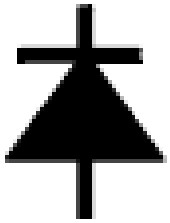
MS D844



Key Parameters

V_{RRM}	= 2700V
$I_{F(AV)}$	= 840A
I_{FSM}	= 21000A
$V_{F(TO)}$	= 0.78V
r_F	= 0.25mΩ

Features

- Full blocking capability over wide temperature range
- Pressure contacts technology for high reliability

Applications

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

Ordering Information

MS D	844	N	X X	F	K
Rectifier Diode	Current code	Polarity R= Base Anode N= Base Cathode	Voltage Code Code X 100 = V_{RRM}	F = Flat Base	Technology K = Pressure Contact Technology
Order Code MS D844N27FK : 2700V V_{RRM}, Flat base, Diode with base Cathode					

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MS D844

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		175	2700	V
V_{RSM}	Non-repetitive peak reverse voltage		175	2800	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	25	0.5	mA
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	175	40	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, T_c=100°C		840	A
I_{FRMS}	RMS current	T_c=100°C		1319	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	21000	A
			175	20000	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	2205 x 10^3	A^2s
			175	2000 x 10^3	A^2s
V_F	Forward voltage	On-state current = 2500A	175	1.45	V
$V_{F(TO)}$	Threshold voltage		175	0.78	V
r_F	Forward slope resistance		175	0.25	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case		0.068	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink		0.02	°C/W
T_j	Max. junction temperature			175	°C
T_{stg}	Storage temperature			-40 175	°C
M	Mounting torque			20	NM
W	Weight (Approx.)			673 ± 5	gm

Note : Diode withstands acceleration of 4500g in rotating application

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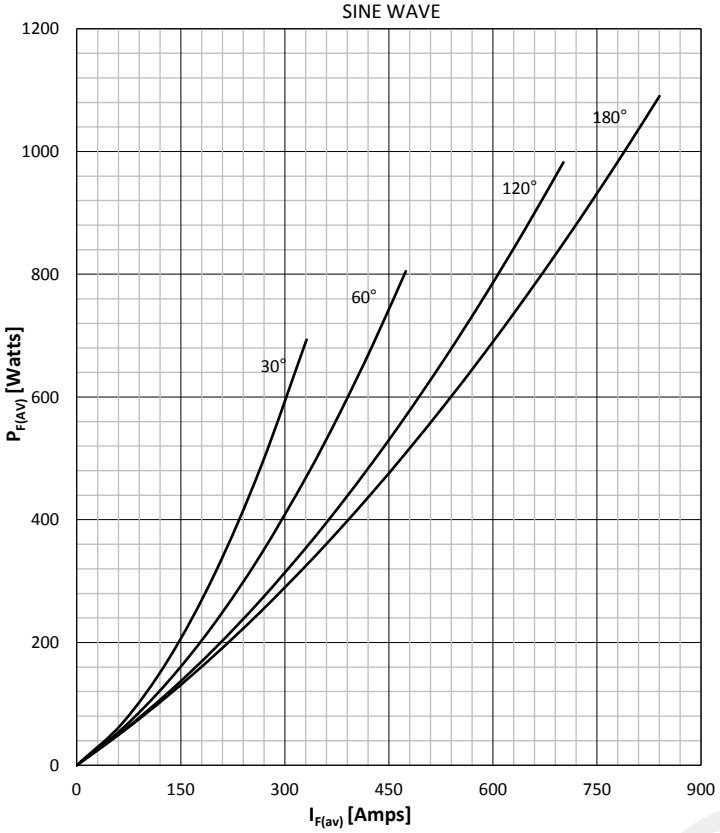
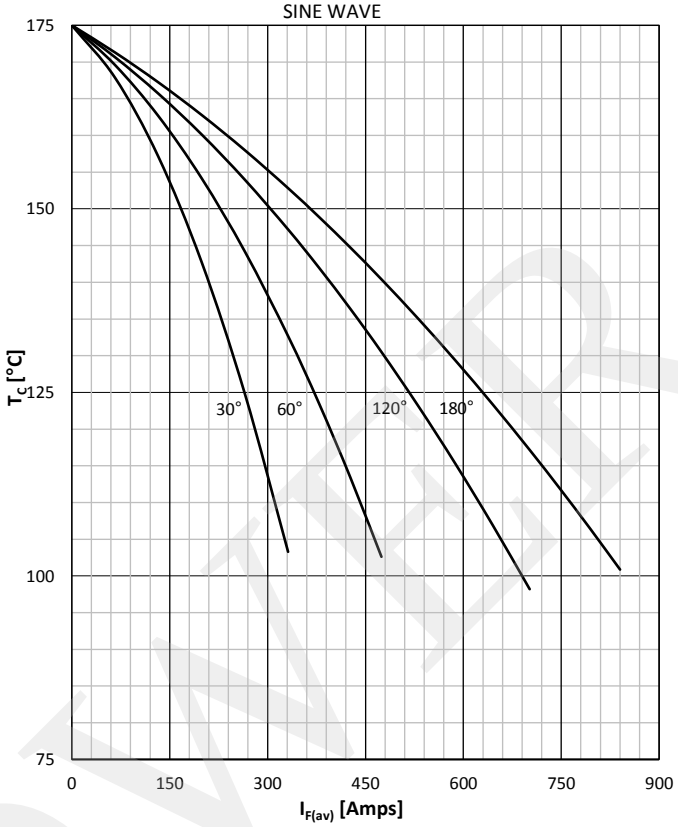
DISSIPATION CHARACTERISTICS

SINE WAVE



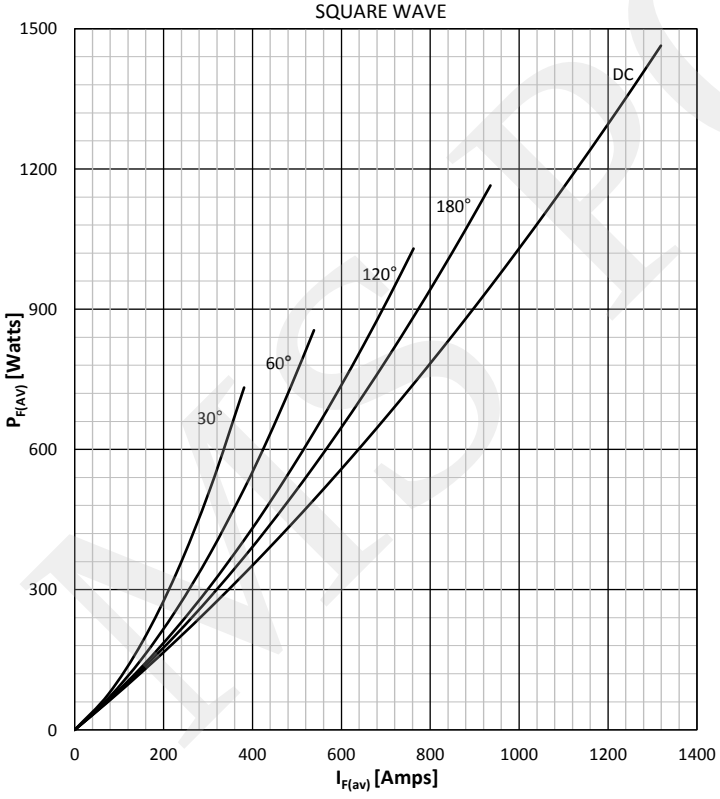
FORWARD CURRENT DERATING CURVE

SINE WAVE



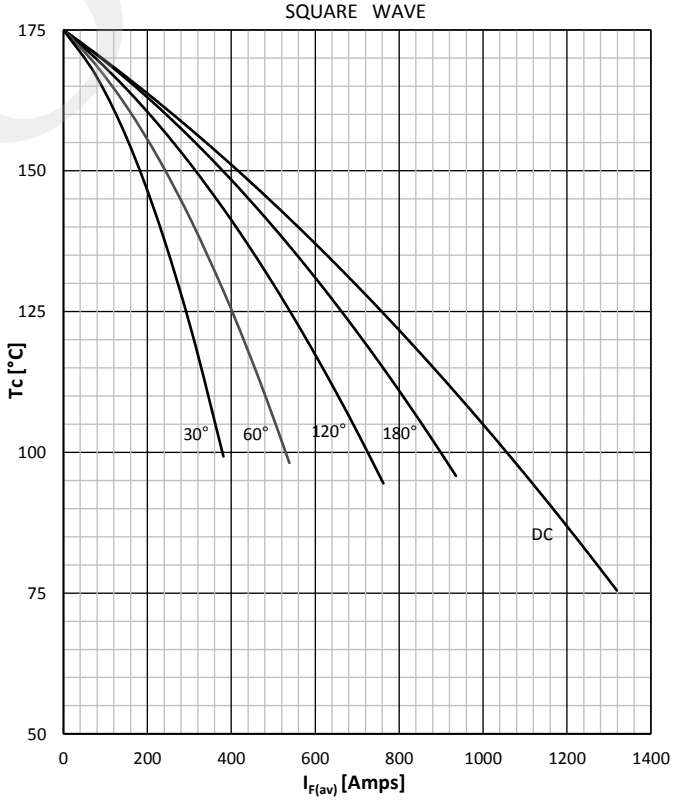
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



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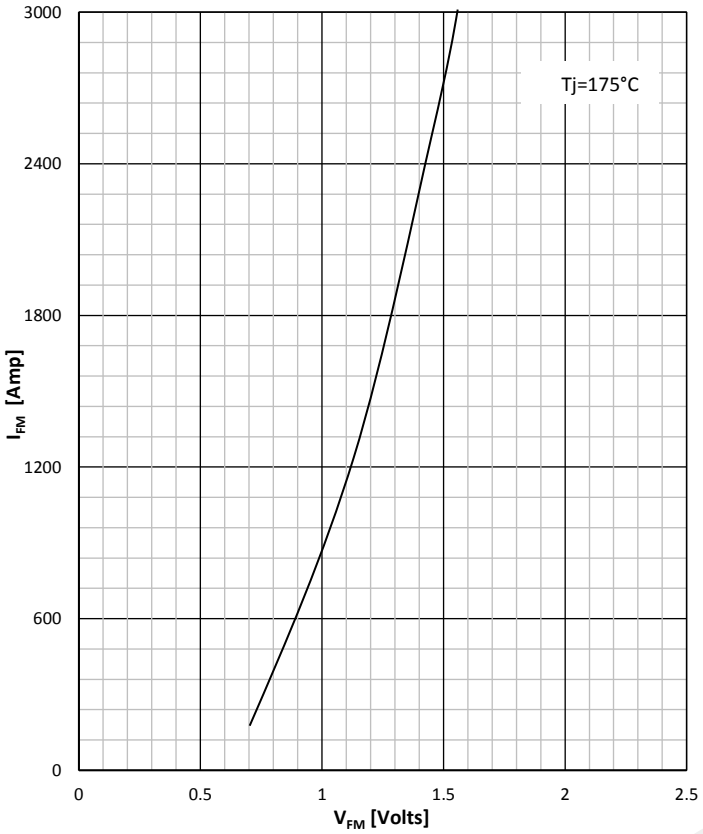
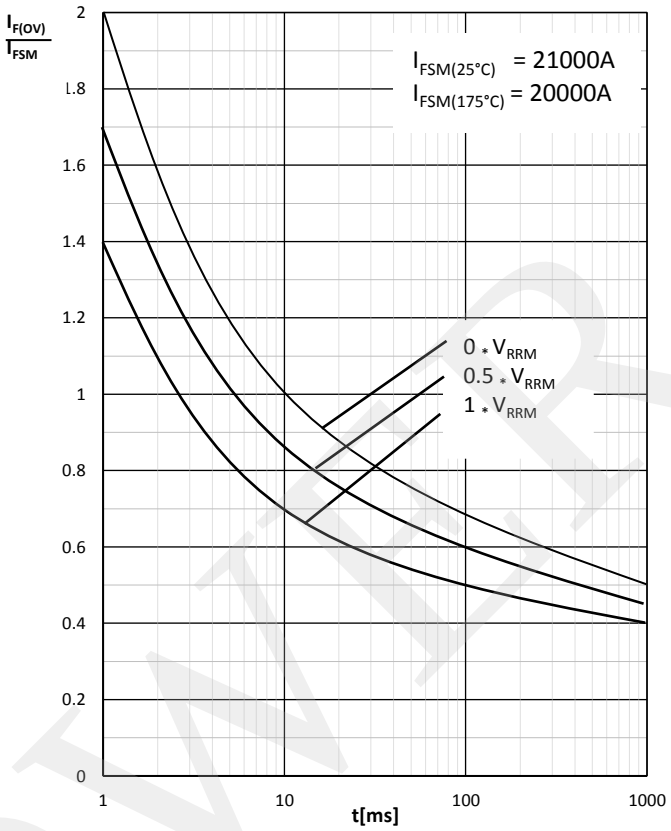
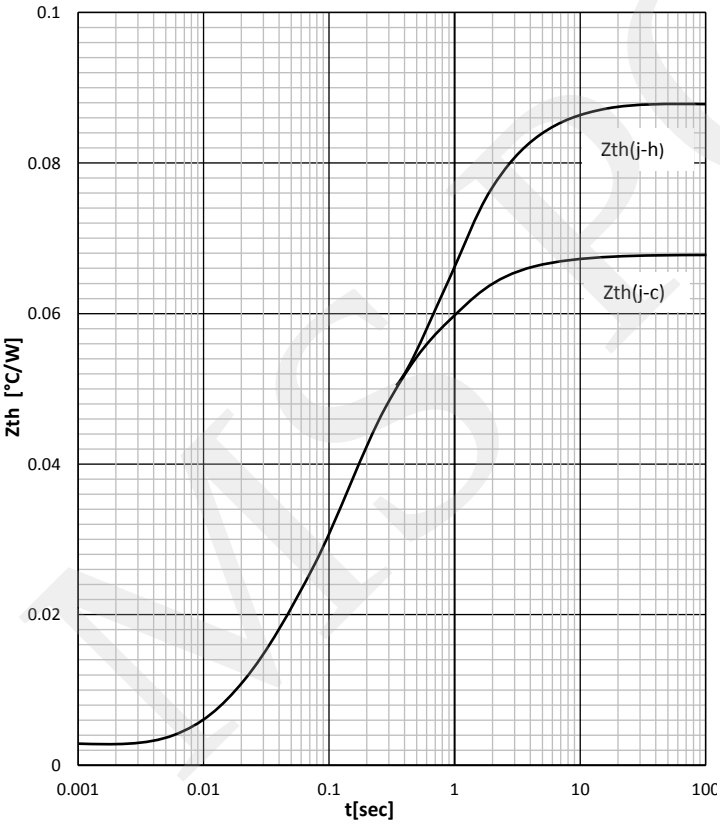
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



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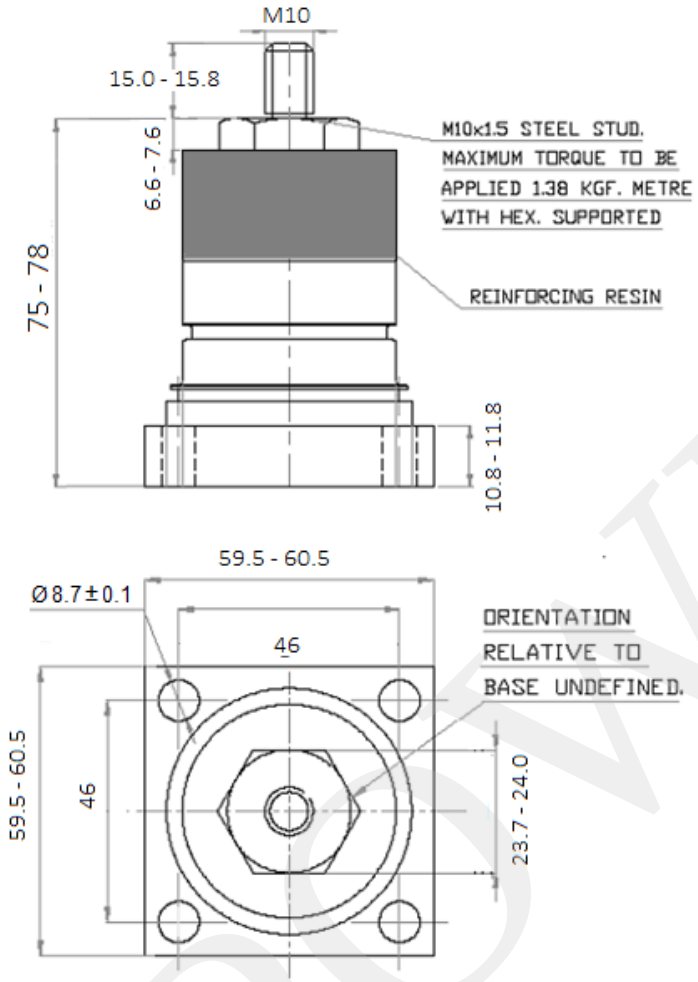
Outline



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