SCTN0350N16

Stud phase control thyristor

FEATURES

-All difussed design
-High current capabilities
-High surge current capabilities
-High rated voltage
-Low gate current
-Low thermal impedance
-Compact size and small weight
-3/4''UNF thread stud

APPLICATION

-High Power drives
-DC motor control
-Battery chargers
-High voltage power cuplplies
-Resistance welding

Photo non-contractual

TECHNICAL SPECIFICATION

Electrical properties

Parameter		Test conditions	Value
Repetitive reverse voltage	V_{RRM}		1600 V
Reverse current	I_{RRM}	Tj_{max}	33 mA
Average on-state current	I_{AV}	T_C=70ºC	350 A
R.M.S. Forward current	I_{RMS}		550 A
Surge current	I_{TSM}	10ms, $Tj_{max,}$ 0.8V_{RRM}	9100 A
I^2t value	I^2t		415x10^3 A^2s
On-state voltage max.	V_T	I_{TM}=625A, Tj_{max}	1,80 V
Treshold voltage	Vo		0,86 V
Slope resistance	ro		0,60 mOhm
Latching current	I_L	Tj=25ºC, V_D=12V	800 mA
Holding current	I_H	Tj=25ºC, V_D=12V	200 mA
Circuit conmutated turno-off time (typical)	tq	Tj=125ºC, I_{TM}=250A, di_R/dt=25A/µs, V_D=0,67V_{DRM}, V_{RM}=100V.	200 µs
Turn-on time (typical)	t_{on}	I_{TM}=100A, V_{DM}=100V	12 µs
Rate of change of current	di/dt	Tj=125ºC, I_{TM}=3I_{AV}, V_D=0,67V_{DRM}, f=50Hz, I_{GM}=1A, di_G/dt=1A/µs	100 A/µs
Rate of rise of voltage	dv/dt	Tj=125ºC, V_D=0,67V_{DRM}	>200 V/µs
Trigger gate current	I_G	Tj=25ºC, V_D=12V	200 mA
Gate trigger voltage	V_G	Tj=25ºC, V_D=12V	3 V

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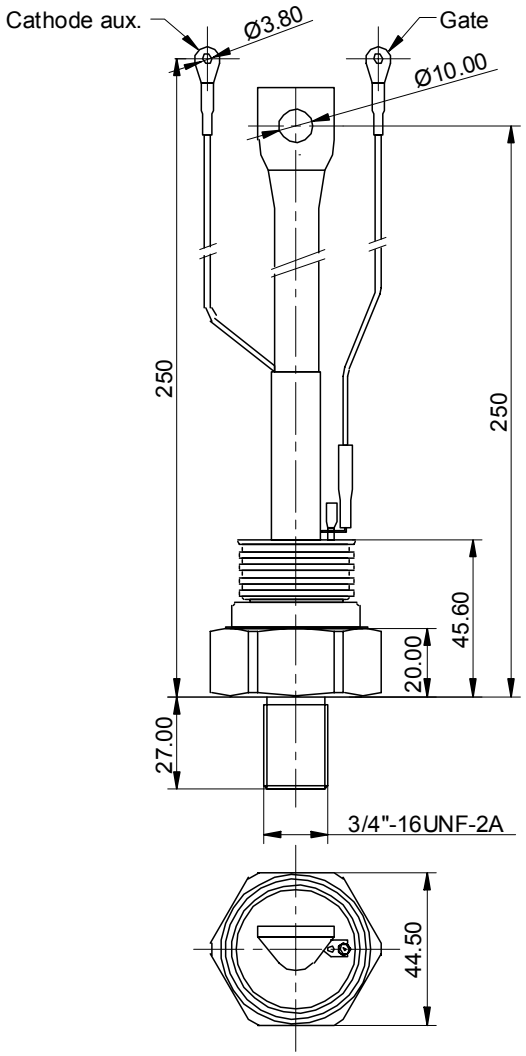
Thermal properties

Parameter		Test conditions	Value
Max. operating junction temperature	Tj_{max}		125 ºC
Thermal resistance junction-capsule	RTH_{j-c}	DC	0,10 ºC/W.
		180º sin	0,12 ºC/W.
		120º sin	0,14 ºC/W.
		60º sin	0,16 ºC/W.
Thermal resistance capsule-heatsink	RTH_{c-hs}		0,05ºC/W.
Storage temperature	T_{stg}		-40...+125ºC

Mechanical properties

Parameter		Value
Weight	M	530 g
Mounting torque	m	38...41 Nm



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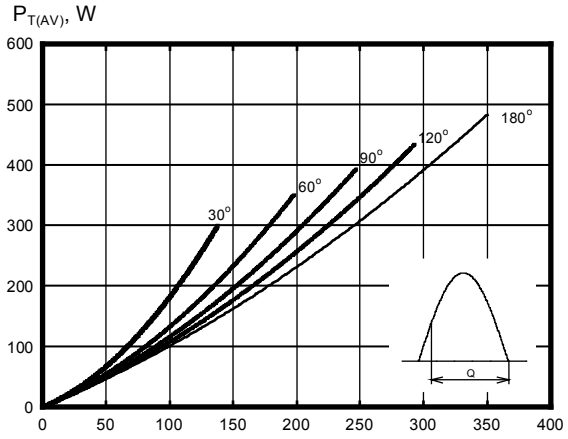
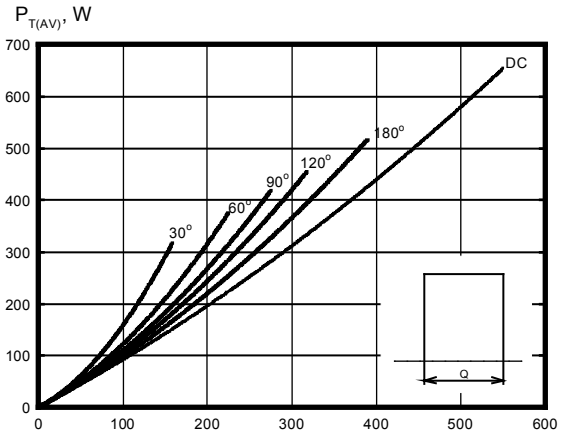
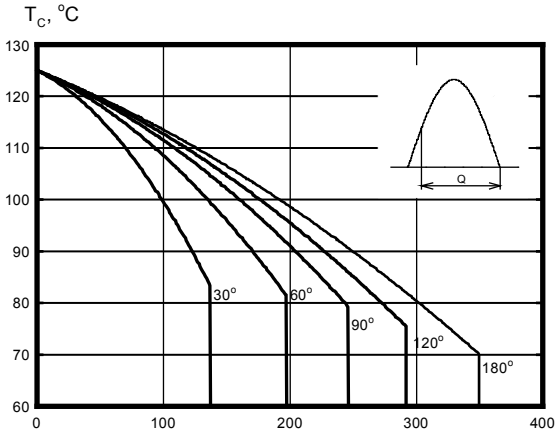


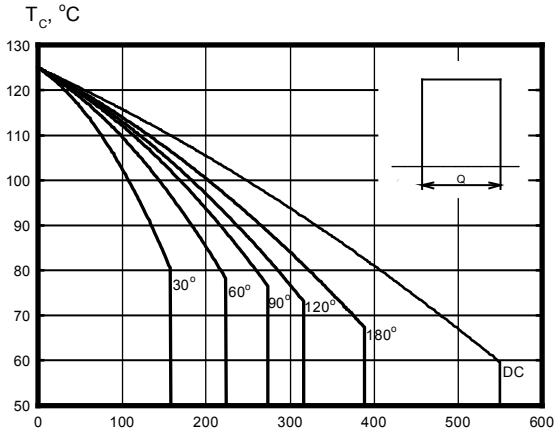
Power loss characteristics. Sinus wave form.



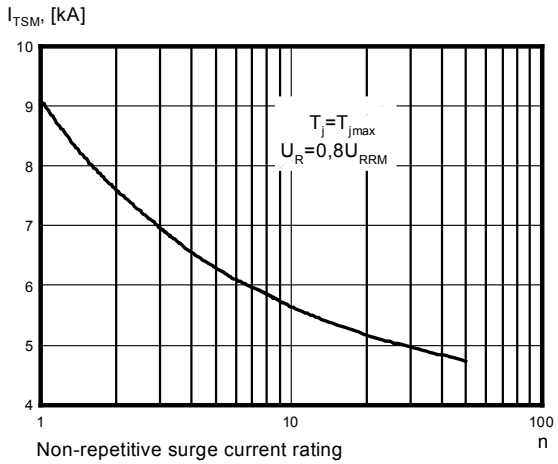
Power loss characteristics. Square wave form.



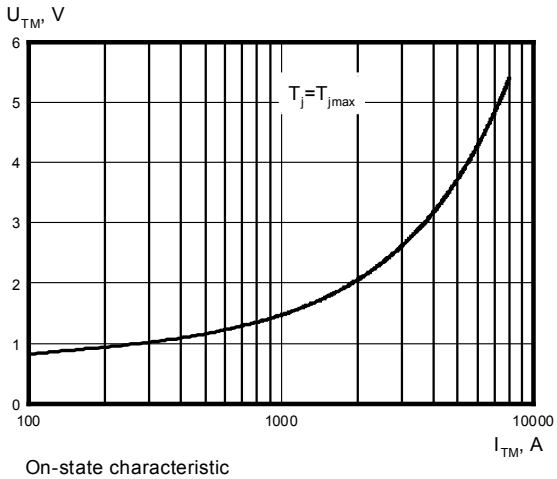
Case temperature ratings. Sinus wave form.



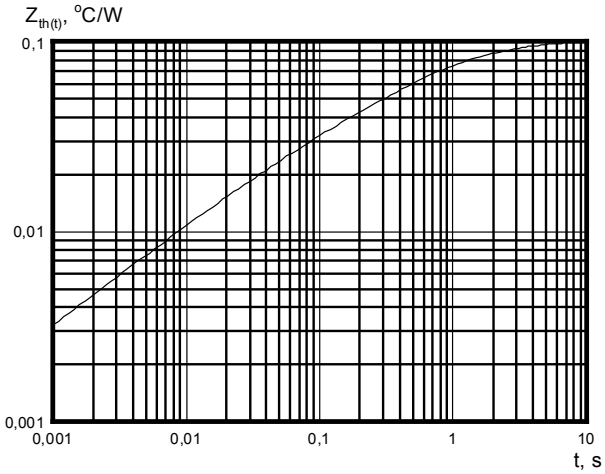
Case temperature ratings. Square wave form.



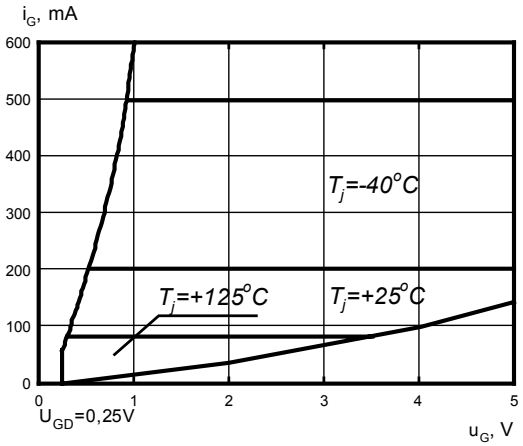
Non-repetitive surge current rating



On-state characteristic



Transient thermal impedance



Gate characteristic. Possible trigger area.

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Cost Effective Products

SEMICODE ELECTRONICA

offers to the market a comprehensive range of products from recognized manufacturers at the best price/ quality relationship, this products are provided with a basic reference code that allows maintaining the same product reference even if the original device manufacturer is replaced. SEMICODE product reference has to be considered as a generic brand.

Seeking the market needs and trends, we are constantly increasing the product portfolio with new products and suppliers, please ask for the updated information available to our local contacts.

SEMICODE products include semiconductors, passive components and accessories focused in power electronics market.

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Tentative information: This is the most tentative form of information and represents a very preliminary specification. No actual design work on the product has been started.
Preliminary Information: The product is in design and development. The datasheet represents the product as it is understood but details may change.
Advance Information: The product design is complete and final characterisation for volume production is well in hand.
No Annotation: The product parameters are fixed and the product is available to datasheet specification.

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