



**Key Parameters**

$V_{DRM} / V_{RRM}$	= 2800V
$I_{T(AV)}$	= 2600A
$I_{TSM}$	= 35.5kA
$V_{T(OT)}$	= 1.504V
$r_T$	= 0.174mΩ

**Features**

- Full blocking capability over wide temperature range
- High Surge current capability
- Hermetic metal case with ceramic insulator
- Distributed gate

**Applications**

- Battery Chargers
- Medical Equipment
- UPS
- Power Supplies
- Motor control
- Transportation
- Induction Heating
- Welding

**Ordering Information**

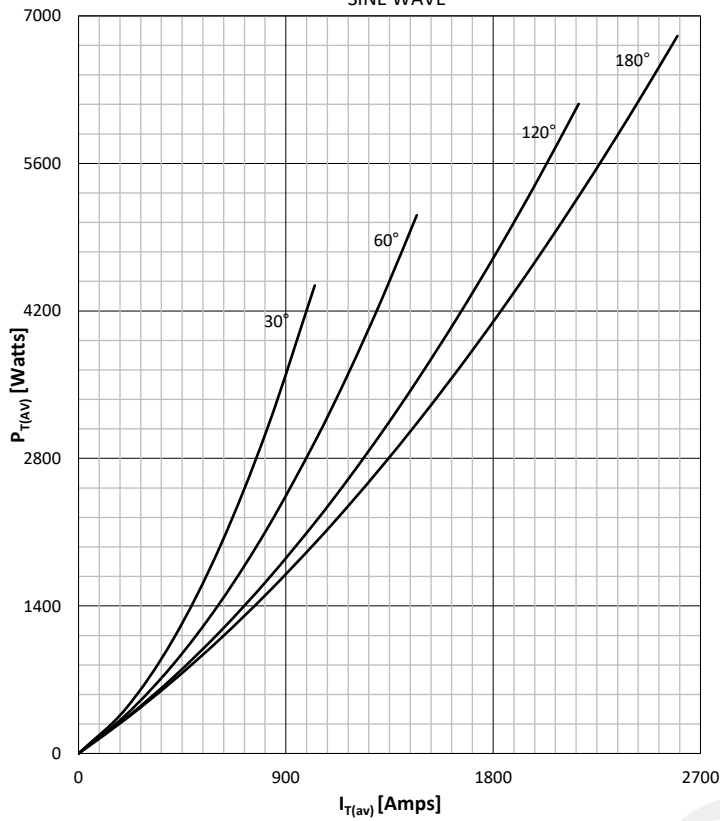
MS TF	2600	C	XX	F	4J
Fast Switching Thyristor	Current Code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = $V_{DRM}/V_{RRM}$	Reapplied dv/dt F = 200V/μsec	Turn Off time code 4K = 80μsec 4J = 100μsec
Order Code MS TF2600C28F4J – 2800V $V_{DRM}, V_{RRM}$ , $T_q=100\mu\text{sec}$ , 37mm clamp height capsule					

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Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		125	2000 - 2800	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		125	2100 - 2900	V
V <sub>DRM</sub>	Repetitive peak off-state voltage		125	2000 - 2800	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	125	300	mA
I <sub>DRM</sub>	Repetitive peak off-state current	V = V <sub>DRM</sub>	125	300	mA
<b>CONDUCTING</b>					
I <sub>T(AV)</sub>	Mean on state current	180° sin ,50 Hz, T <sub>c</sub> =70°C, Double side cooled 180° sin ,50 Hz, T <sub>c</sub> =74°C, Double side cooled		2600 2475	A
I <sub>RMS</sub>	RMS on-state current	T <sub>c</sub> =70°C, Double side cooled		4082	A
I <sub>TSM</sub>	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	35.5	kA
			125	34.1	kA
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	6301 x 10 <sup>3</sup>	A <sup>2</sup> s
			125	5814 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>T</sub>	On-state voltage	On-state current = 5700A	125	2.55	V
V <sub>T(TO)</sub>	Threshold voltage		125	1.504	V
r <sub>T</sub>	On-state slope resistance		125	0.174	mΩ
<b>SWITCHING</b>					
di/dt	Critical rate of rise of on-state current	Repetitive, V <sub>D</sub> = 67%V <sub>DRM</sub> , I <sub>FG</sub> =2A, tr≤0.5μs	125	1000	A/μs
dv/dt	Critical rate of rise of off-state voltage	V <sub>DR</sub> = 80%V <sub>DRM</sub>	125	200	V/μs
T <sub>q</sub>	Circuit commutated turn off time	I <sub>TM</sub> =4000A, -di <sub>F</sub> /dt = 60A/μs, V <sub>R</sub> = 100V, t <sub>p</sub> =2000μs Reapplied dv/dt = 200V/μs, V <sub>DR</sub> = 67%V <sub>DRM</sub>	125	80 - 100	μs
<b>GATE</b>					
I <sub>gt</sub>	Gate trigger current	V <sub>D</sub> =6V	25	300	mA
V <sub>gt</sub>	Gate trigger voltage	V <sub>D</sub> =6V	25	3.0	V
I <sub>H</sub>	Holding current	V <sub>D</sub> =6V, gate open circuit	25	1000	mA
I <sub>L</sub>	Latching current	V <sub>D</sub> =6V	25	1200	mA
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, sin 180°	Junction to case, Double side cooled		0.008	°C/W
R <sub>th(j-c)</sub>	Thermal impedance, rec120°	Junction to case, Double side cooled		0.0092	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, Double side cooled		0.003	°C/W
T <sub>j</sub>	Max. junction temperature			125	°C
T <sub>stg</sub>	Storage temperature			-40 .... 125	°C
M	Clamping Force			30 - 47	kN
W	Weight (Approx.)			1750	gm
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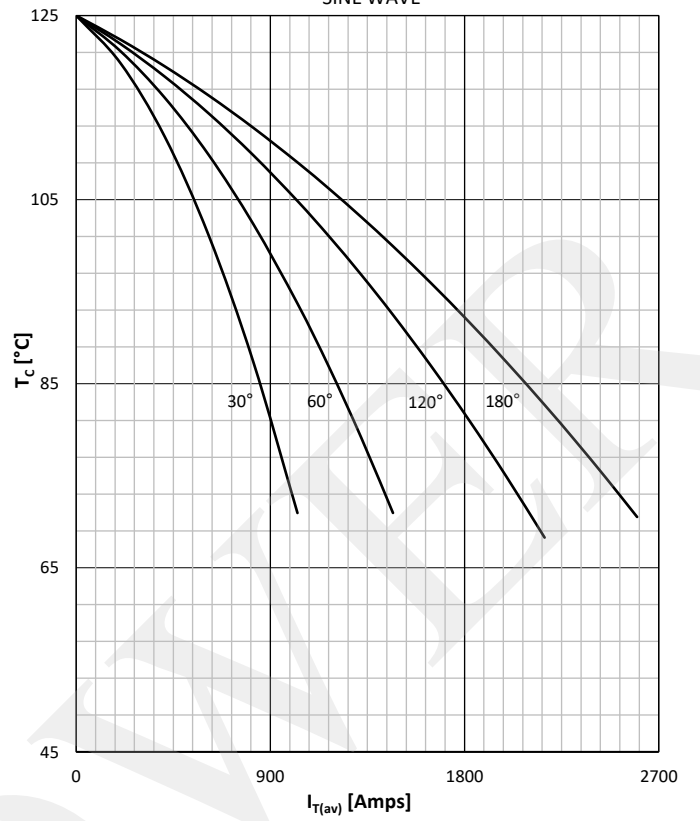
DISSIPATION CHARACTERISTICS

SINE WAVE



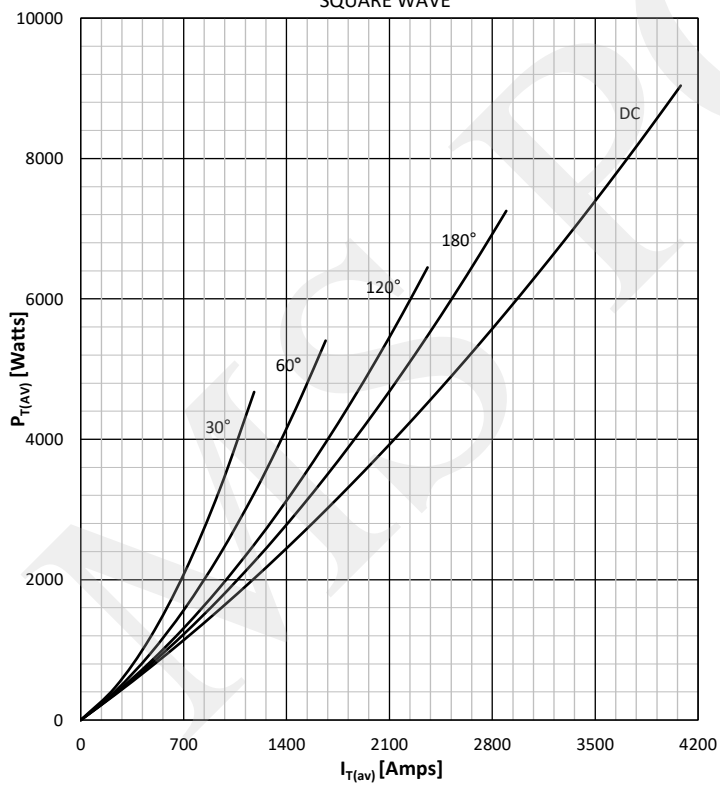
ON STATE CURRENT DERATING CURVE

SINE WAVE



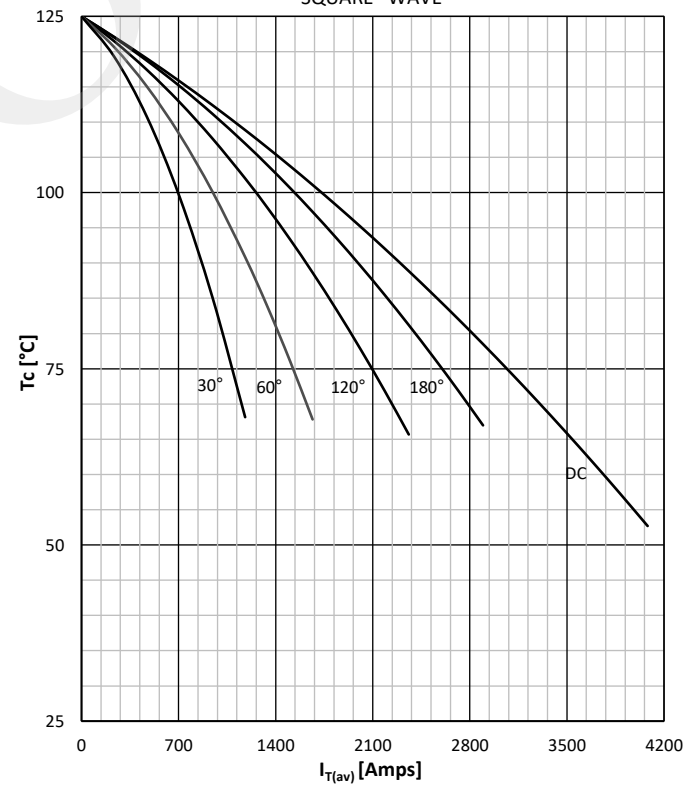
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



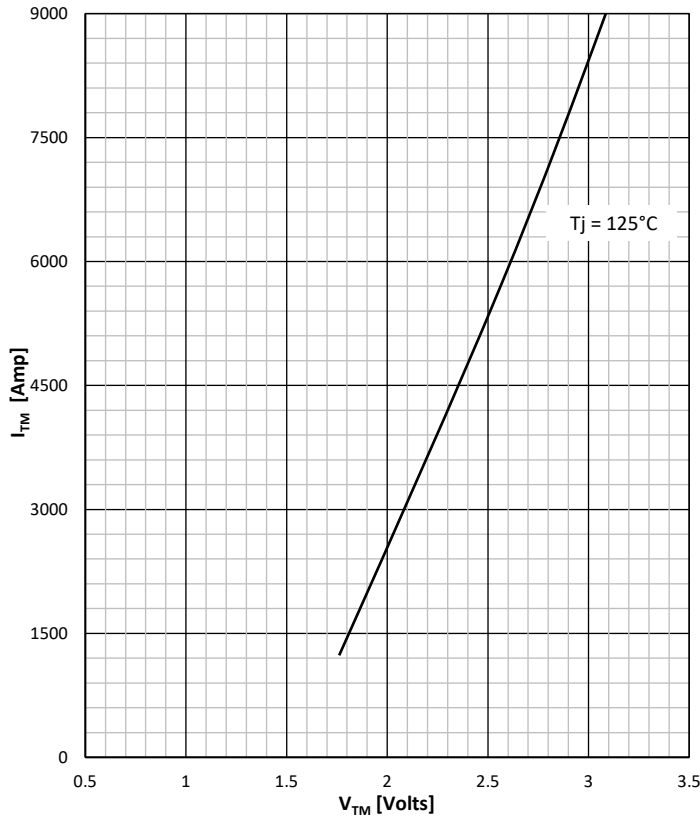
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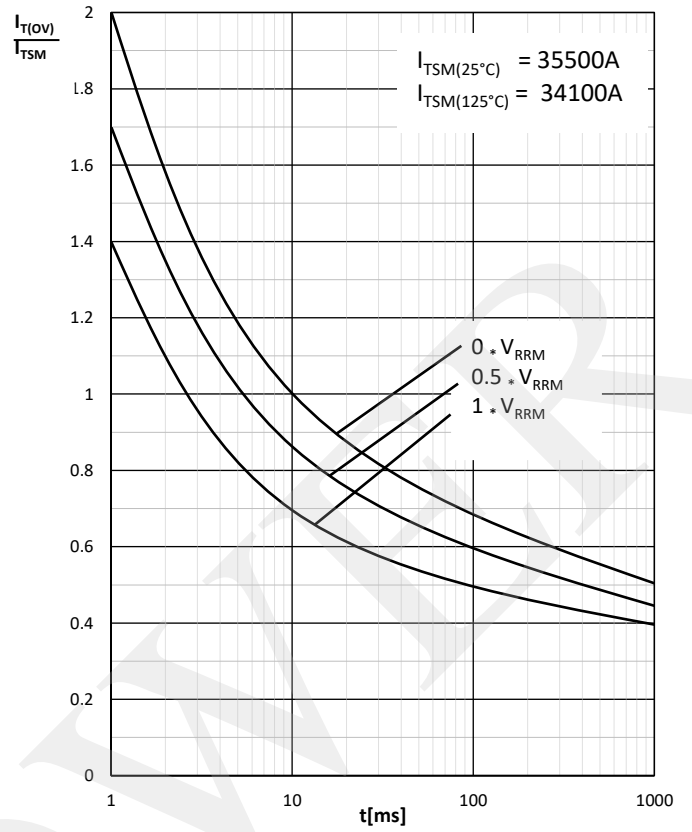
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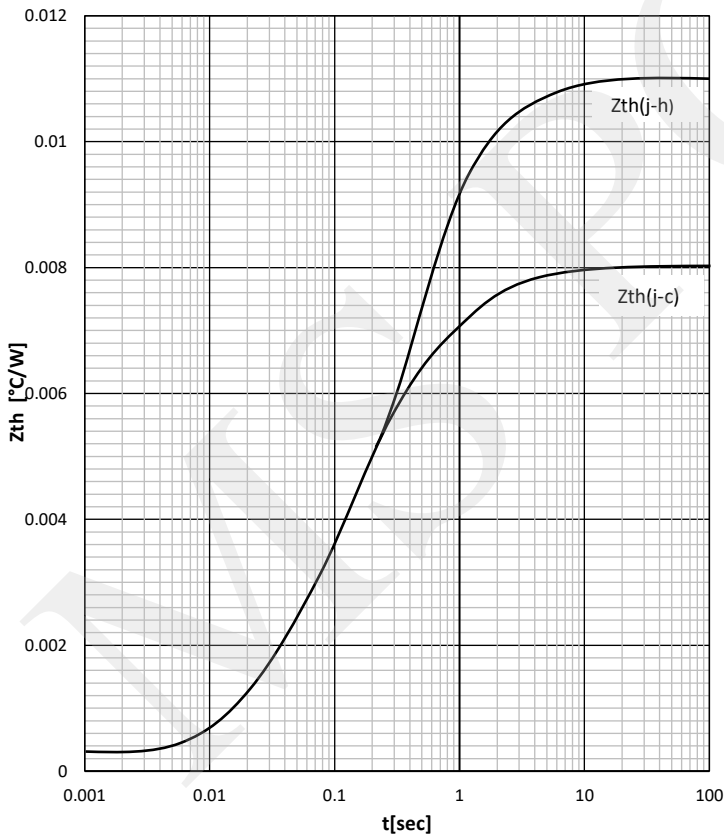
ON STATE CHARACTERISTIC



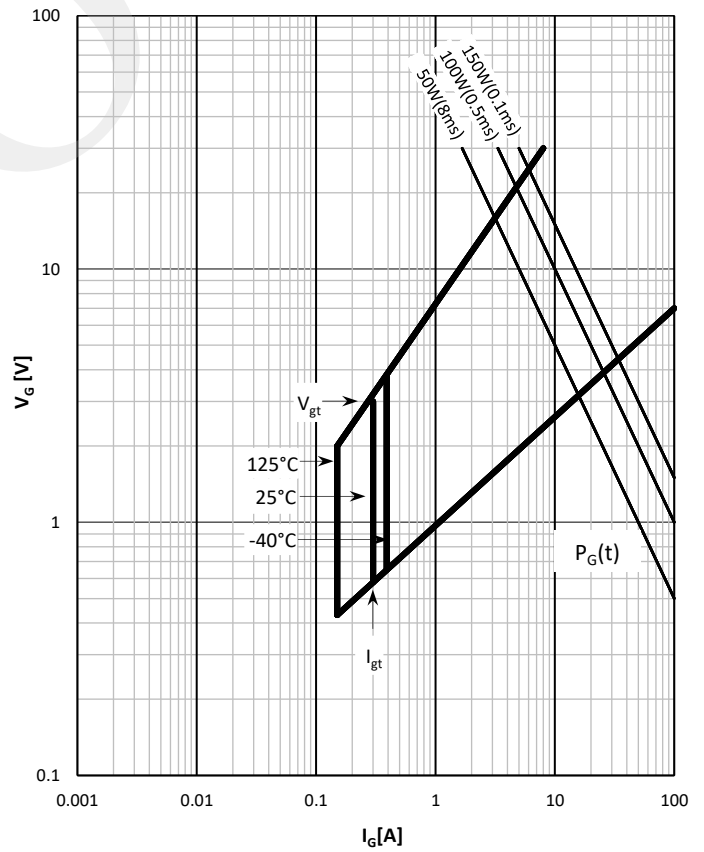
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



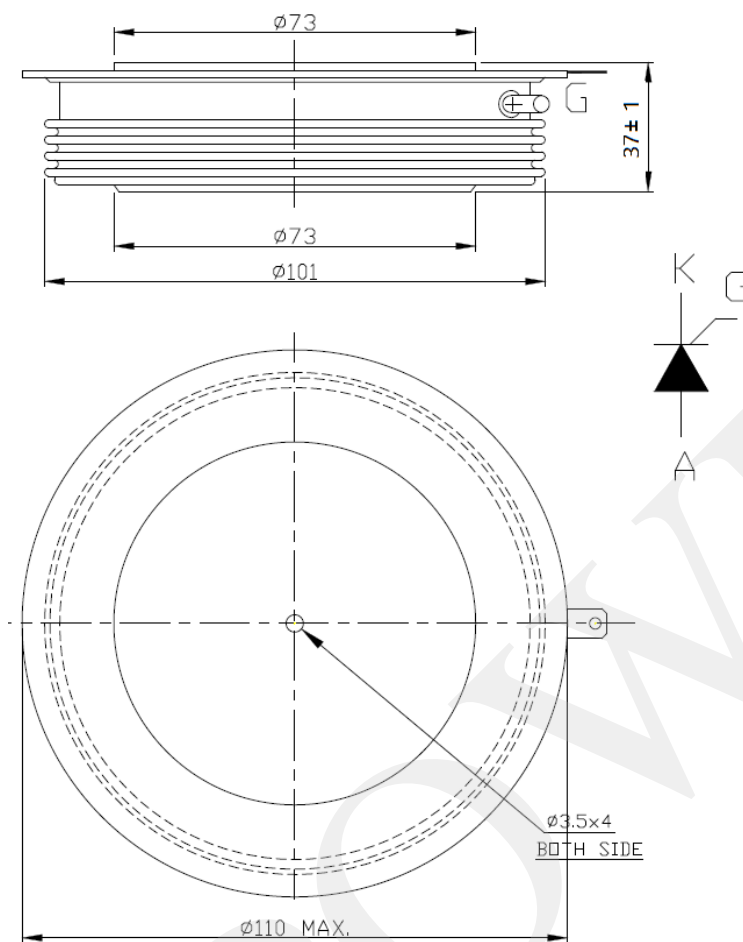
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