

Key Parameters

V_{RRM}	= 1600V
$I_{F(AV)}$	= 85A
I_{FSM}	= 1800A
$V_{F(TO)}$	= 0.75V
r_F	= 1.5mΩ



Features

- Full blocking capability over wide temperature range
- Hermetic metal case with glass insulator
- Threaded stud

Applications

- Power Supplies
- Uncontrolled Rectifiers
- Battery Chargers

Ordering Information

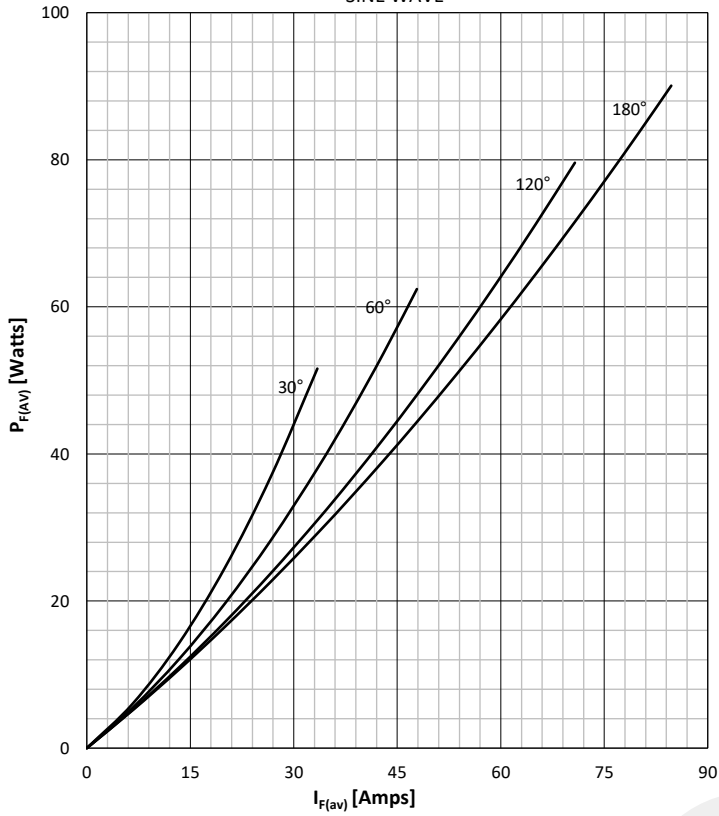
MS D	83	N	X X	M	B
Rectifier Diode	Current code	Polarity R= Stud Anode N= Stud Cathode	Voltage Code Code X 100 = V_{RRM}	Stud Threads M = Stud M8 X 1.25 U = 1/4" UNF	Technology B = Solder Bond Technology
Order Code MS D83N16MB : 1600V V_{RRM} , Metric Stud, Diode with stud Cathode					

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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	10	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, T _c =140°C		85	A
I _{FRMS}	RMS current	T _c =140°C		133	A
I _{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	1800	A
			180	1700	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	16200	A ² s
			180	14450	A ² s
V _F	Forward voltage	On-state current = 250A	180	1.20	V
V _{F(TO)}	Threshold voltage		180	0.75	V
r _F	Forward slope resistance		180	1.5	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case		0.35	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink		0.15	°C/W
T _j	Max. junction temperature			180	°C
T _{stg}	Storage temperature			-40 180	°C
M	Mounting torque			4	NM
W	Weight (Approx.)			40	gm
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DISSIPATION CHARACTERISTICS

SINE WAVE



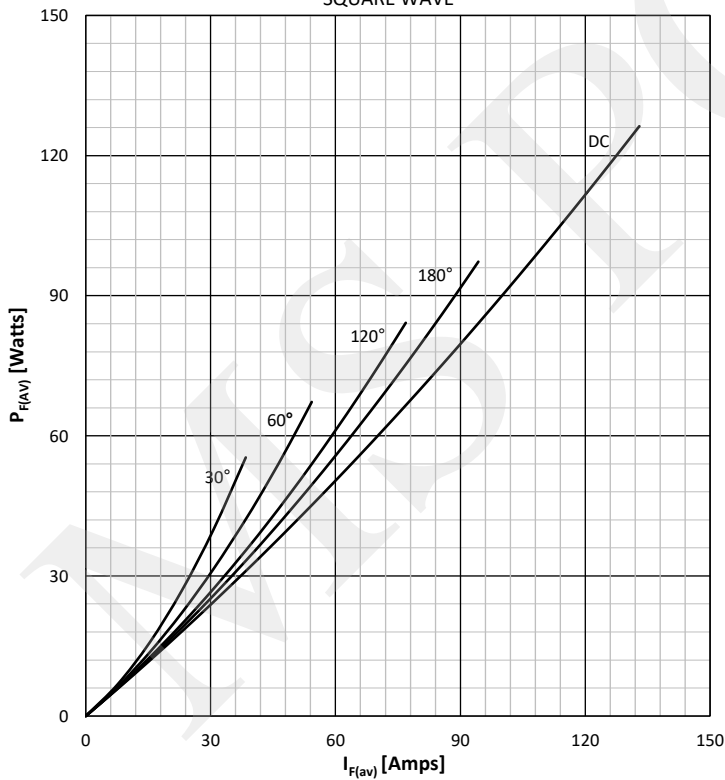
FORWARD CURRENT DERATING CURVE

SINE WAVE



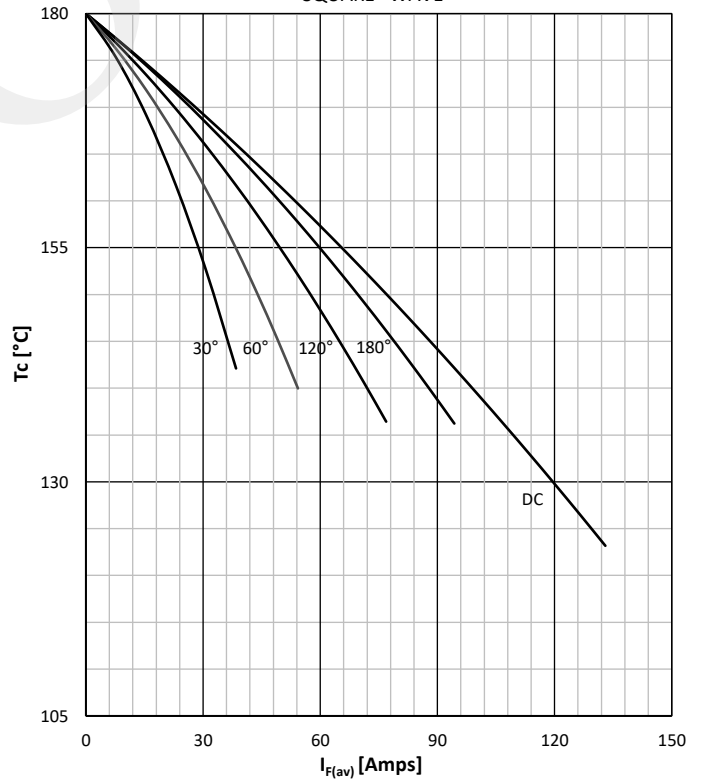
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

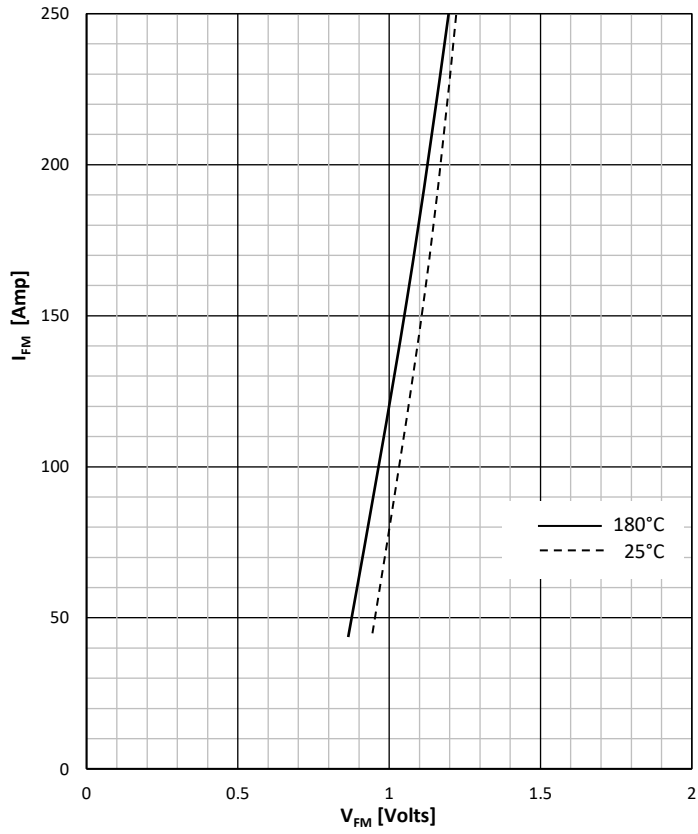
SQUARE WAVE



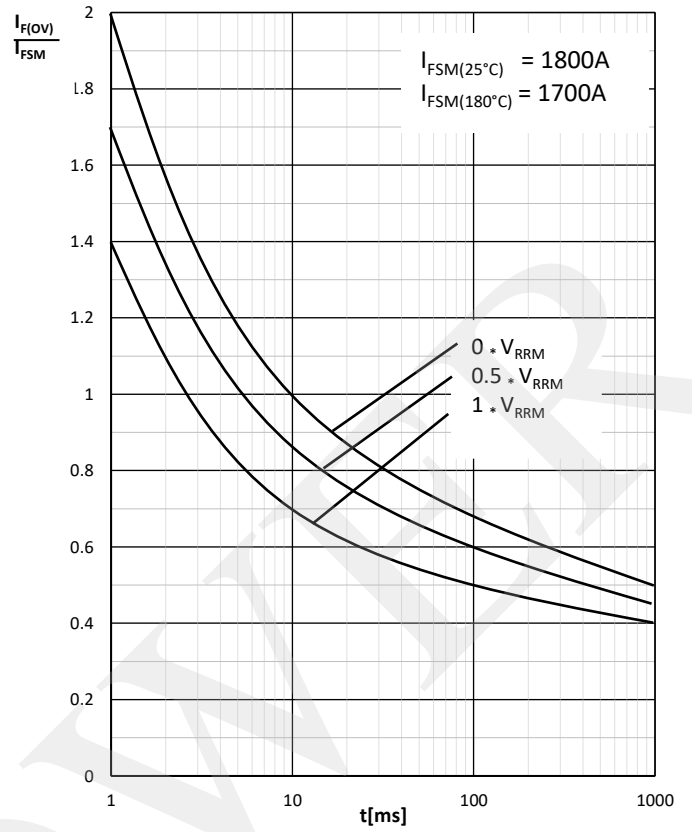
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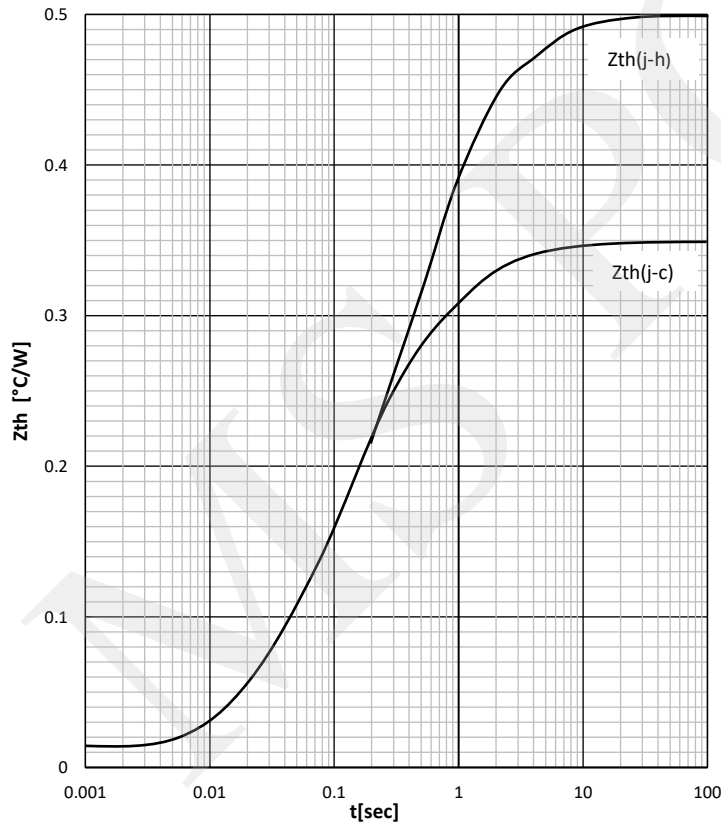
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

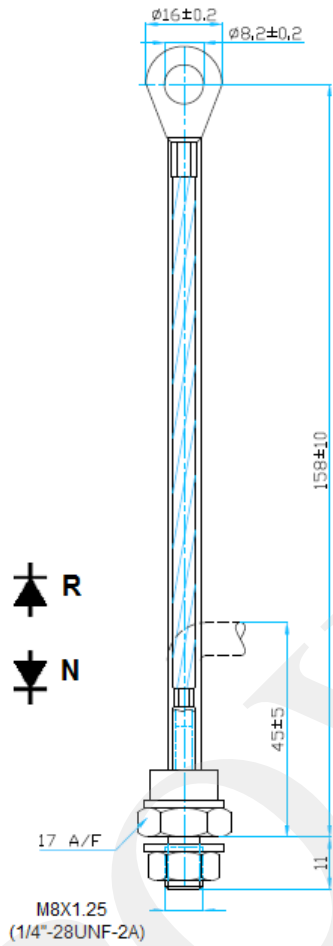


TRANSIENT THERMAL IMPEDANCE



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Outline



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