



Key Parameters

V_{RRM}	= 2900V
$I_{F(AV)}$	= 1598A
I_{FSM}	= 19000A
$V_{F(TO)}$	= 0.85V
r_F	= 0.26mΩ

Features

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

Applications

- Traction Rectifiers
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting

Ordering Information

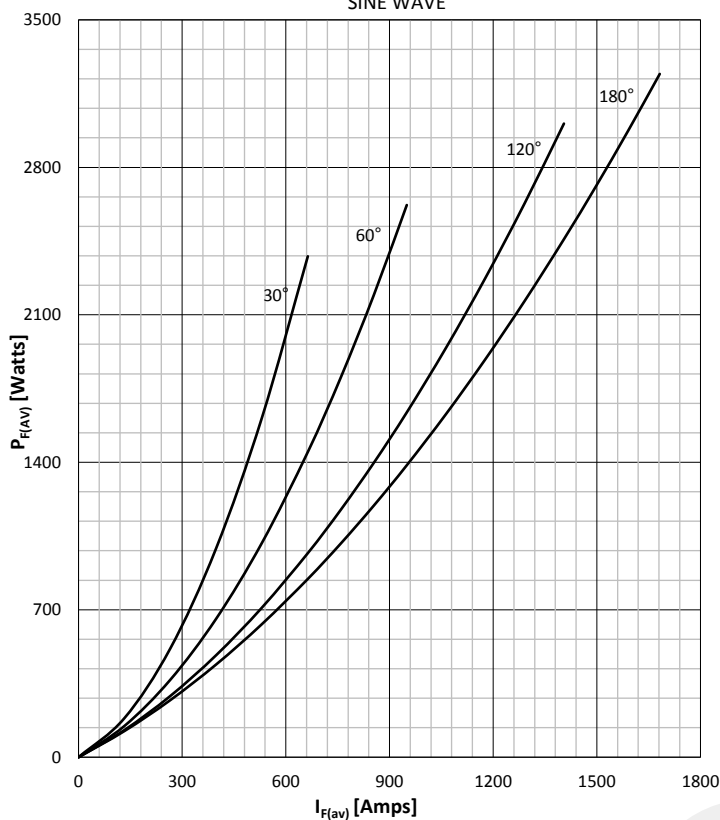
MS D	1598	C	XX
Rectifier Diode	Current code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = V_{RRM}
Order Code MS D1598C29 : 2900V V_{RRM} , Capsule Diode			

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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		175	2000 - 2900	V
V _{RSM}	Non-repetitive peak reverse voltage		175	2100 - 3000	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	175	50	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 =78°C , double side cooled		1598 1682	A
I _{FRMS}	RMS current	T _c =78°C , double side cooled		2641	A
I _{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	19000	A
			175	17900	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	1805 x 10 ³	A ² s
			175	1602 x 10 ³	A ² s
V _F	Forward voltage	On-state current = 1800A	25	1.30	V
V _{F(TO)}	Threshold voltage		175	0.85	V
r _F	Forward slope resistance		175	0.26	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, double side cooled		0.030	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		0.007	°C/W
T _j	Max. junction temperature			175	°C
T _{stg}	Storage temperature			-40 175	°C
M	Clamping force			12 - 15	KN
W	Weight (Approx.)			280	gm
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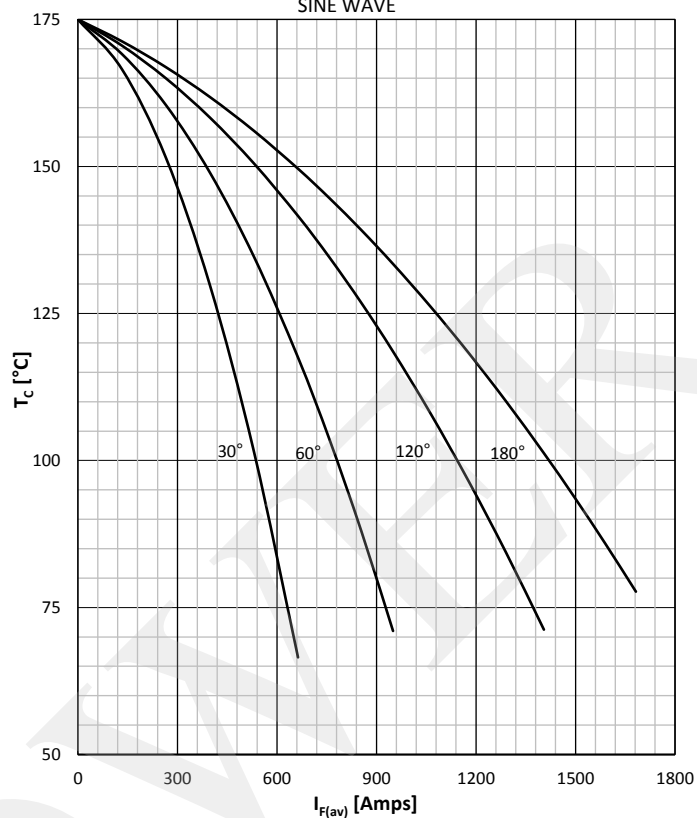
DISSIPATION CHARACTERISTICS

SINE WAVE



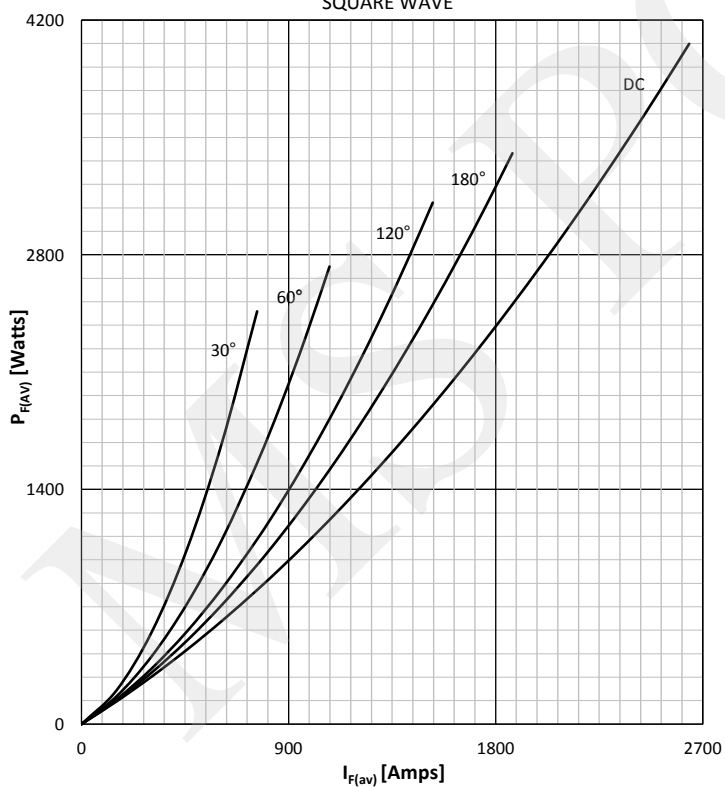
FORWARD CURRENT DERATING CURVE

SINE WAVE



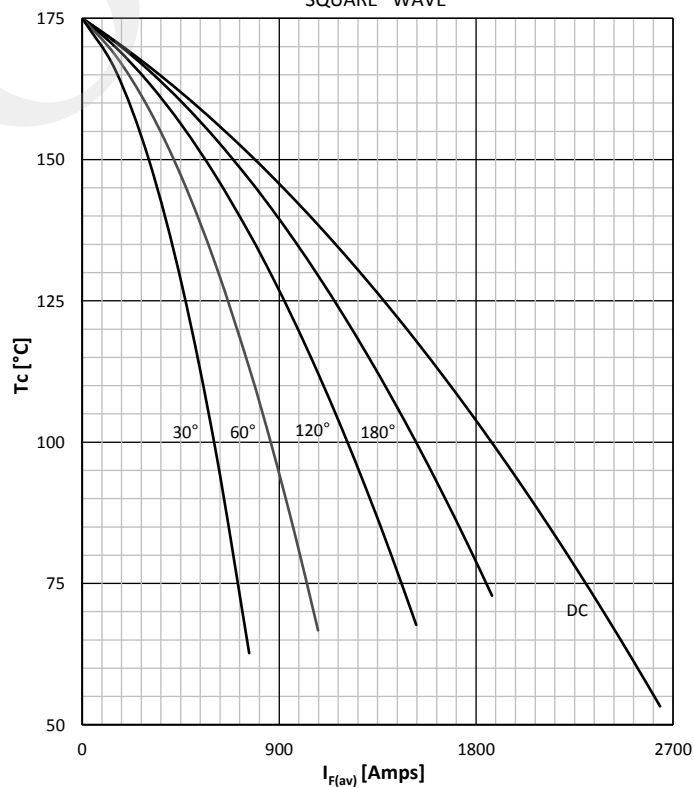
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



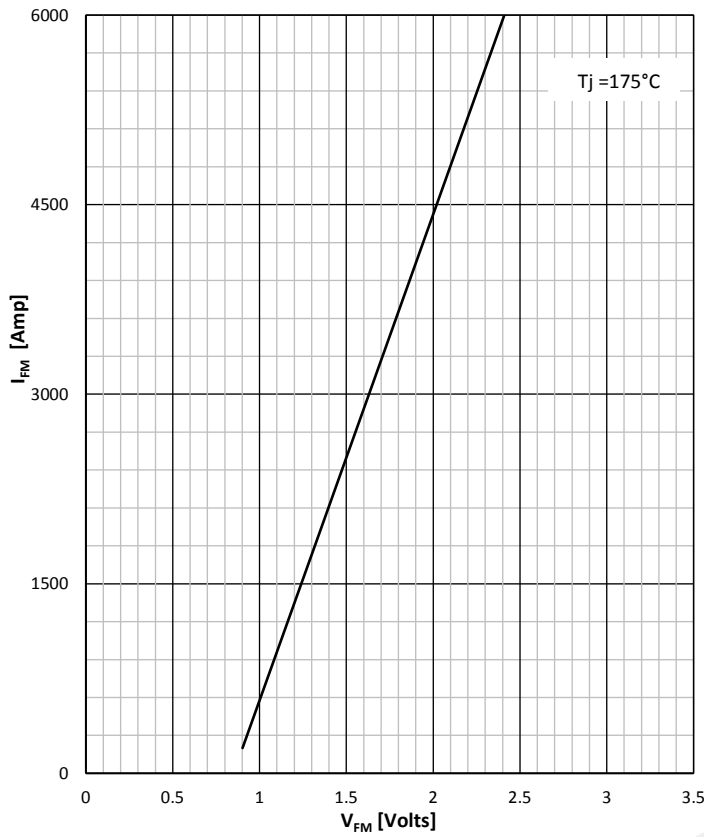
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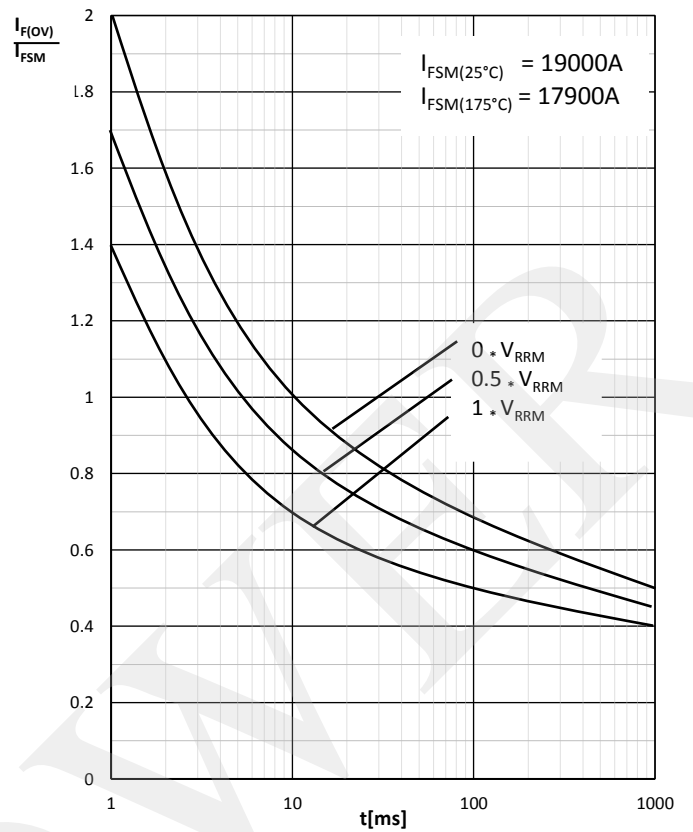
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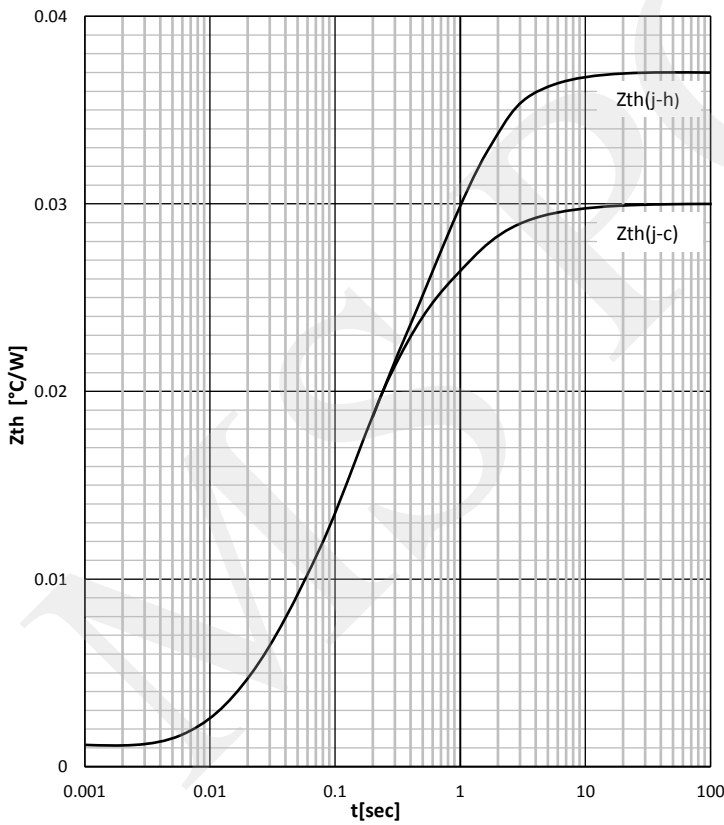
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

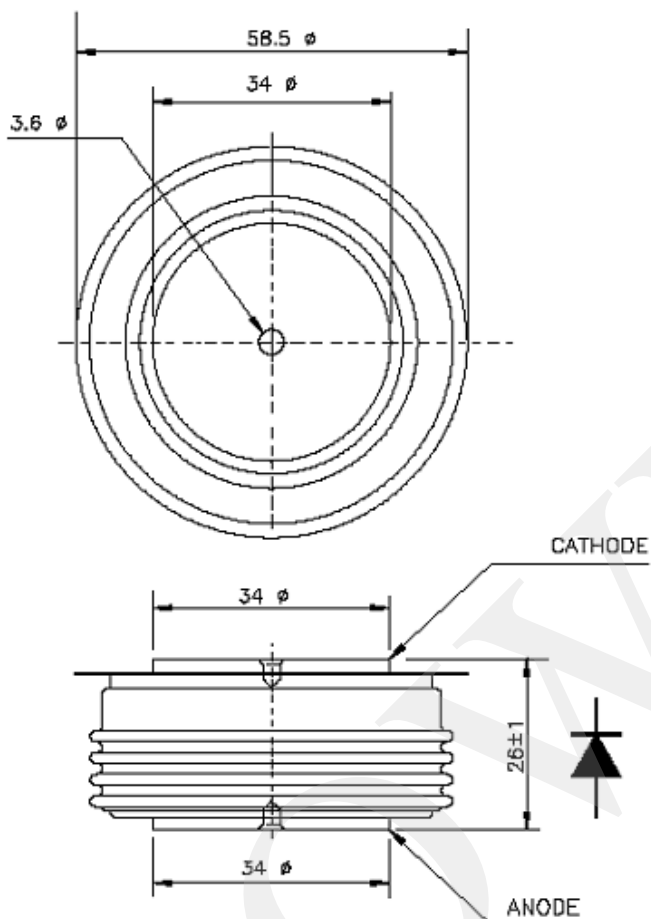


TRANSIENT THERMAL IMPEDANCE



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