



Key Parameters

V_{RRM}	= 1800V
$I_{F(AV)}$	= 501A
I_{FSM}	= 6000A
$V_{F(TO)}$	= 0.70V
r_F	= 0.66mΩ

Features

- Full blocking capability over wide temperature range
- Hermetically sealed ceramic package
- High case non-rupture current

Applications

- Power Supplies
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting

Ordering Information

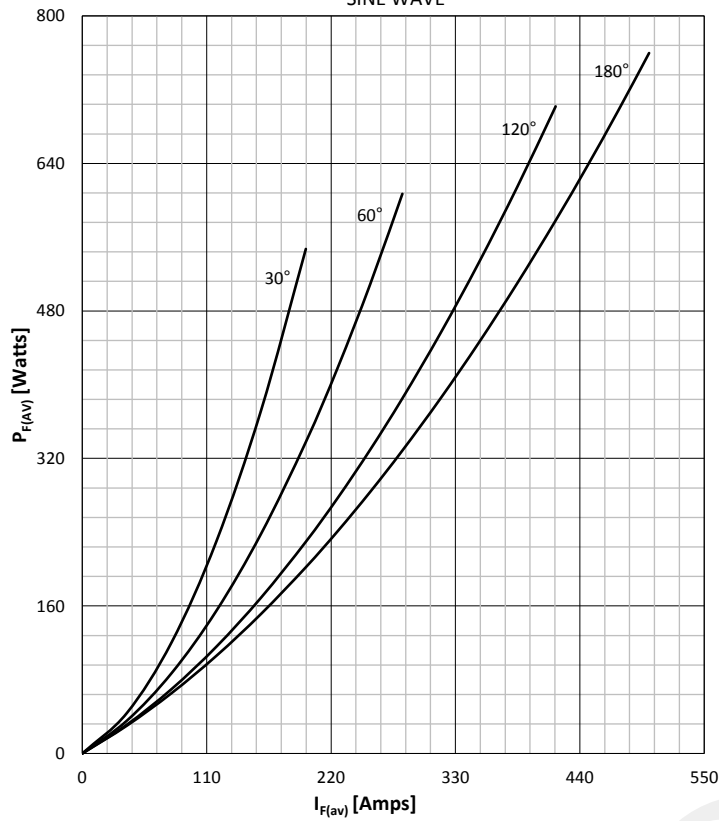
MS D	501	C	XX
Rectifier Diode	Current code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = V_{RRM}
Order Code MS D501C18 : 1800V V_{RRM} , Capsule Diode			

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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		170	200 - 1800	V
V _{RSM}	Non-repetitive peak reverse voltage		170	300 - 1900	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	170	20	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin, 50 Hz, T _c =85°C , double side cooled 180° sin, 50 Hz, T _c =95°C , double side cooled		501 460	A
I _{FRMS}	RMS current	T _c =85°C , double side cooled		787	A
I _{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	6000	A
			170	5000	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	180 x 10 ³	A ² s
			170	125 x 10 ³	A ² s
V _F	Forward voltage	On-state current = 1500A	170	1.69	V
V _{F(TO)}	Threshold voltage		170	0.70	V
r _F	Forward slope resistance		170	0.66	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, double side cooled		0.112	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		0.015	°C/W
T _j	Max. junction temperature			170	°C
T _{stg}	Storage temperature			-40 170	°C
M	Clamping force			5 - 6	KN
W	Weight (Approx.)			70	gm
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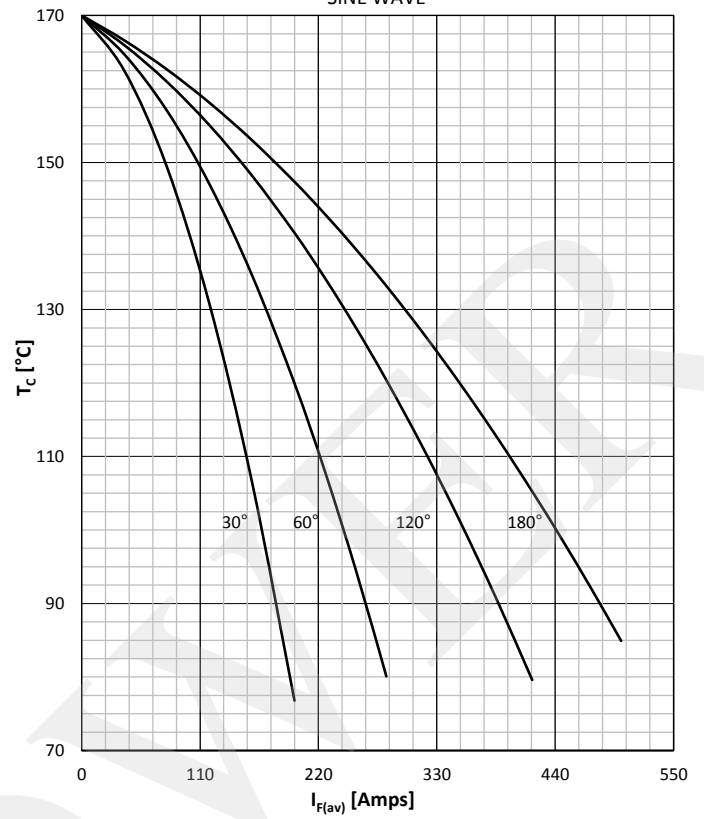
DISSIPATION CHARACTERISTICS

SINE WAVE



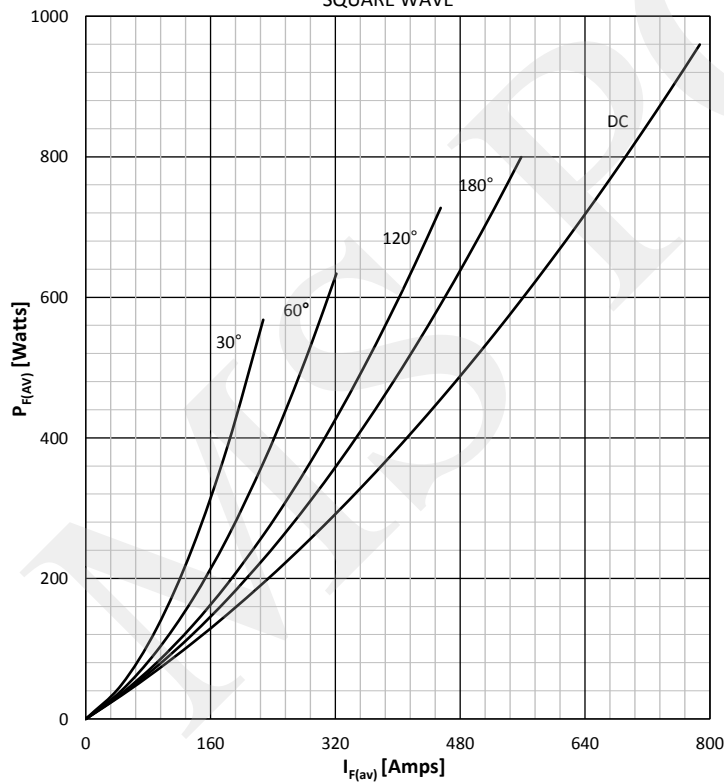
FORWARD CURRENT DERATING CURVE

SINE WAVE



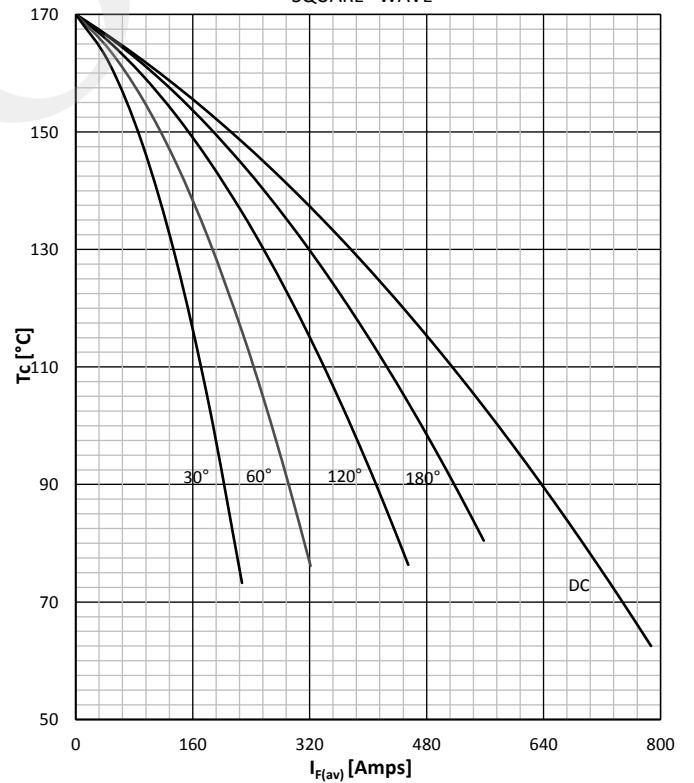
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



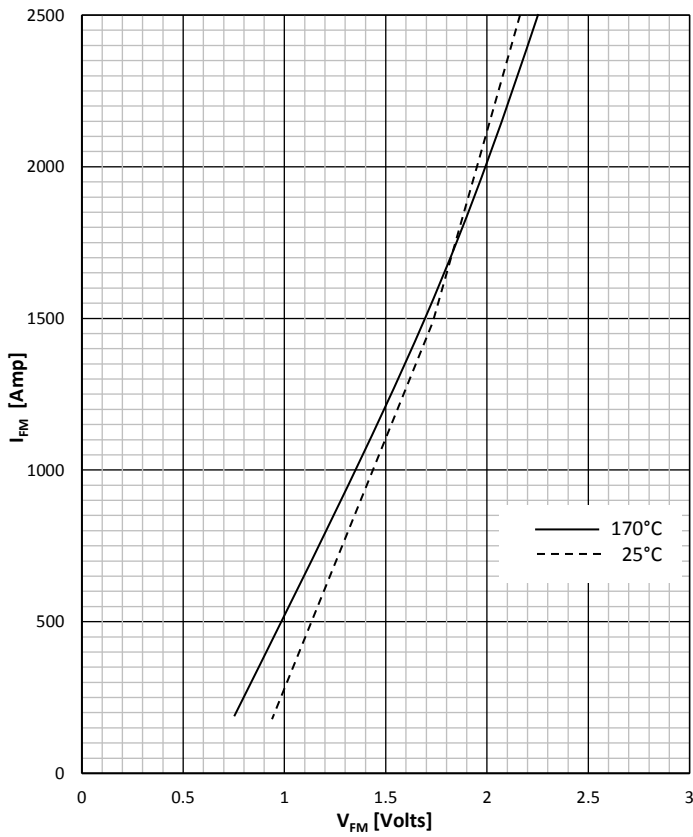
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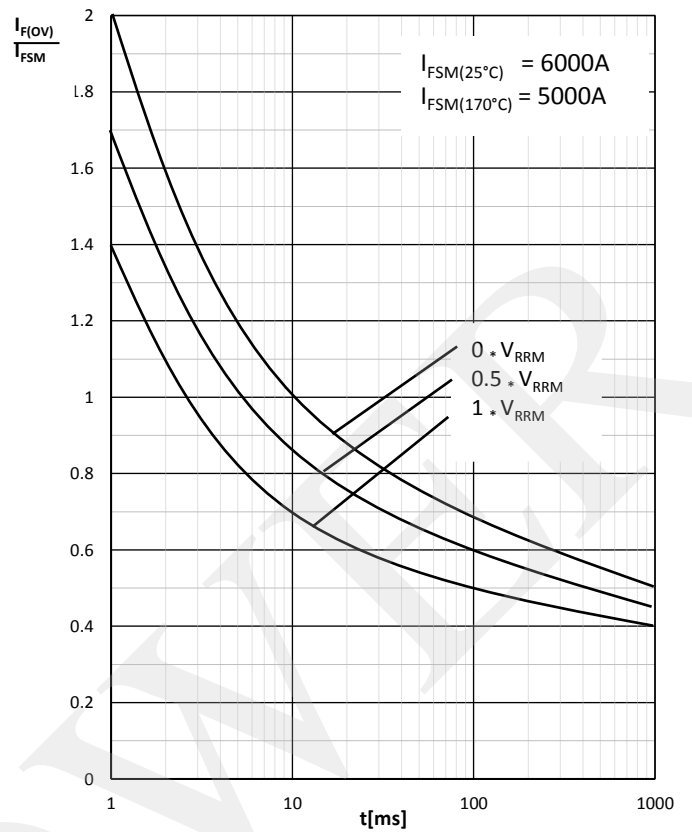
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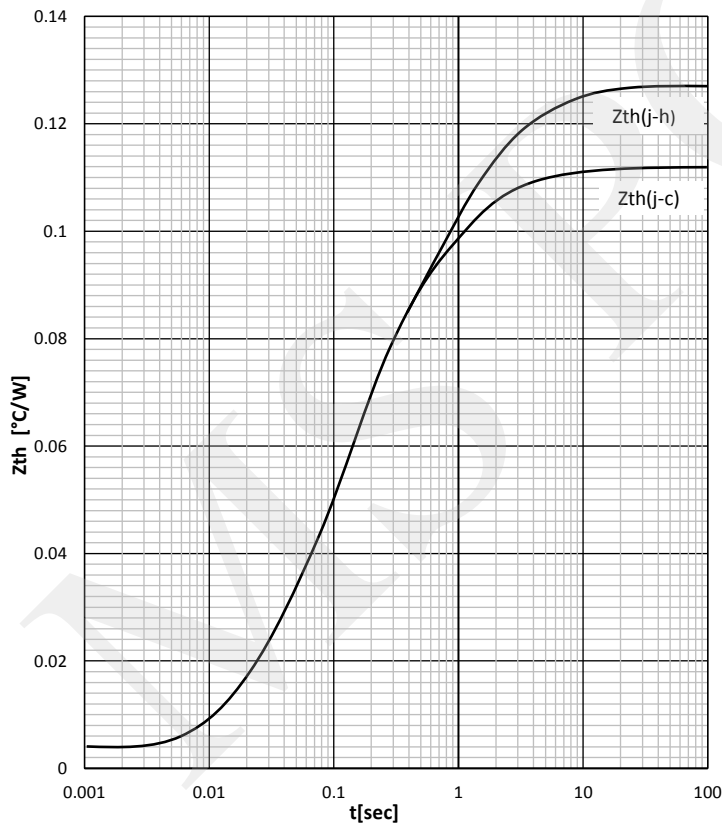
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

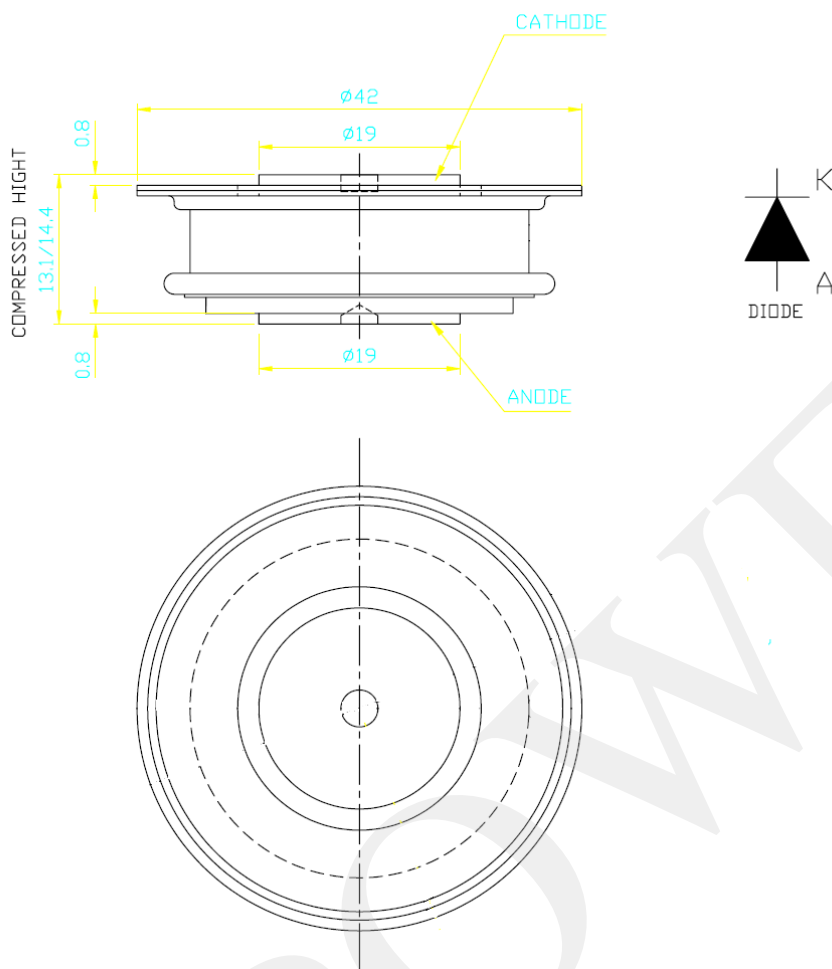


TRANSIENT THERMAL IMPEDANCE



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