

## FEATURES

- All difussed design
- High current capabilities
- High surge current capabilities
- High rated voltage
- High dv/dt
- Low gate current
- Dynamic gate
- Low thermal impedance
- Compact size and small weight

## APPLICATION

- High Power drives
- DC motor control
- High voltage power cupplies
- Resistance welding



Photo non-contractual

## TECHNICAL SPECIFICATION

### Electrical properties

Parameter		Test conditions	Value
Repetitive reverse voltage	$V_{RRM}$		2000 V
Reverse current	$I_{RRM}$	$T_{Jmax}$	80 mA
Average on-state current	$I_{AV}$	$T_C=70^{\circ}C$	1400 A
R.M.S. Forward current	$I_{RMS}$		2200 A
Surge current	$I_{TSM}$	10ms, $T_{Jmax}$ , $0.8V_{RRM}$	21000 A
$I^2t$ value	$I^2t$		$2200 \times 10^3 A^2s$
On-state voltage max.	$V_T$	$I_{TM}=1500A$ , $T_{Jmax}$	1,30 V
Treshold voltage	$V_O$		0,83 V
Slope resistance	$r_o$		0,214 mOhm
Latching current	$I_L$	$T_j=25^{\circ}C$ , $V_D=12V$	1000 mA
Holding current	$I_H$	$T_j=25^{\circ}C$ , $V_D=12V$	250 mA
Circuit conmutated turno-off time (typical)	$t_q$	$T_j=125^{\circ}C$ , $I_{TM}=250A$ , $di_R/dt=25A/\mu s$ , $V_D=0,67V_{DRM}$ , $V_{RM}=100V$ .	150 $\mu s$
Turn-on time (typical)	$t_{on}$	$I_{TM}=100A$ , $V_{DM}=100V$	12 $\mu s$
Rate of change of current	$di/dt$	$T_j=125^{\circ}C$ , $I_{TM}=3I_{AV}$ , $V_D=0,67V_{DRM}$ , $f=50Hz$ , $I_{GM}=1A$ , $di_G/dt=1A/\mu s$	200 A/ $\mu s$
Rate of rise of voltage	$dv/dt$	$T_j=125^{\circ}C$ , $V_D=0,67V_{DRM}$	1000 V/ $\mu s$
Trigger gate current	$I_G$	$T_j=25^{\circ}C$ , $V_D=12V$	200 mA
Gate trigger voltage	$V_G$	$T_j=25^{\circ}C$ , $V_D=12V$	3 V

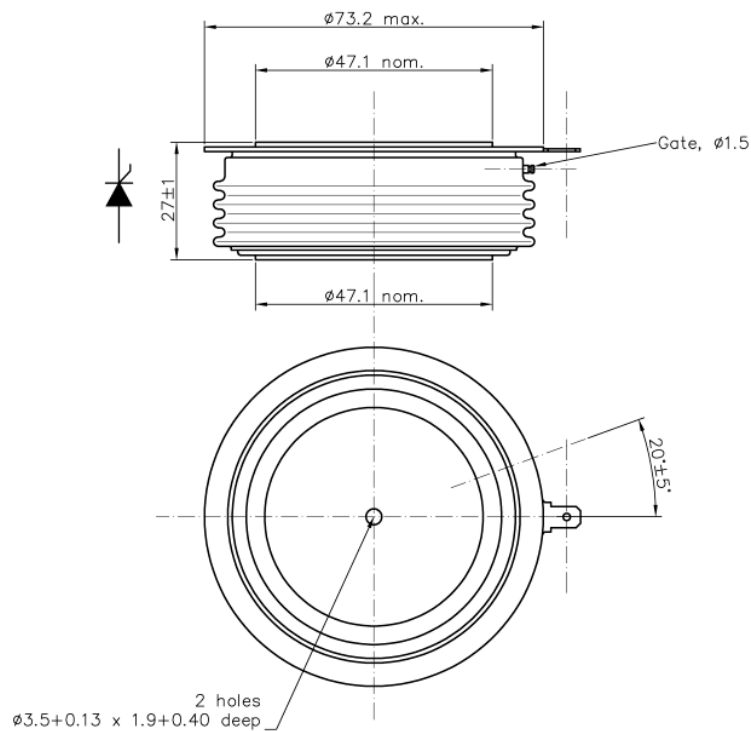
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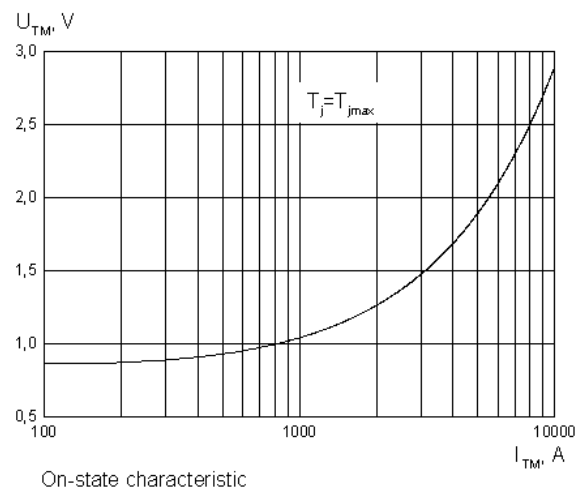
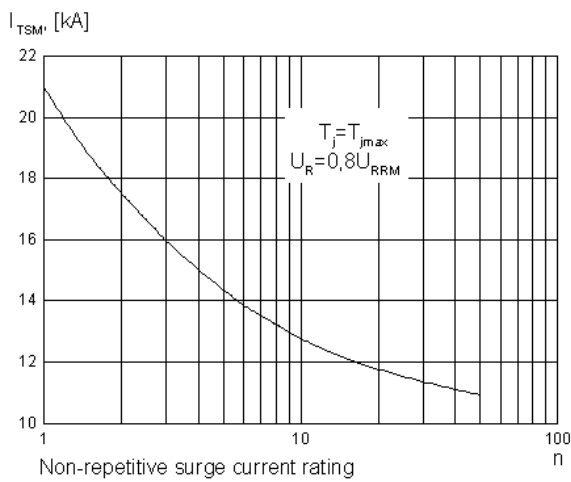
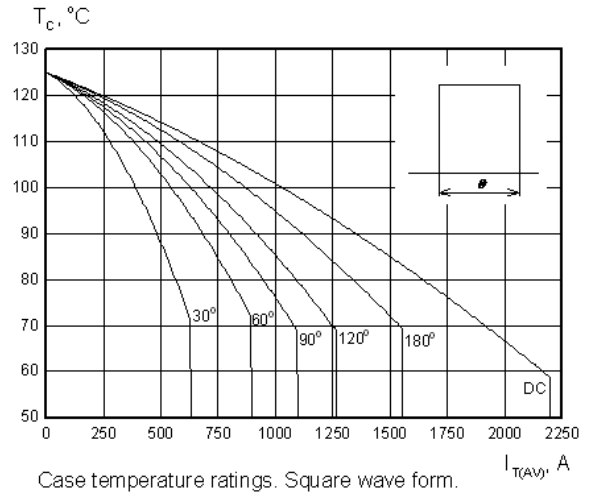
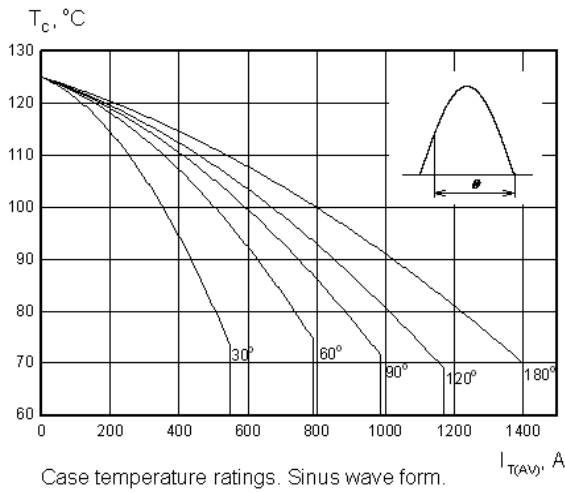
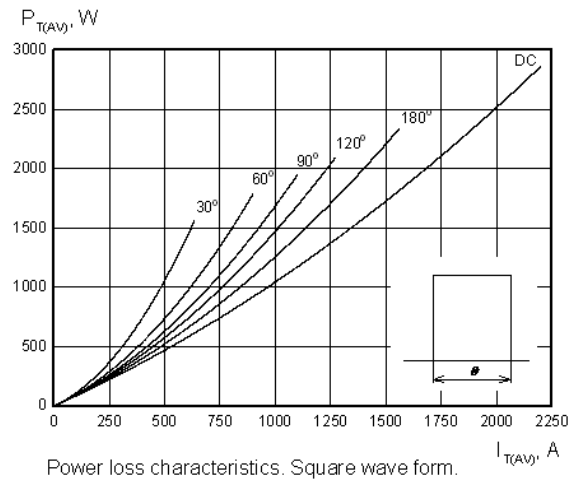
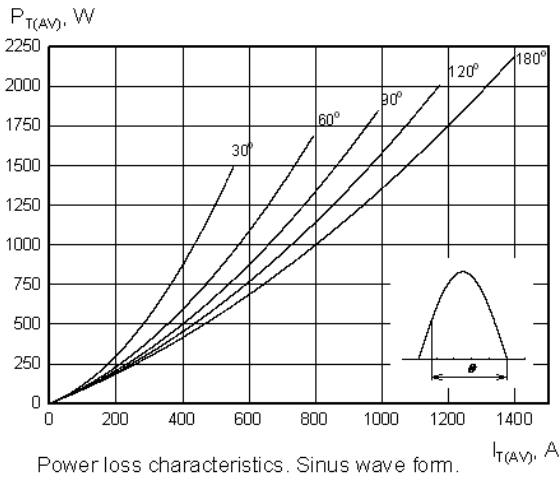
**Thermal properties**

Parameter		Test conditions	Value
Max. operating junction temperature	$T_{j_{max}}$		125 °C
Thermal resistance junction-capsule	$R_{TH_{j-c}}$	DC	0,01 °C/W.
		180° sin	0,010 °C/W.
		120° sin	0,0102 °C/W.
		60° sin	0,0105 °C/W.
Thermal resistance capsule-heatsink	$R_{TH_{c-hs}}$		0,023°C/W.
Storage temperature	$T_{stg}$		-40...+125°C

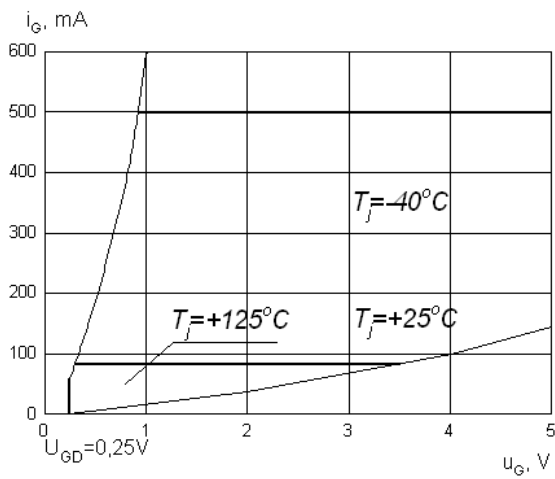
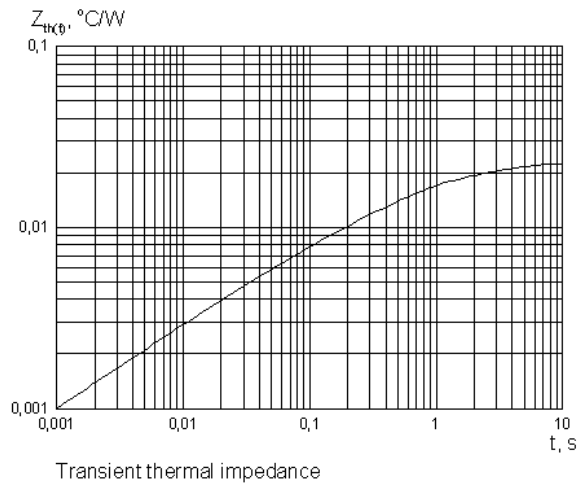
**Mechanical properties**

Parameter		Value
Weight	M	480 g
Clamping force	m	22,5...25 kN

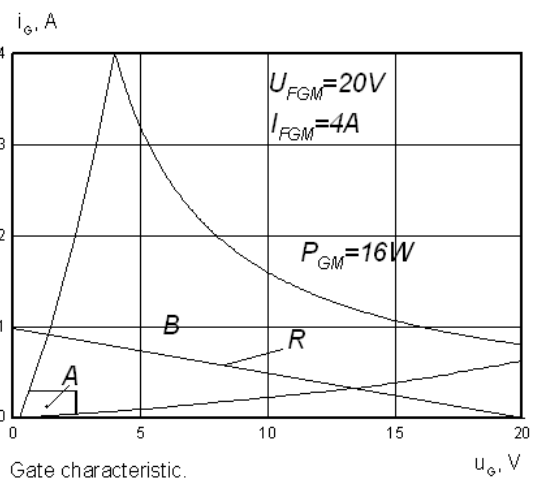




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Gate characteristic. Possible trigger area.



Gate characteristic.

- A - possible trigger area
- B - permitted gate pulse forcing area
- R - recommended gate drive load line

## Cost Effective Products

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