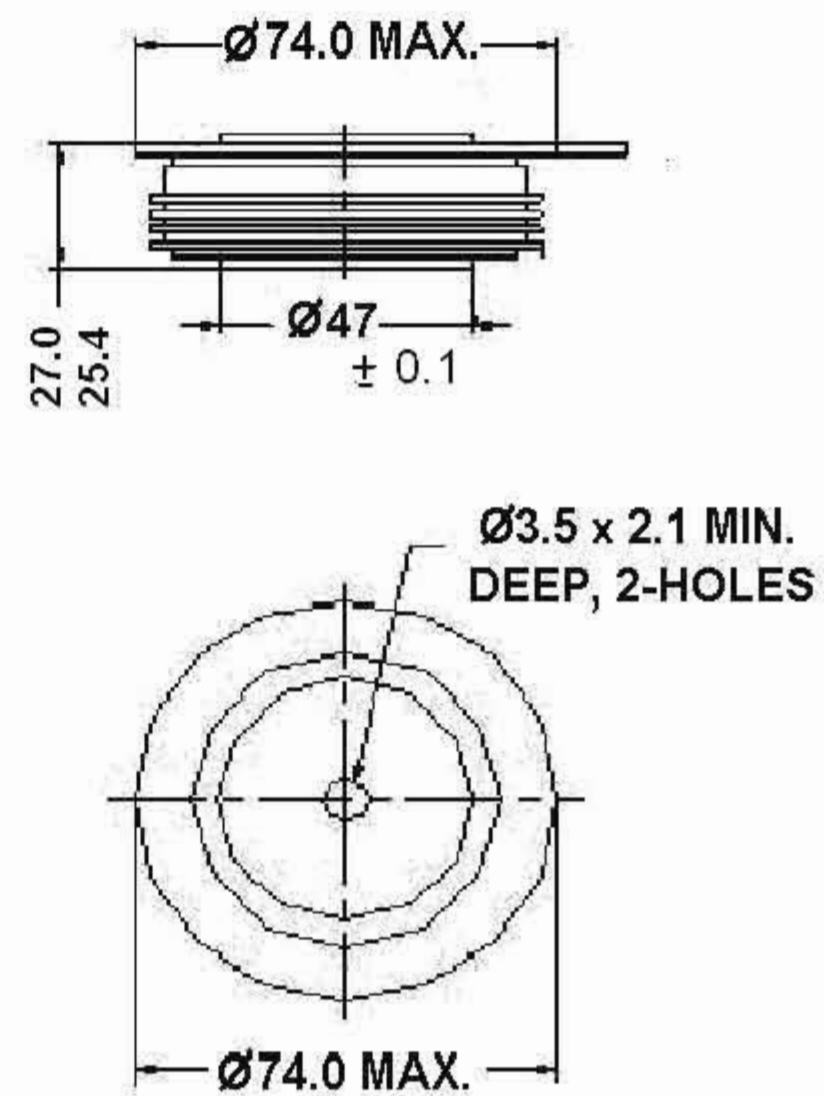
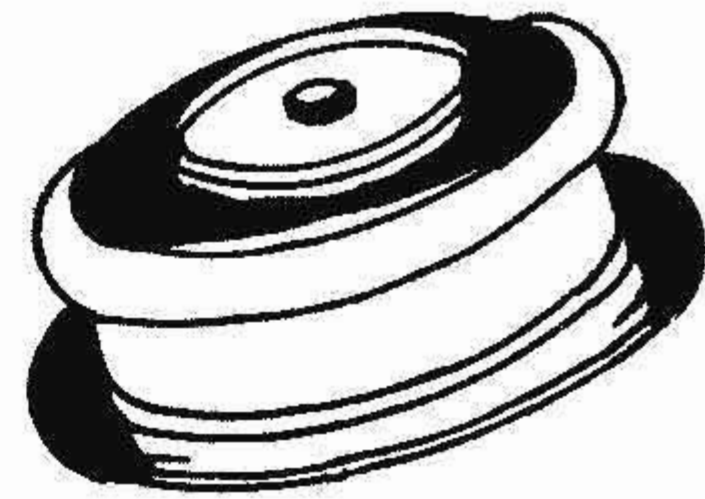
TYPICAL APPLICATIONS

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

MAJOR RATINGS & CHARACTERISTICS

Parameters	R1700K	Units
$I_{F(AV)}$	1700	A
@ T_{hs}	55	$^{\circ}C$
$I_{F(RMS)}$	2670	A
@ T_{hs}	55	$^{\circ}C$
I_{FSM} @ 50 Hz	22000	A
I^2t @ 50 Hz	2420	KA^2s
V_{RRM} range	3200 - 4200	V
T_J	-40 to 160	$^{\circ}C$

R1700K (K-PUK)



All dimension in millimeters

STANDARD RECOVERY DIODES

R1700K...C

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
R1700K	32	3200	3300	80
	34	3400	3500	
	36	3600	3700	
	38	3800	3900	
	40	4000	4100	
	42	4200	4300	

FORWARD CONDUCTION

	Parameter	R1700K	Units	Conditions
$I_{F(AV)}$	Max. average Forward current @ heat sink temperature	1700	A	180° conduction, half sine wave double side cooled
		55	°C	
$I_{F(RMS)}$	Max. RMS Forward current	2670		@55°C heat sink temperature double side cooled
I_{FSM}	Max. peak one cycle Forward non-repetitive surge current	22000	A	t = 10ms Sinusoidal half wave, Initial $T_J = T_J$ max.
I^2t	Maximum I^2t for fusing	2420	kA ² s	t = 10ms
V_O	Threshold voltage	1.15	V	$T_J = T_J$ max.
r_f	Forward slope resistance	0.36	mΩ	$T_J = T_J$ max.
V_{FM}	Max. Forward voltage drop	1.15	V	$I_{pk} = 1000$ A, RT, $t_p = 10$ ms sine pulse

THERMAL AND MECHANICAL SPECIFICATION

	Parameter	R1700K	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	0.023	°C/W	DC operation double side cooled
F	Mounting force, ±10%	22250 (2250)	N (kg)	
w t	Approximate weight	425	g	
	Case style	DO-200ACK-PUK)		See outline