

Phase Control Thyristors

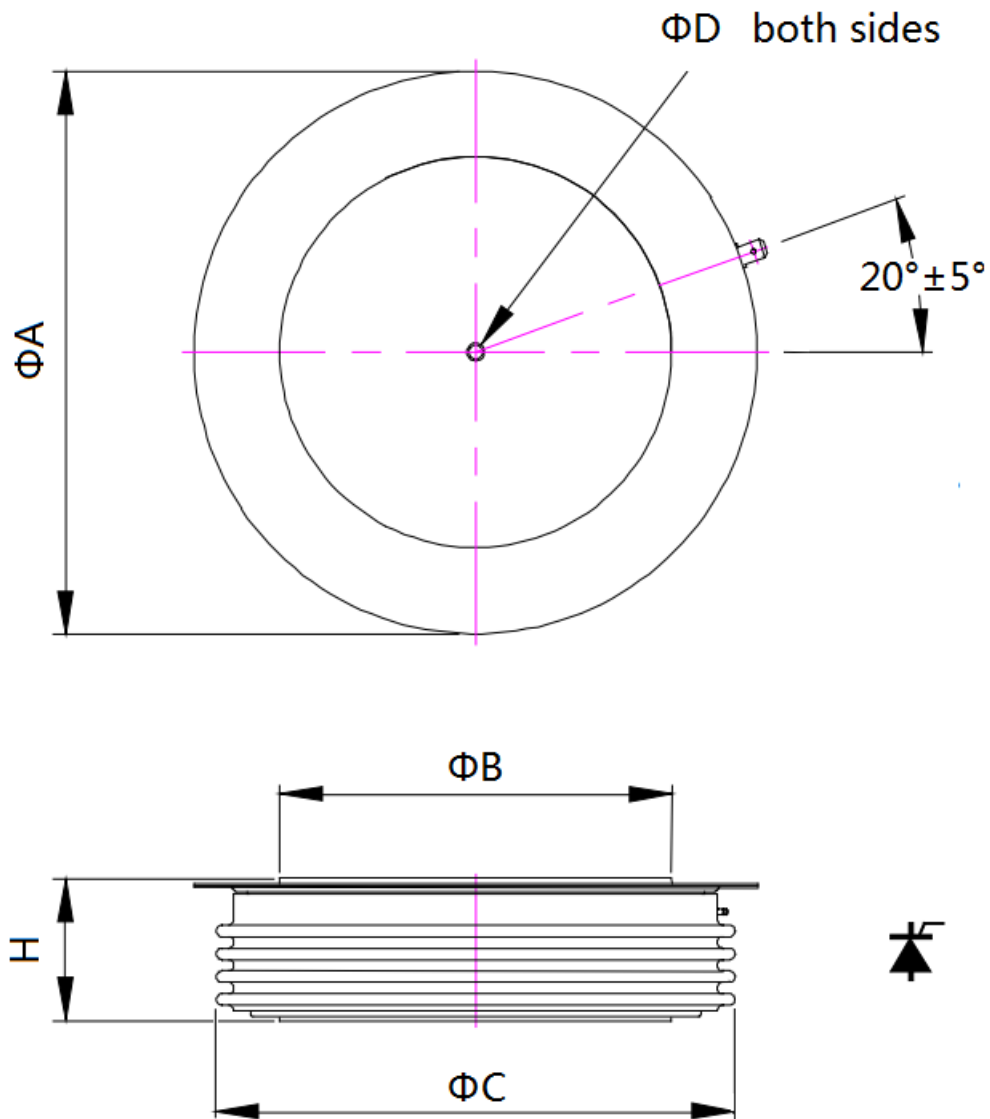
KP1000A/1800V

Thyristor

Ratings

Symbol	Definition	Conditions		min.	typ.	max.	Unit
V_{BSM} <small>DSM</small>	max. non-repetitive reverse/forward blocking voltage		$T_J = 25^\circ\text{C}$			1900	V
V_{BRM} <small>DRM</small>	max. repetitive reverse/forward blocking voltage		$T_J = 25^\circ\text{C}$			1800	V
V_T	On-state voltage	$I_T=2200\text{ A}$	$T_J = 25^\circ\text{C}$			1.85	V
$I_{T(AV)}$	average forward current	$T_C=25^\circ\text{C}$				1000	A
$I_{T(RMS)}$	RMS forward current	180° sine				2300	A
R_{thJC}	thermal resistance junction to case						K/W
R_{thCH}	thermal resistance case to heatsink						K/W
R_{thJK}	thermal resistance junction to heatsink					0.024	K/W
I_{TSM}	max. forward surge current	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}$	$T_J = 25^\circ\text{C}$			12.1	kA
I^2t	value for fusing	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}$	$T_J = 25^\circ\text{C}$			732	kA ² s
di/dt	Rate of rise of on-state current	$T_J = 125^\circ\text{C}; f = 50\text{ Hz}$ $t_p=200\mu\text{s}; di_G/dt=0.15\text{A}/\mu\text{s};$ $I_G=0.15\text{A}; V_D = \frac{2}{3}V_{DRM}$	repetitive			200	A/ μs
			non-repet			400	A/ μs
dv/dt	Maximum linear rate of rise of off-state voltage	$V_D = \frac{2}{3}V_{DRM}$ $R_{GK} = \infty; \text{ method 1 (linear voltage rise)}$	$T_J = 125^\circ\text{C}$			200	V/ μs
V_{GT}	gate trigger voltage	$V_D = 6\text{V}$	$T_J = 25^\circ\text{C}$			3.0	V
I_{GT}	gate trigger current	$V_D = 6\text{V}$	$T_J = 25^\circ\text{C}$			300	mA
I_L	latching current		$T_J = 25^\circ\text{C}$				A
I_H	holding current		$T_J = 25^\circ\text{C}$			500	mA
t_{gd}	gate controlled delay time		$T_J = 25^\circ\text{C}$		1.0	1.5	μs
t_q	Turn-off time	$V_R=10\text{ V}; I_T=20\text{A}; V_D=\frac{2}{3}V_{DRM}$	$T_J = 150^\circ\text{C}$		600	650	μs
T_{stg}	storage temperature			-40		125	$^\circ\text{C}$
T_J	virtual junction temperature			-40		125	$^\circ\text{C}$
W_t	Weight						g
F	mounting force			19		29	kN

Outline Drawing



Type	Sym	A	B	C	D	H
	mm	65	40	57	3.5x3	14.5