

HIGH POWER RECTIFIER DIODE

Type : R5800K 02CS...06CS SERIES

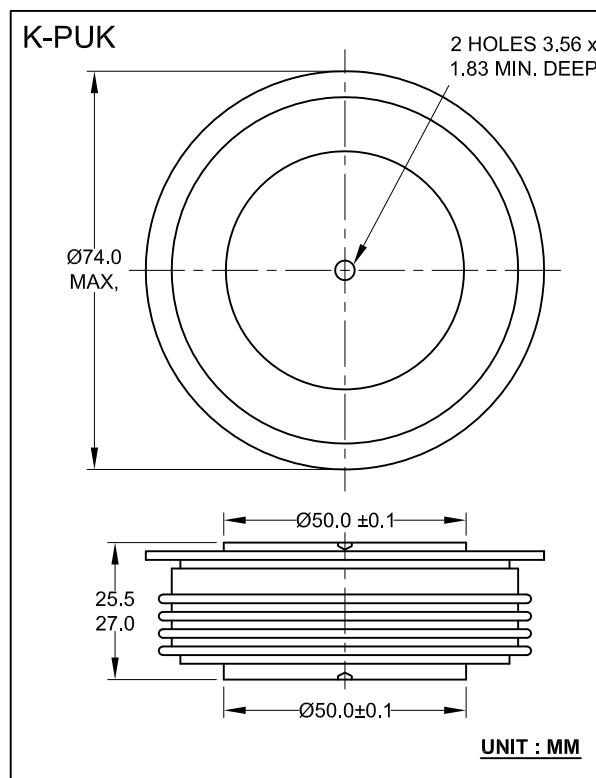
Features

- * Low voltage rating up to 600V
- * High current capability
- * Low forward recovery
- * Press-puk encapsulation
- * Case style conform to (K-PUK)

Typical Applications

- * Snubber diode for GTO
- * High Voltage free-wheeling diode

Hockey Puk Version



MAJOR RATING & CHARACTERISTICS

Parameters	R5800K...06CS	Units
$I_{F(AV)}$	5880	A
@ T_{hs}	58	°C
$I_{F(RMS)}$ @ 55°C	9240	A
I_{FSM} @ 50Hz	81000	A
V_{RRM} Range	200 to 600	V
I^2t	32800	$10^3 A^2s$
T_J max,	-40°C to 180°	°C

SILICON RECTIFIER

Type : R5800K...06CS SERIES

ELECTRICAL SPECIFICATION

VOLTAGE RATINGS

Type Number	Voltage Code	V_{RRM} max. repetitive peak reverse voltage V	V_{RSM} max. Non-repetitive peak reverse voltage	I_{RRM} max. @ $T_J = T_J$ Max. mA
R5800K...06CS	02	200	300	100
	04	400	500	
	06	600	700	

FORWARD CONDUCTION

Parameter		R5800K...06CS	Unit	Conditions	
I_F (AV)	Max, average forward current	5880	A	180° conduction, half sine wave Double side cooled	
	@ Heatsink temp.	58	°C		
I_F (RMS)	Max, RMS forward current	9240	A	@ 55°C heat sink temperature double side cooled	
I_{FSM}	Max, peak, one-cycle forward, non-repetitive surge current	81000	A	t - 10ms	Sinusoidal half wave, Initial $T_J = T_J$ max,
I^2t	Max, $I^2\sqrt{t}$ for fusing	32800	10^3A^2s	t = 0.1 to 10ms. no voltage reapplied	
$V_{F(TO)}$	Threshold voltage	0.7	V	$T_J = T_J$ max,	
r_f	Forward slop resistance	0.04	mΩ	$T_J = T_J$ max,	
V_{FM}	Max, forward voltage drop	0.90	V	$I_{pk} = 4000A$, $T_J = T_J$ max, $t_p = 10ms$ sinusoidal wave	

Thermal and Mechanical Specification

Parameter		R5800K 06CS	Unit	Conditions	
T_J	Max, Junction operating temperature	-40 to 180	°C		
T_{stg}	Max, storage temperature range	-40 to 180	°C		
R_{thJ-C}	Max, Thermal resistance, junction to case	0.0160	°C/W	DC operation double side cooled	
F	Mounting Force, ±10%	24 to 30	kN		
Wt	Approximate weight	500	g		
Case style		(K-PUK)		See Outline Table	