

GPTP4125

PHASE CONTROLLED SCR

High reliability operation

DC power supply

AC drives

VOLTAGE UP TO	3600 V
AVERAGE CURRENT	1255 A
SURGE CURRENT	18 kA

BLOCKING CHARACTERISTICS

Characteristic	Conditions	Value
V _{RRM}	Repetitive peak reverse voltage	3600 V
V _{RSM}	Non-repetitive peak reverse voltage	3700 V
V _{DRM}	Repetitive peak off-state voltage	3600 V
I _{DRM}	Repetitive peak off-state current, max.	150 mA
I _{IRRM}	Repetitive peak reverse current, max.	150 mA

ON-STATE CHARACTERISTICS

I _{T(AV)}	Average on-state current	Sine wave, 180° conduction, Th = 55 °C	1255 A
I _{T(RMS)}	R.M.S. on-state current	Sine wave, 180° conduction, Th = 55 °C	1971 A
I _{TSM}	Surge on-state current	Non rep. half sine wave, 50 Hz, V _R = 0 V, T _j = T _{jmax}	18 kA
I ² t	I ² t for fusing coordination		1620 kA ² s
V _{T(TO)}	Threshold voltage	T _j = T _{jmax}	1.30 V
r _T	On-state slope resistance	T _j = T _{jmax}	0.40 mΩ
V _{TM}	Peak on-state voltage, max	On-state current I _T = 1300 A, T _j = 25 °C	1.82 V
I _H	Holding current, max	T _j = 25 °C	300 mA
I _L	Latching current, typ	T _j = 25 °C	1500 mA

TRIGGERING CHARACTERISTICS

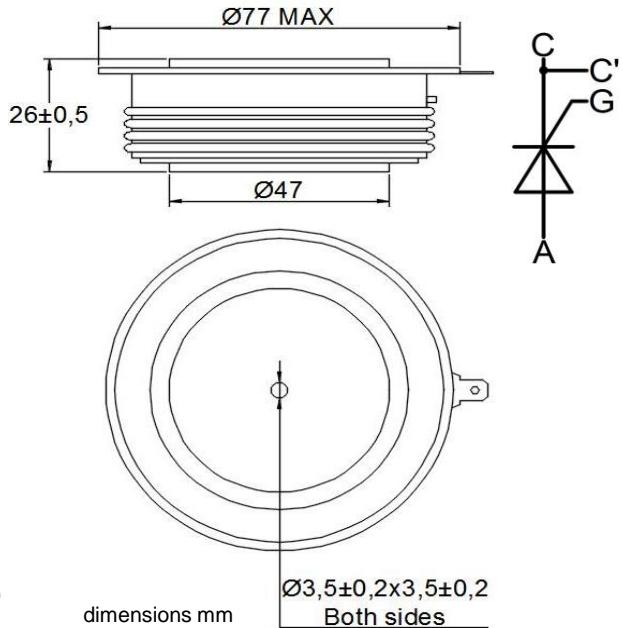
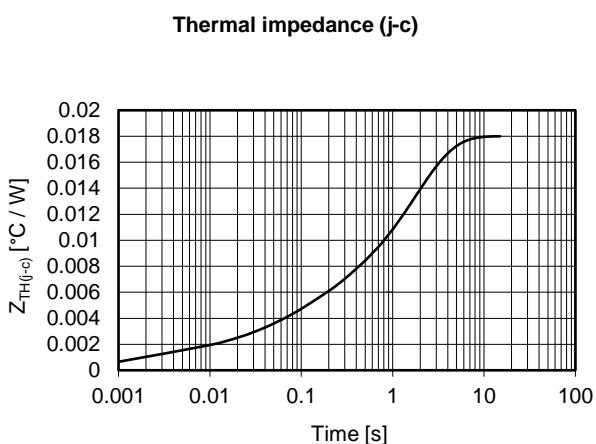
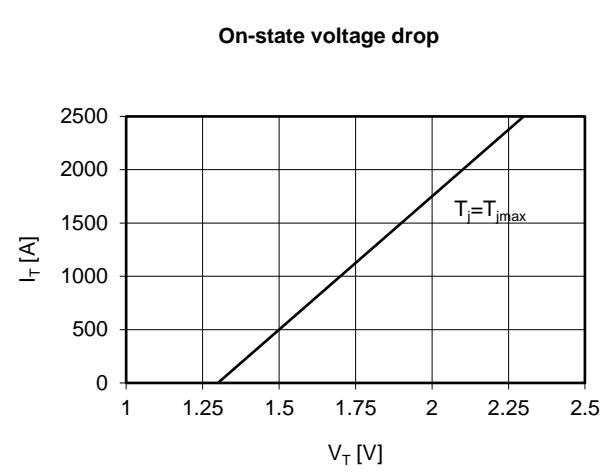
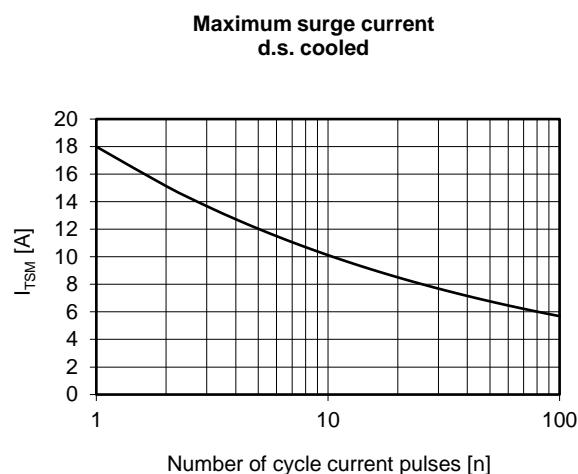
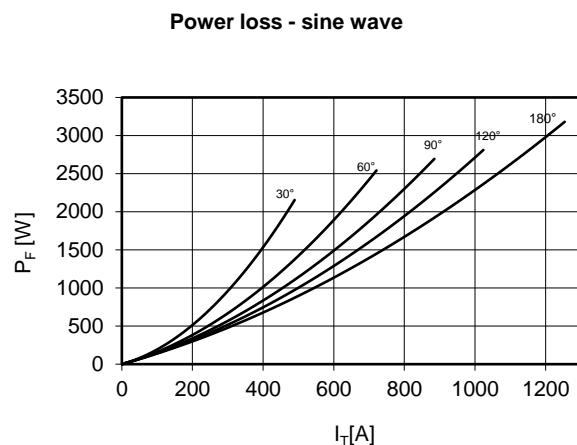
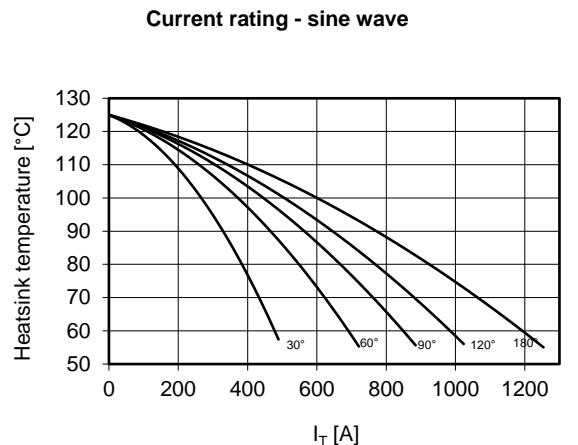
V _{GT}	Gate trigger voltage	T _j = 25 °C, V _D = 5 V	3 V
I _{GT}	Gate trigger current	T _j = 25 °C, V _D = 5 V	300 mA
V _{GD}	Non-trigger voltage	V _D = 67% V _{RRM} , T _j = T _{jmax}	0.25 V
P _{GM}	Peak gate power dissipation	Pulse width 100 µs	150 W
P _{G(AV)}	Average gate power dissipation		2 W
I _{FGM}	Peak gate current		8 A
V _{FGM}	Peak gate voltage (forward)		30 V
V _{RGFM}	Peak gate voltage (reverse)		5 V

SWITCHING CHARACTERISTICS

di/dt	Critical rate of rise of on-state current	T _j = T _{jmax}	200 A/µs
dV/dt	Critical rate of rise of off-state voltage	T _j = T _{jmax}	1000 V/µs
t _q	Turn-off time, typ	T _j = T _{jmax} , I _T = 1000 A, di/dt = -10 A/µs	400 µs
		VR = 50 V, V _D = 67% V _{DRM} , dV/dt = 20 V/µs	

THERMAL AND MECHANICAL CHARACTERISTICS

R _{th(j-c)}	Thermal resistance (junction to case)	Double side cooled	0.018 °C/W
R _{th(c-h)}	Thermal resistance (case to heatsink)	Double side cooled	0.004 °C/W
T _{jmax}	Max operating junction temperature		125 °C
T _{stg}	Storage temperature		-40 / 125 °C
F	Clamping force ± 10%		26 kN
	Mass		520 g



Ordering information GPTP4125-VVGL

VV: blocking voltage / 100 (e.g. 36 for 3600 V)
G: trigger lead type (**S** = straight **T** = twisted **blank** = no leads)
L: trigger lead lenght x 100mm (**3 - 4 - 5 - 7** **blank** = no leads)

In the interest of product improvement Green Power Solutions reserves the right to change any specification given in this data sheet without notice.