

GETG0105

PHASE CONTROLLED SCR

Plastic case

DC power supply

AC drives

VOLTAGE UP TO	600 V
AVERAGE CURRENT	1050 A
SURGE CURRENT	15 kA

BLOCKING CHARACTERISTICS

Characteristic	Conditions	Value
V_{RRM}	Repetitive peak reverse voltage	600 V
V_{RSM}	Non-repetitive peak reverse voltage	700 V
V_{DRM}	Repetitive peak off-state voltage	600 V
I_{DRM}	Repetitive peak off-state current, max.	50 mA
I_{RRM}	Repetitive peak reverse current, max.	50 mA

ON-STATE CHARACTERISTICS

$I_{T(AV)}$	Average on-state current	Sine wave, 180° conduction, $T_h = 55^\circ C$	1050 A
$I_{T(RMS)}$	R.M.S. on-state current	Sine wave, 180° conduction, $T_h = 55^\circ C$	1649 A
I_{TSM}	Surge on-state current	Non rep. half sine wave, 50 Hz, $V_R = 0 V$, $T_j = T_{jmax}$	15 kA
$I^2 t$	$I^2 t$ for fusing coordination		1125 kA ² s
$V_{T(TO)}$	Threshold voltage	$T_j = T_{jmax}$	0.87 V
r_T	On-state slope resistance	$T_j = T_{jmax}$	0.238 mΩ
V_{TM}	Peak on-state voltage, max	On-state current $I_T = 2900 A$, $T_j = T_{jmax}$	1.56 V
I_H	Holding current, max	$T_j = 25^\circ C$	600 mA
I_L	Latching current, typ	$T_j = 25^\circ C$	1000 mA

TRIGGERING CHARACTERISTICS

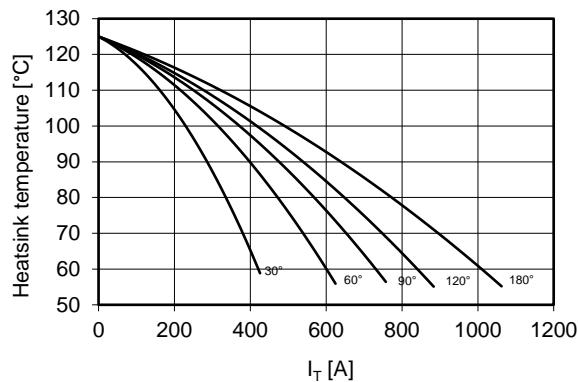
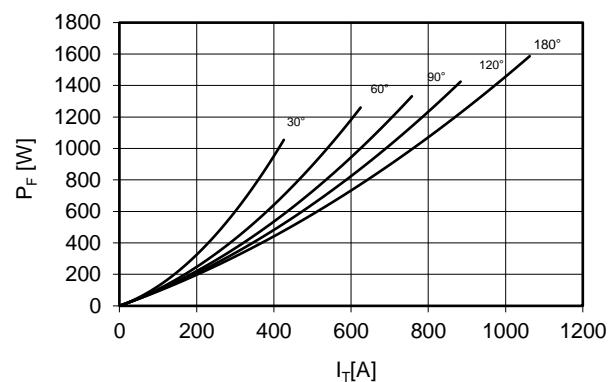
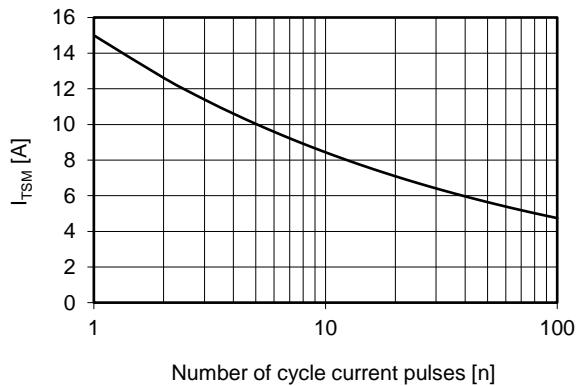
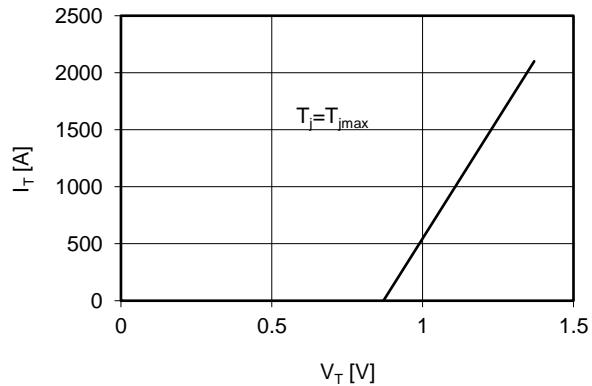
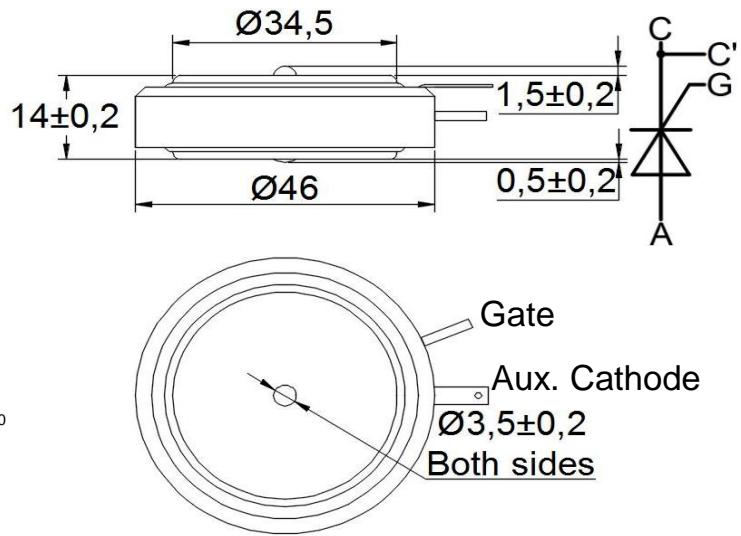
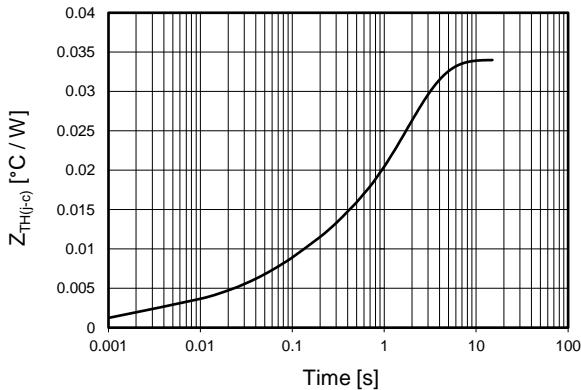
V_{GT}	Gate trigger voltage	$T_j = 25^\circ C$, $V_D = 5 V$	2.5 V
I_{GT}	Gate trigger current	$T_j = 25^\circ C$, $V_D = 5 V$	190 mA
V_{GD}	Non-trigger voltage	$V_D = 67\% V_{RRM}$, $T_j = T_{jmax}$	0.25 V
P_{GM}	Peak gate power dissipation	Pulse width 0.5 ms	10 W
$P_{G(AV)}$	Average gate power dissipation		2 W
I_{FGM}	Peak gate current		3 A
V_{FGM}	Peak gate voltage (forward)		20 V
V_{RGM}	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	$T_j = T_{jmax}$	500 V/μs
t_q	Turn-off time, typ	$T_j = T_{jmax}$, $I_T = 320 A$, $di/dt = -12.5 A/\mu s$ $VR = 100 V$, $VD = 67\% V_{DRM}$, $dV/dt = 20 V/\mu s$	μs

THERMAL AND MECHANICAL CHARACTERISTICS

$R_{th(j-c)}$	Thermal resistance (junction to case)	Double side cooled	0.034 °C/W
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Double side cooled	0.010 °C/W
T_{jmax}	Max operating junction temperature		125 °C
T_{stg}	Storage temperature		-30 / 125 °C
F	Clamping force ± 10%		9.0 kN
	Mass		85 g

Current rating - sine wave

Power loss - sine wave

**Maximum surge current
d.s. cooled**

On-state voltage drop

Thermal impedance (j-c)


Ordering information GETG0105-VVGL

VV: blocking voltage / 100 (e.g. 06 for 600 V)

G: trigger lead type (S = straight T = twisted blank = no leads)

L: trigger lead length 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.