

Features

- Full blocking capability over wide temperature range
- Electrically insulated base plate
- Pressure contacts technology for high reliability

Key Parameters

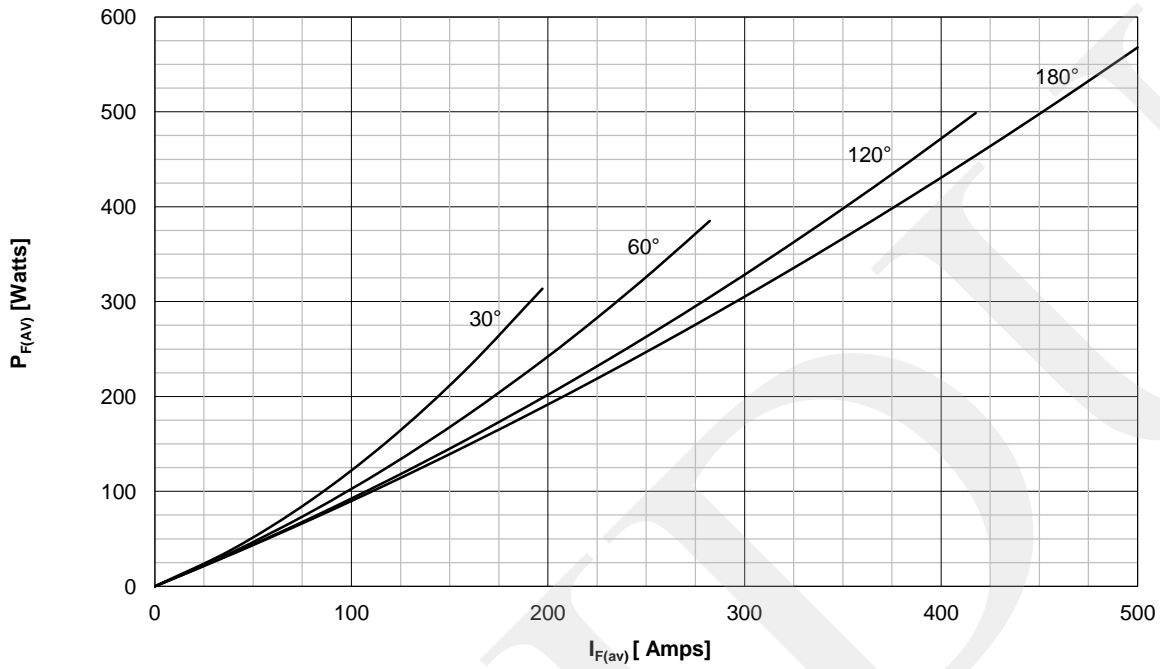
V_{RRM}	= 1800V
$I_{F(AV)}$	= 500A
I_{FSM}	= 15kA
$V_{F(TO)}$	= 0.84V
r_F	= 0.24mΩ

Applications

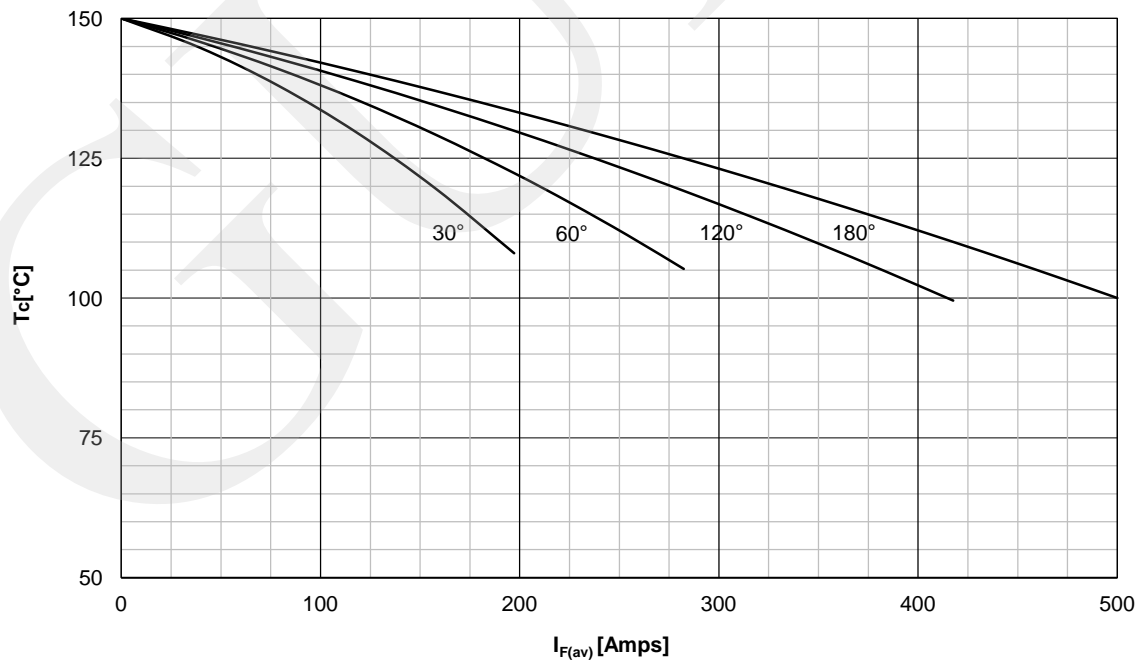
- Power Supplies
- Field supply for DC motors
- Uncontrolled Rectifiers

Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		150	200 - 1800	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	150	40	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, T _{CASE} =100°C		500	A
I_{FRMS}	RMS forward current			785	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	15000	A
			150	14000	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	1125 x 10 ³	A ² s
			150	980 x 10 ³	A ² s
V_F	Forward voltage	Forward current = 1500 A	25	1.35	V
$V_{F(TO)}$	Threshold voltage		150	0.84	V
r_F	Forward slope resistance		150	0.24	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, per arm per module		0.088 0.044	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per arm per module		0.030 0.015	°C/W
T_j	Max. junction temperature			150	°C
T_{stg}	Storage temperature			-40 150	°C
V_{ISOL}	Insulation test voltage,RMS	F=50Hz, 1min		2.5	KV
M1	Mounting torque			6 ± 15%	Nm
M2	Terminal connection torque			12 ± 10%	Nm
	Weight (Approx.)			1450	g

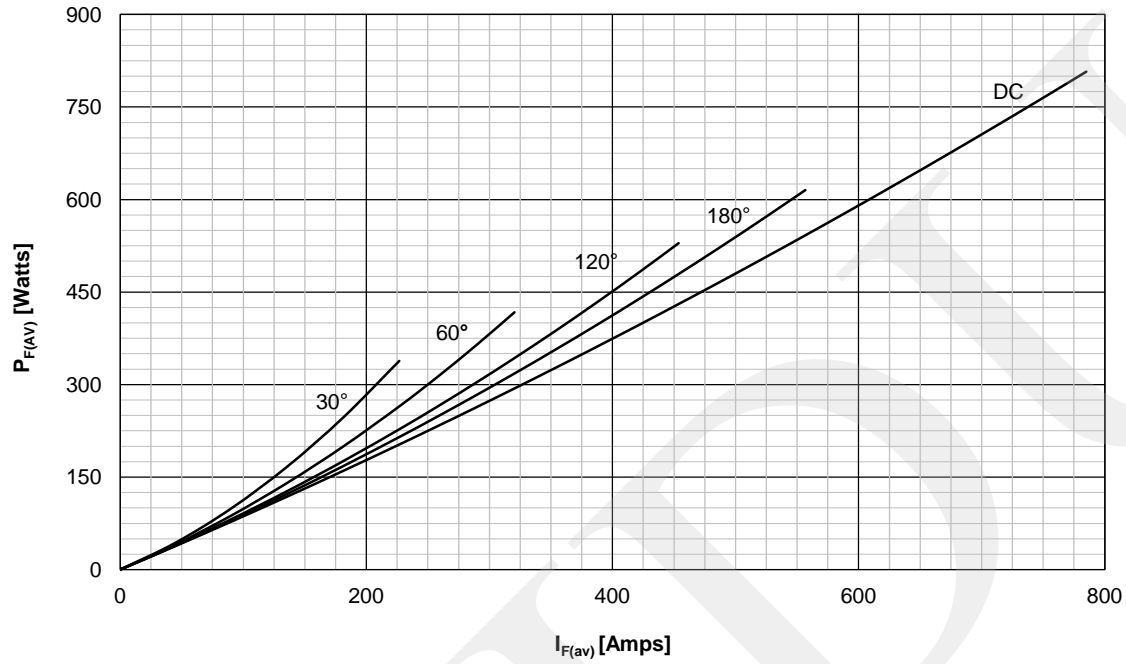
DISSIPATION CHARACTERISTICS PER ARM
SINE WAVE



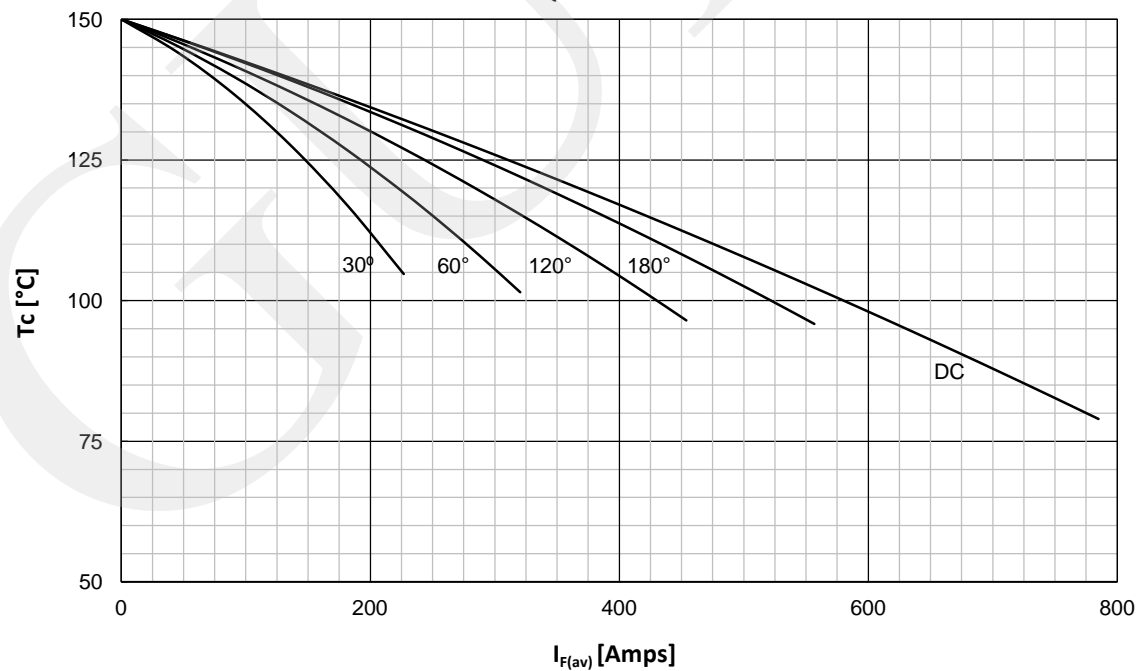
FORWARD CURRENT DERATING CURVE PER ARM
SINE WAVE



DISSIPATION CHARACTERISTICS PER ARM
SQUARE WAVE

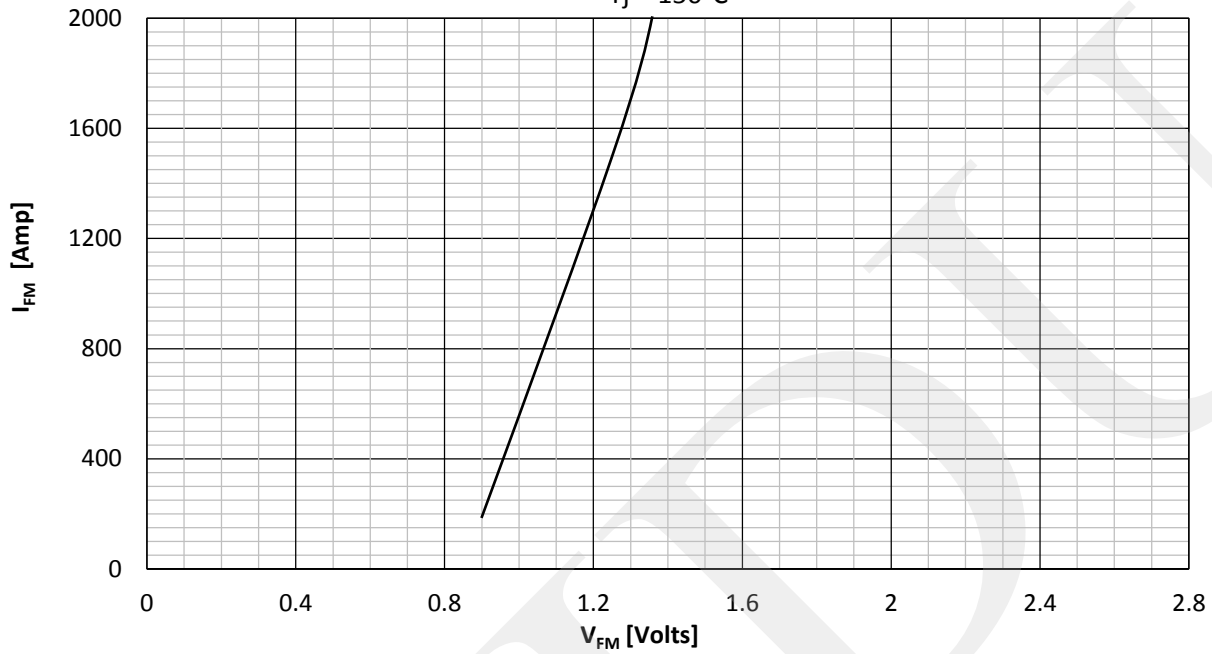


FORWARD CURRENT DERATING CURVE PER ARM
SQUARE WAVE

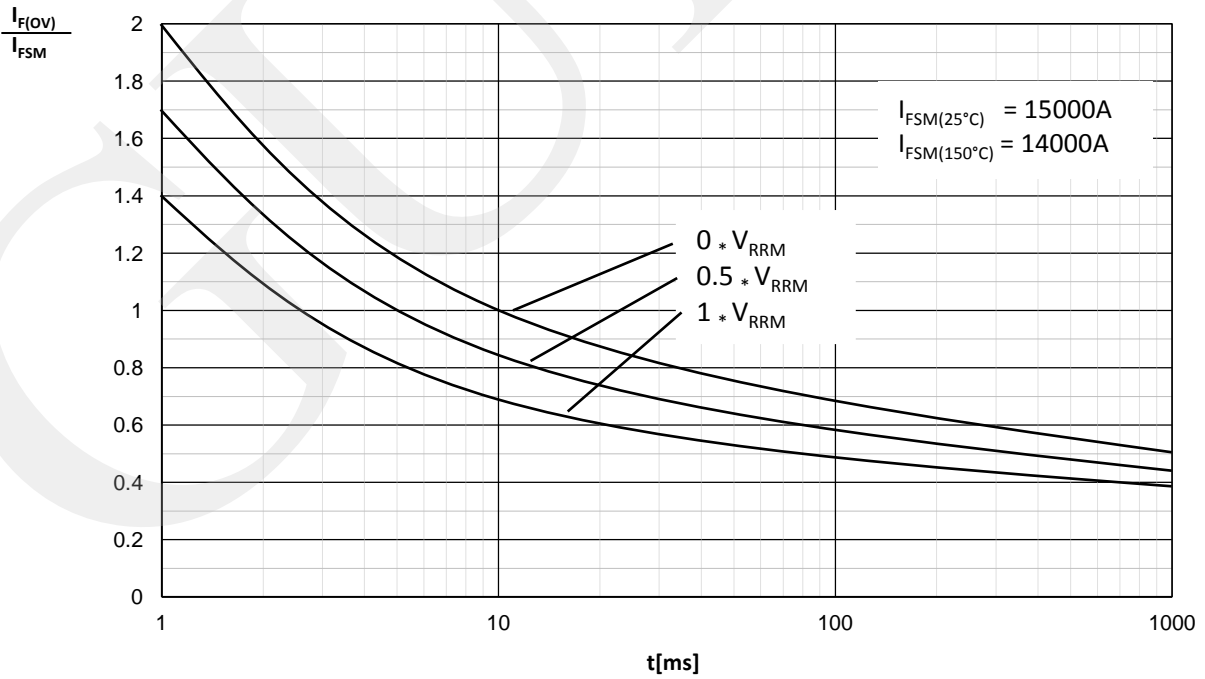


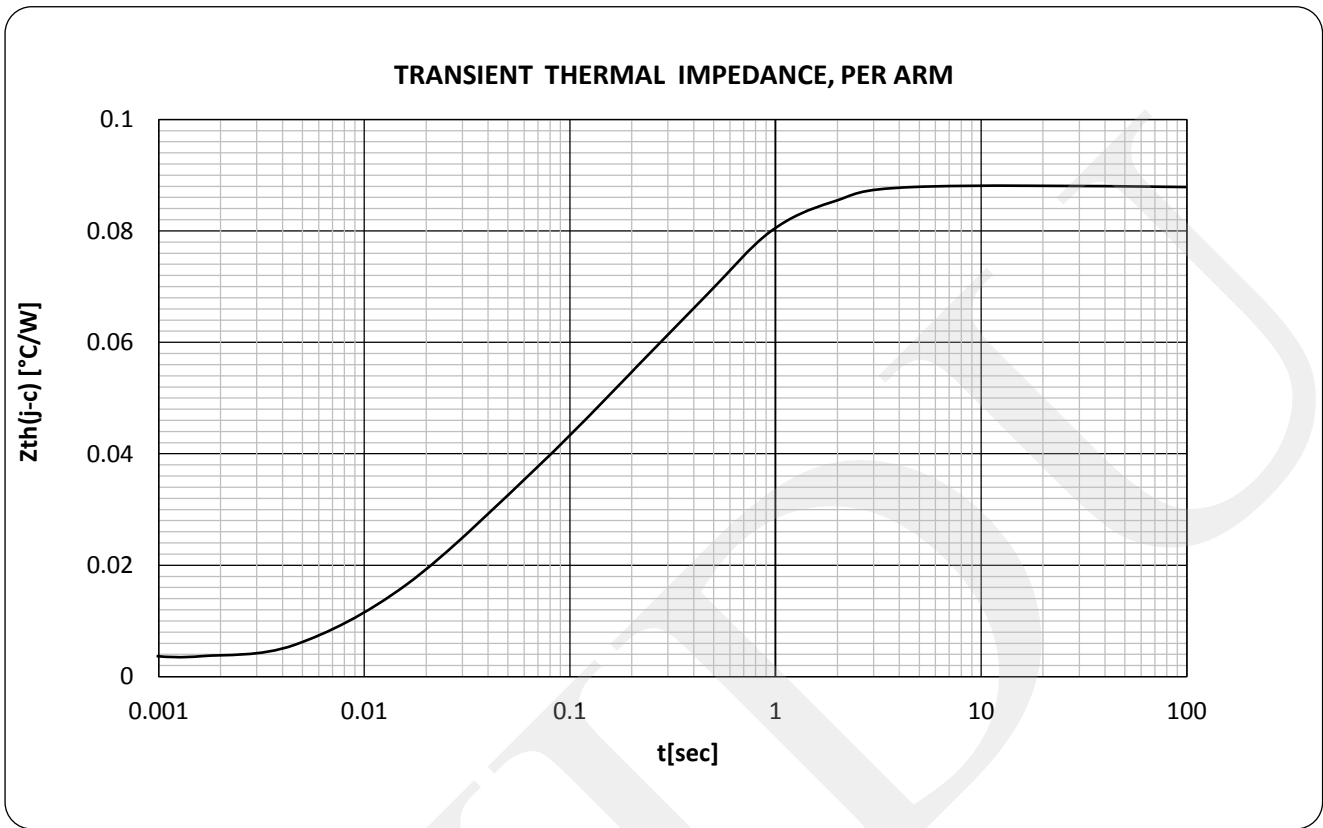
FORWARD CHARACTERISTICS

$T_j = 150^\circ\text{C}$



SURGE CHARACTERISTICS





ORDERING INFORMATION

GD	DD	500	- X X
Fixed code	DD- Diode- Diode Module	Current Code	Voltage Code Code X 100 = V _{RRM}

Order Code GDDD500-18 : 1800V V_{RRM1} Diode-Diode Module

Outline

