

## Phase Control Thyristors

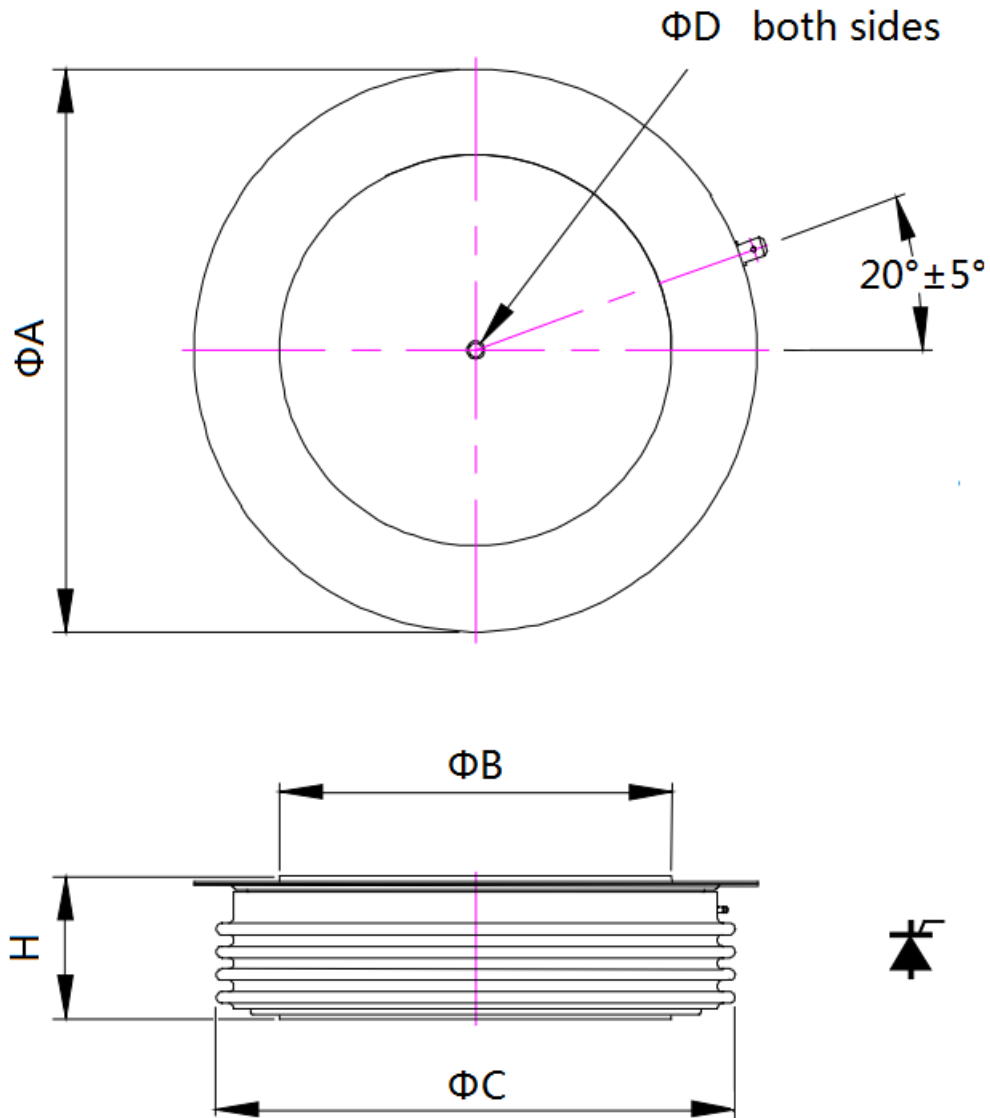
## KP400A/1800V

### Thyristor

### Ratings

Symbol	Definition	Conditions		min.	typ.	max.	Unit
$V_{DSM}$	max. non-repetitive reverse/forward blocking voltage		$T_J = 25^\circ\text{C}$			1900	V
$V_{DRM}$	max. repetitive reverse/forward blocking voltage		$T_J = 25^\circ\text{C}$			1800	V
$V_T$	On-state voltage	$I_T=1100\text{ A}$	$T_J = 25^\circ\text{C}$			1.85	V
$I_{T(AV)}$	average forward current	$T_C=25^\circ\text{C}$				400	A
$I_{T(RMS)}$	RMS forward current	180° sine				530	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					0.048	K/W
$I_{TSM}$	max. forward surge current	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}$	$T_J = 25^\circ\text{C}$			6.3	kA
$I^2t$	value for fusing	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}$	$T_J = 25^\circ\text{C}$			198	kA <sup>2</sup> 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			160	A/ $\mu\text{s}$
			non-repet			320	A/ $\mu\text{s}$
$dv/dt$	Maximum linear rate of rise of off-state voltage	$V_D= \frac{2}{3}V_{DRM}$ $R_{GK} = \infty; \text{ method 1 (linear voltage rise)}$	$T_J = 125^\circ\text{C}$			1000	V/ $\mu\text{s}$
$V_{GT}$	gate trigger voltage	$V_D = 6\text{V}$	$T_J = 25^\circ\text{C}$			2.5	V
$I_{GT}$	gate trigger current	$V_D = 6\text{V}$	$T_J = 25^\circ\text{C}$			250	mA
$I_L$	latching current		$T_J = 25^\circ\text{C}$				A
$I_H$	holding current		$T_J = 25^\circ\text{C}$			300	mA
$t_{gd}$	gate controlled delay time		$T_J = 25^\circ\text{C}$			2.5	$\mu\text{s}$
$t_q$	Turn-off time	$V_R=10\text{ V}; I_T=20\text{A}; V_D=\frac{2}{3}V_{DRM}$	$T_J = 150^\circ\text{C}$		200	400	$\mu\text{s}$
$T_{stg}$	storage temperature			-60		125	$^\circ\text{C}$
$T_J$	virtual junction temperature			-60		120	$^\circ\text{C}$
$W_t$	Weight						g
$F$	mounting force			9		11	kN

Outline Drawing



Type	Sym	A	B	C	D	H
	mm	54	29	47	3.5x3	14.5