

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}	SCTP1900N12	1200 V
		SCTP1900N16	1600 V
Reverse current	I_{RRM}	T_{jmax}	100 mA
Average on-state current	I_{AV}	$T_C=70^{\circ}C$	1900 A
R.M.S. Forward current	I_{RMS}		3000 A
Surge current	I_{TSM}	10ms, T_{jmax} , $0.8V_{RRM}$	30000 A
I^2t value	I^2t		$4500 \times 10^3 A^2s$
On-state voltage max.	V_T	$I_{TM}=1500A$, T_{jmax}	1,05 V
Treshold voltage	V_o		0,74 V
Slope resistance	r_o		0,089 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	$T_j=125^{\circ}C$, $I_{TM}=250A$, $di_R/dt=25A/\mu s$, $V_D=0,67V_{DRM}$, $V_{RM}=100V$.	100 μs
Turn-on time (typical)	t_{on}	$I_{TM}=100A$, $V_{DM}=100V$	12 μs
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/ μs
Rate of rise of voltage	dv/dt	$T_j=125^{\circ}C$, $V_D=0,67V_{DRM}$	1000 V/ μs
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

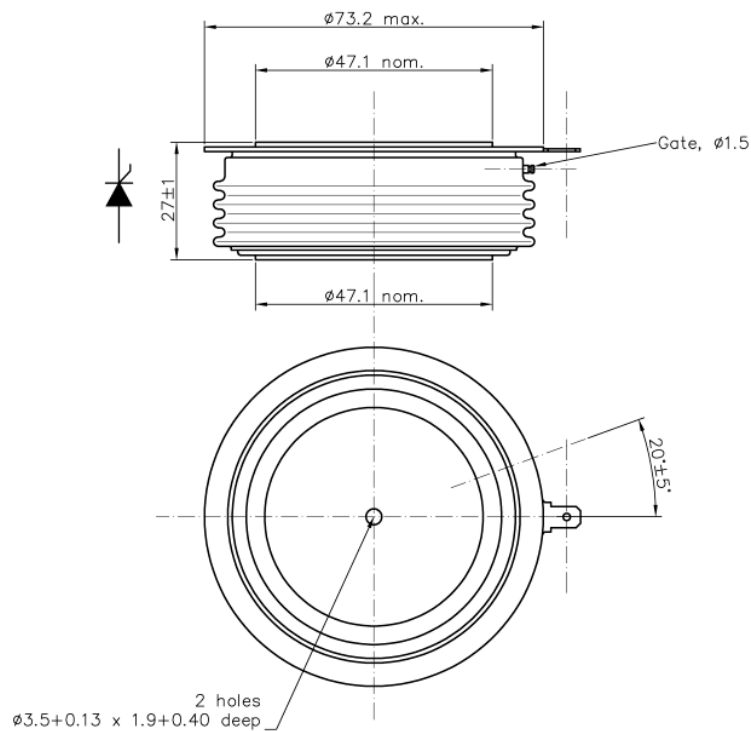
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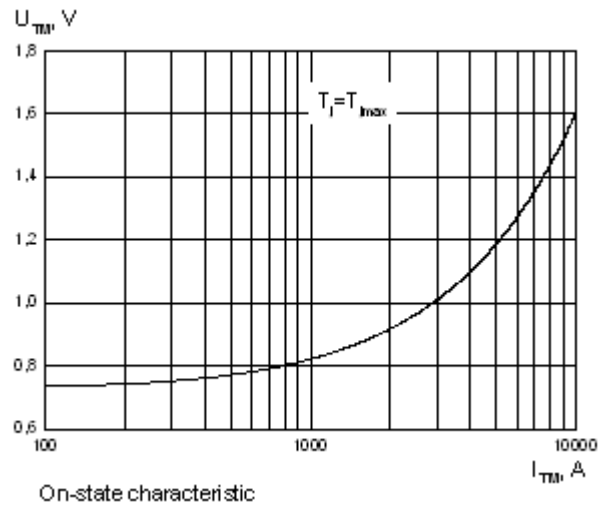
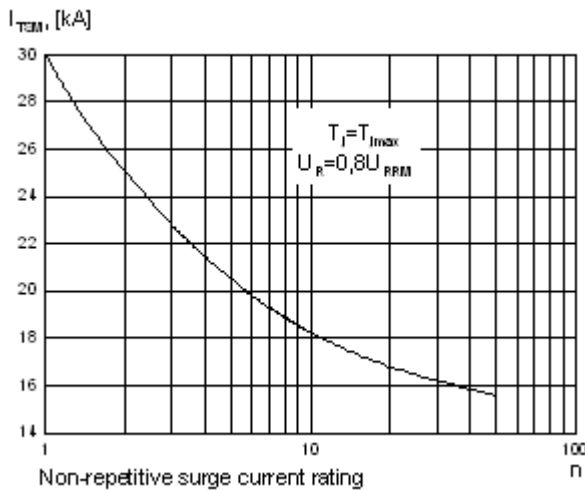
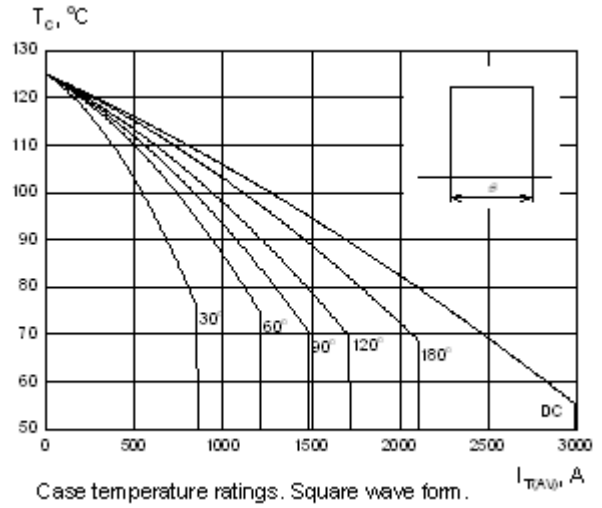
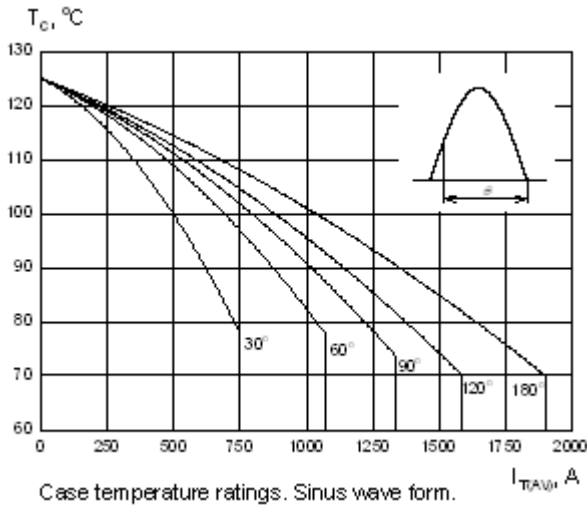
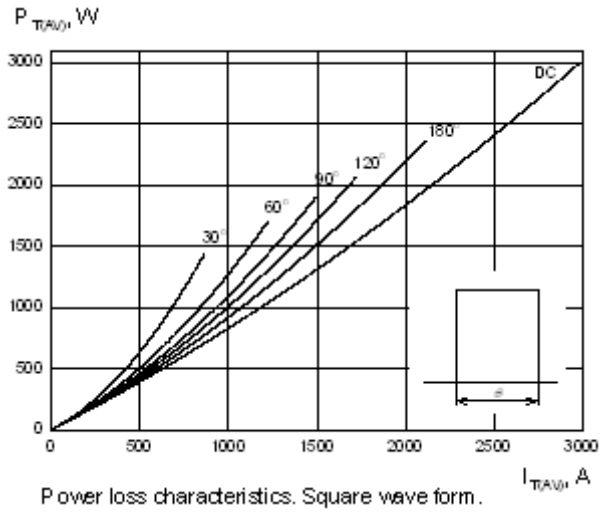
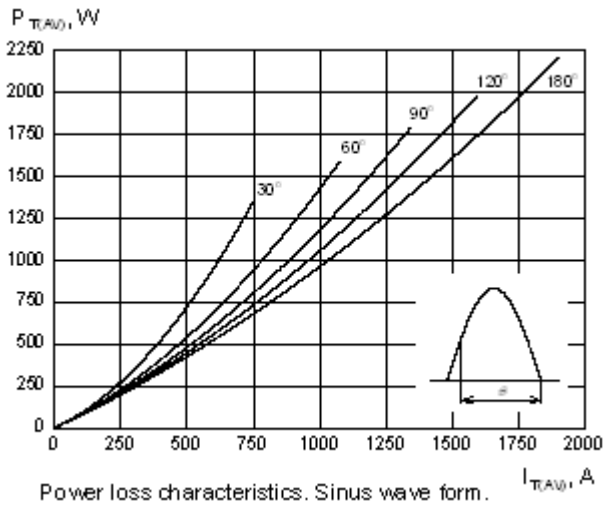
Thermal properties

Parameter		Test conditions	Value
Max. operating junction temperature	T_{jmax}		125 °C
Thermal resistance junction-capsule	RTH_{j-c}	DC	0,021 °C/W.
		180° sin	0,021 °C/W.
		120° sin	0,0215 °C/W.
		60° sin	0,0225 °C/W.
Thermal resistance capsule-heatsink	RTH_{c-hs}		0,01°C/W.
Storage temperature	T_{stg}		-40...+125°C

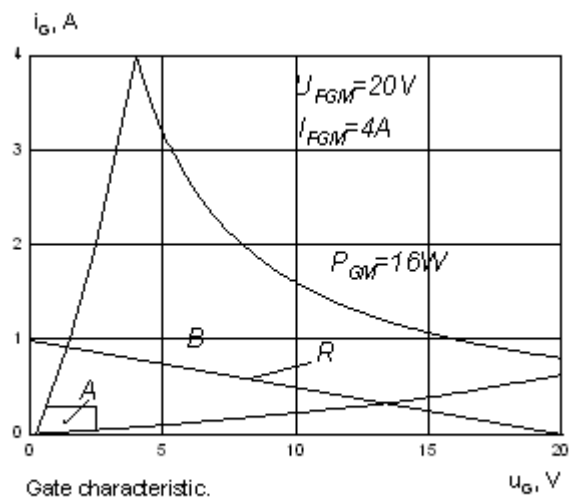
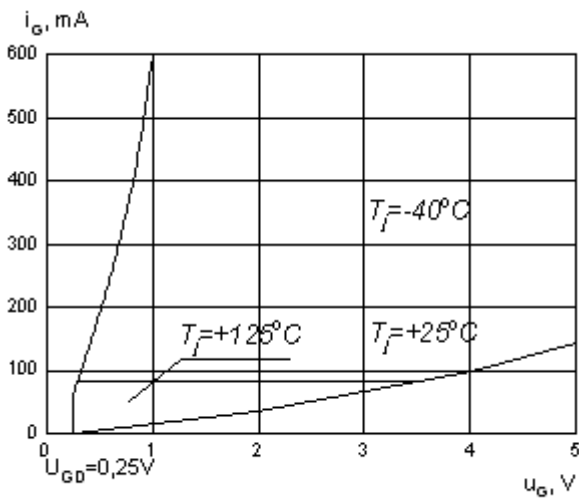
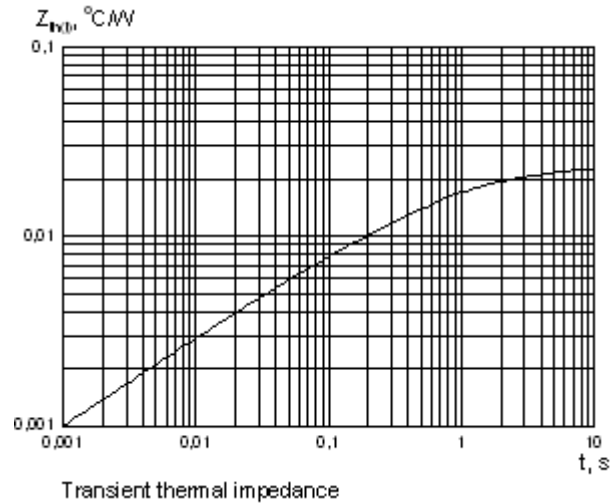
Mechanical properties

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





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Cost Effective Products

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