



Key Parameters

V_{RRM}	= 1600V
$I_{F(AV)}$	= 300A
I_{FSM}	= 5600A
$V_{F(TO)}$	= 0.75V
r_F	= 0.40mΩ

Features

- Full blocking capability over wide temperature range
- Hermetic metal case with glass insulator
- Flat round base

Applications

- Power Supplies
- Uncontrolled Rectifiers
- Battery Chargers

Ordering Information

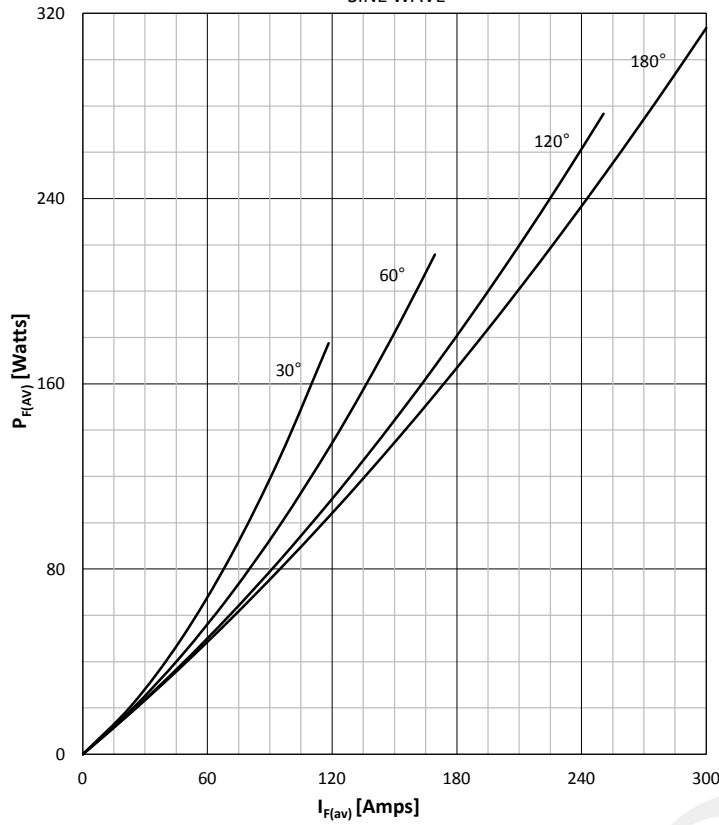
MS D	300	N	XX	M	B
Rectifier Diode	Current code	Polarity R= Base Anode N= Base Cathode	Voltage Code Code X 100 = V_{RRM}	M = Flat Base	Technology B = Solder Bond Technology
Order Code MS D300N16FB : 1600V V_{RRM} , Flat Base, Diode with base Cathode					

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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		180	200 - 1600	V
V _{RSM}	Non-repetitive peak reverse voltage		180	300 - 1700	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	180	40	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, T _c =130°C		300	A
I _{FRMS}	RMS current			471	A
I _{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	5600	A
			180	5200	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	157 x 10 ³	A ² s
			180	135 x 10 ³	A ² s
V _F	Forward voltage	On-state current = 1000A	180	1.20	V
V _{F(TO)}	Threshold voltage		180	0.75	V
r _F	Forward slope resistance		180	0.40	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case		0.16	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink		0.05	°C/W
T _j	Max. junction temperature			180	°C
T _{stg}	Storage temperature			-40 180	°C
M	Mounting torque			18	NM
W	Weight (Approx.)			250	gm
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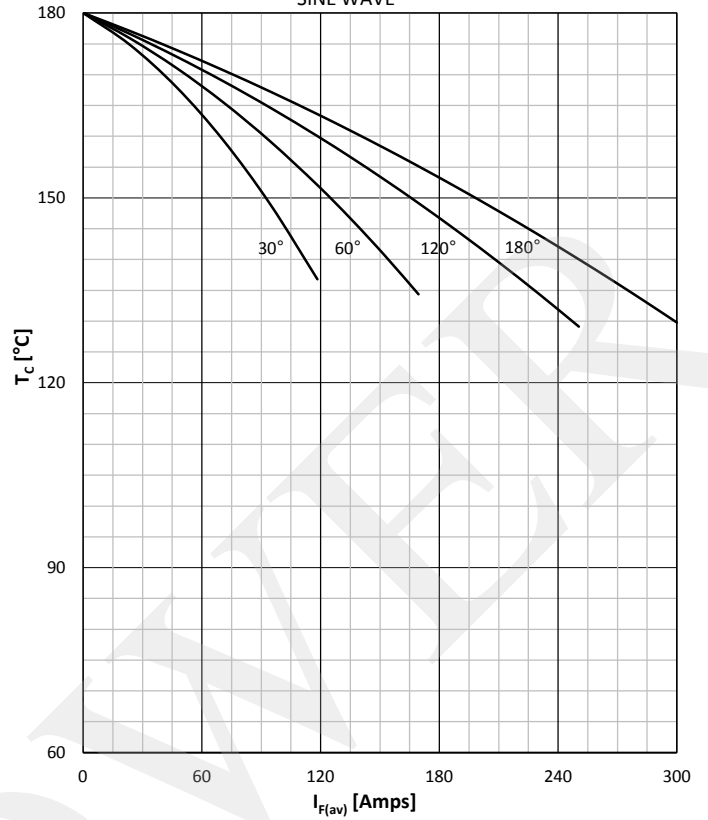
DISSIPATION CHARACTERISTICS

SINE WAVE



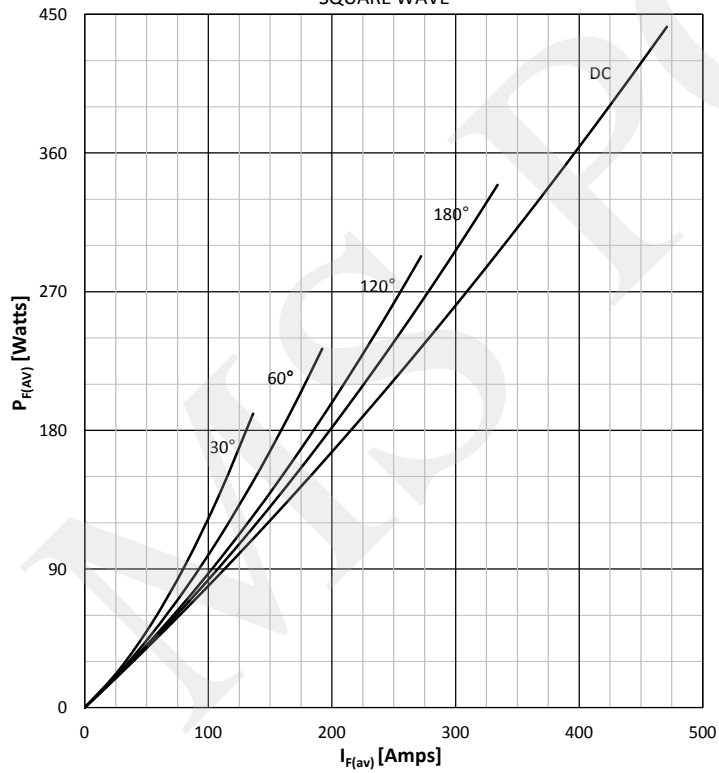
FORWARD CURRENT DERATING CURVE

SINE WAVE



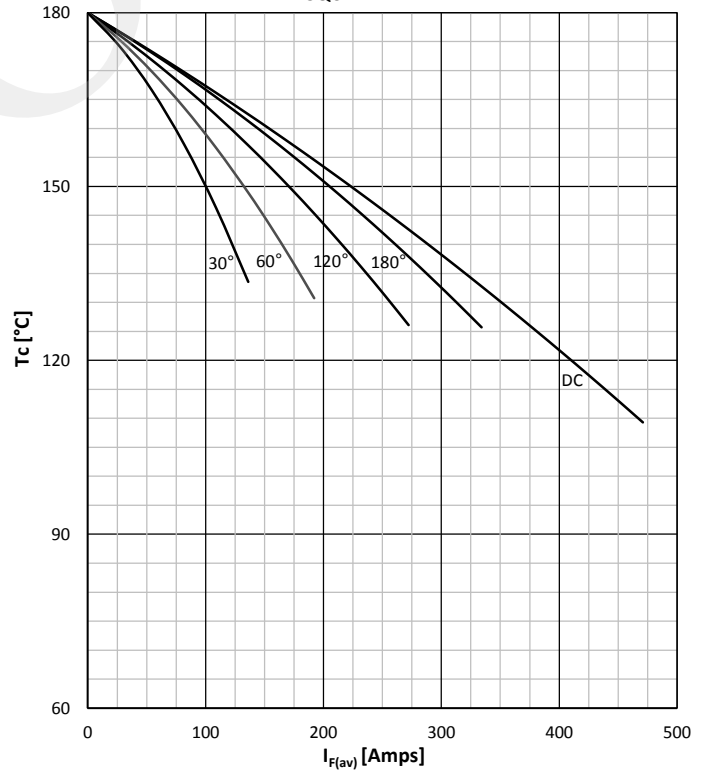
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



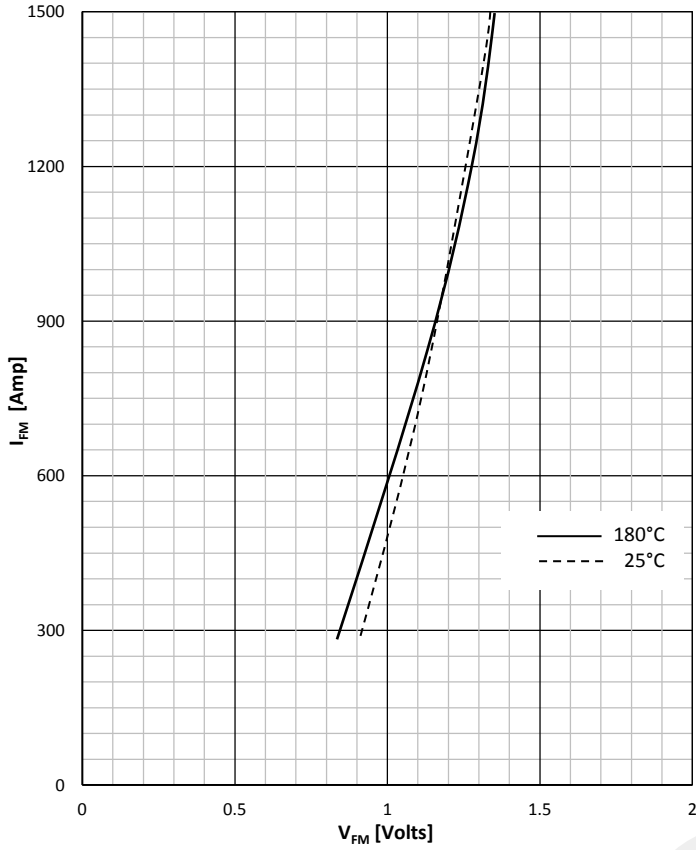
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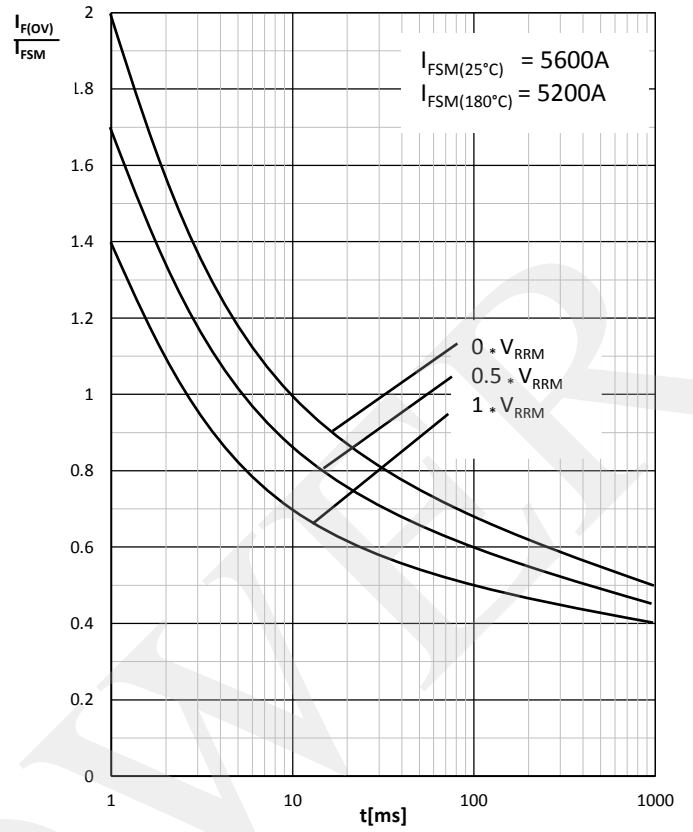
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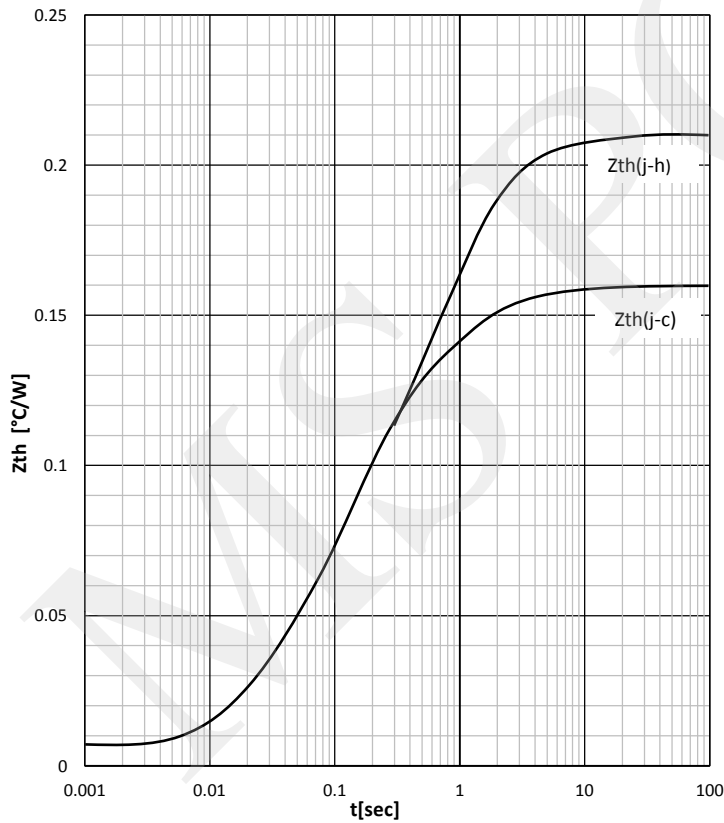
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

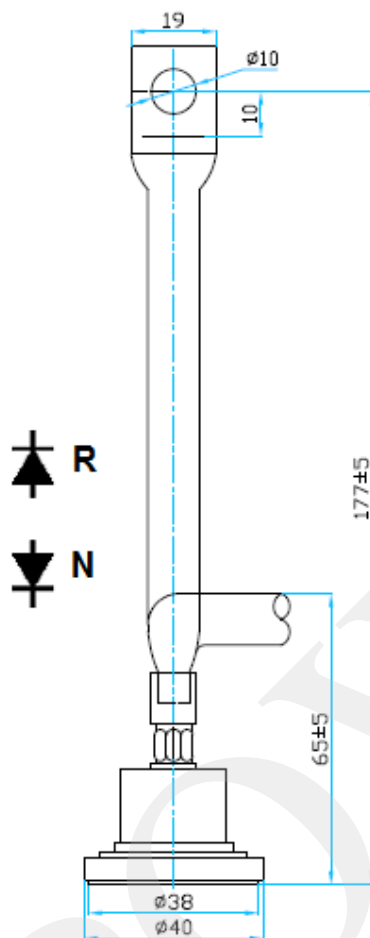


TRANSIENT THERMAL IMPEDANCE



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Outline



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