

Features

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

Key Parameters

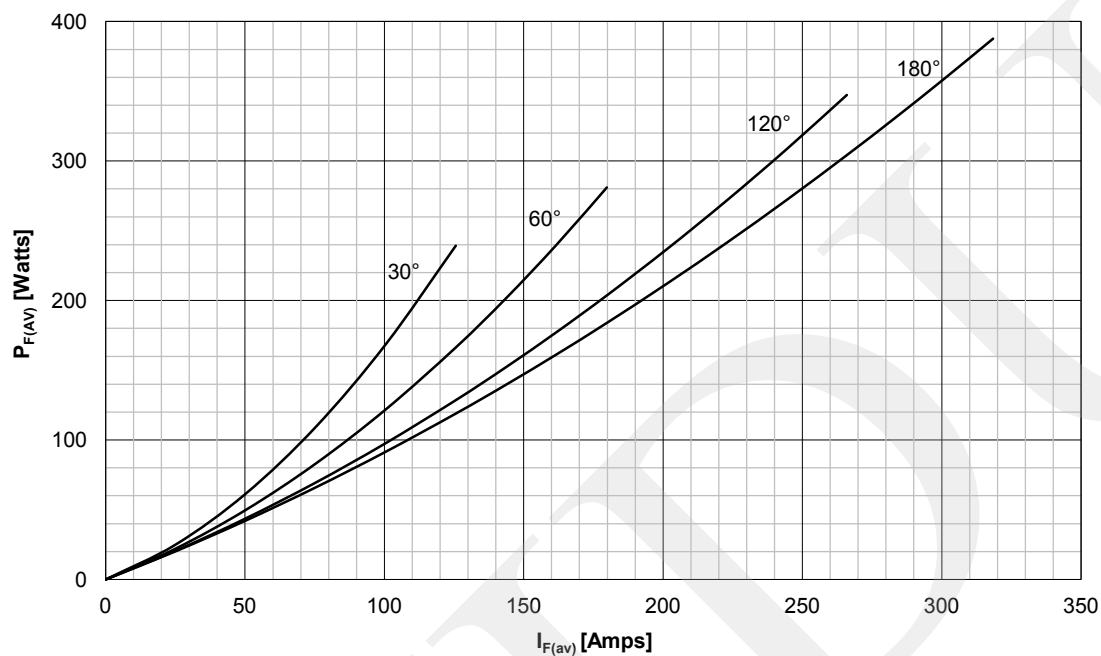
V_{RRM}	= 1600V
$I_{F(AV)}$	= 320A
I_{FSM}	= 7500A
$V_{F(TO)}$	= 0.77V
r_F	= 0.57mΩ

Applications

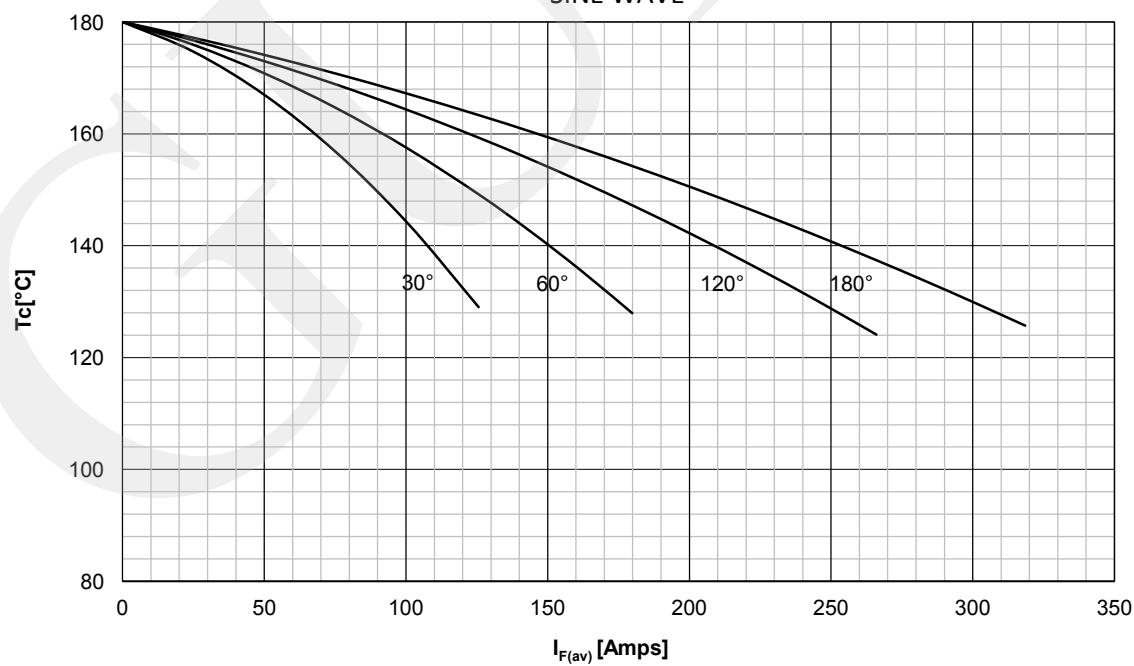
- Power Supplies
- Free-wheeling Diodes
- Uncontrolled Rectifiers

Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		180	200 - 1600	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	180	30	mA
CONDUCTING					
$I_{F(AV)}$	Mean Forward current	180° sin ,50 Hz, T _c =125°C		320	A
I_{FRMS}	RMS Forward current			500	A
I_{FSM}	Surge Forward current	Sine wave, 10 ms Without reverse voltage	25	7500	A
			180	6500	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	281 x 10 ³	A ² s
			180	211 x 10 ³	A ² s
V_F	Peak Forward voltage	Peak forward current = 1000A	180	1.35	V
$V_{F(TO)}$	Threshold voltage		180	0.77	V
r_F	Forward slope resistance		180	0.57	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case		0.14	°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			26	NM
W	Weight (Approx.)			250	gm

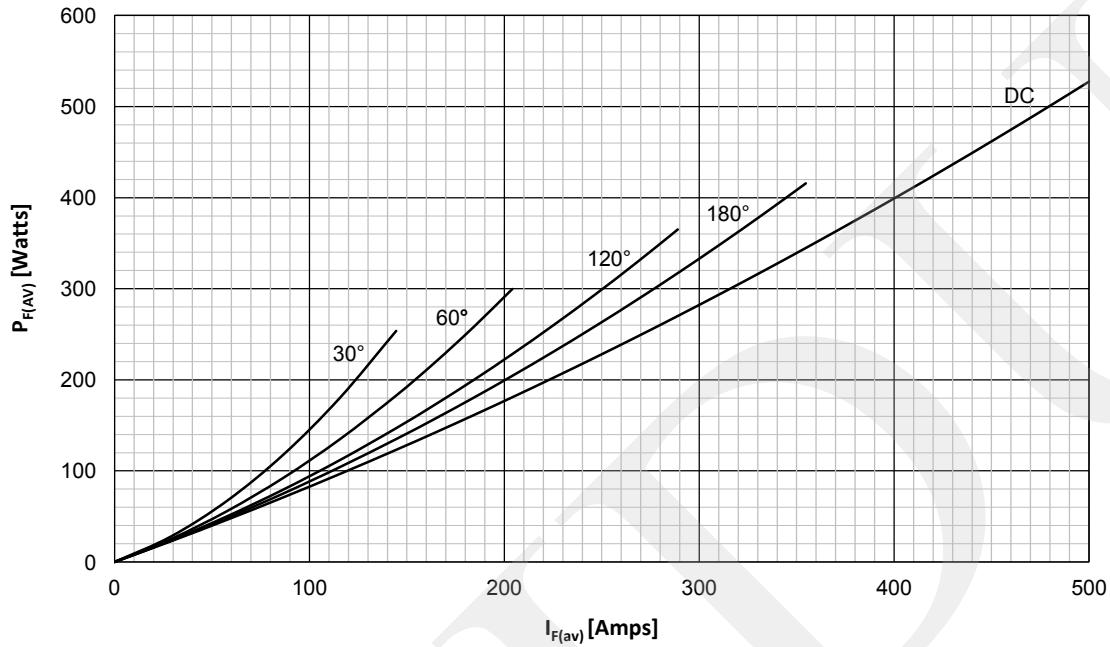
DISSIPATION CHARACTERISTICS
SINE WAVE



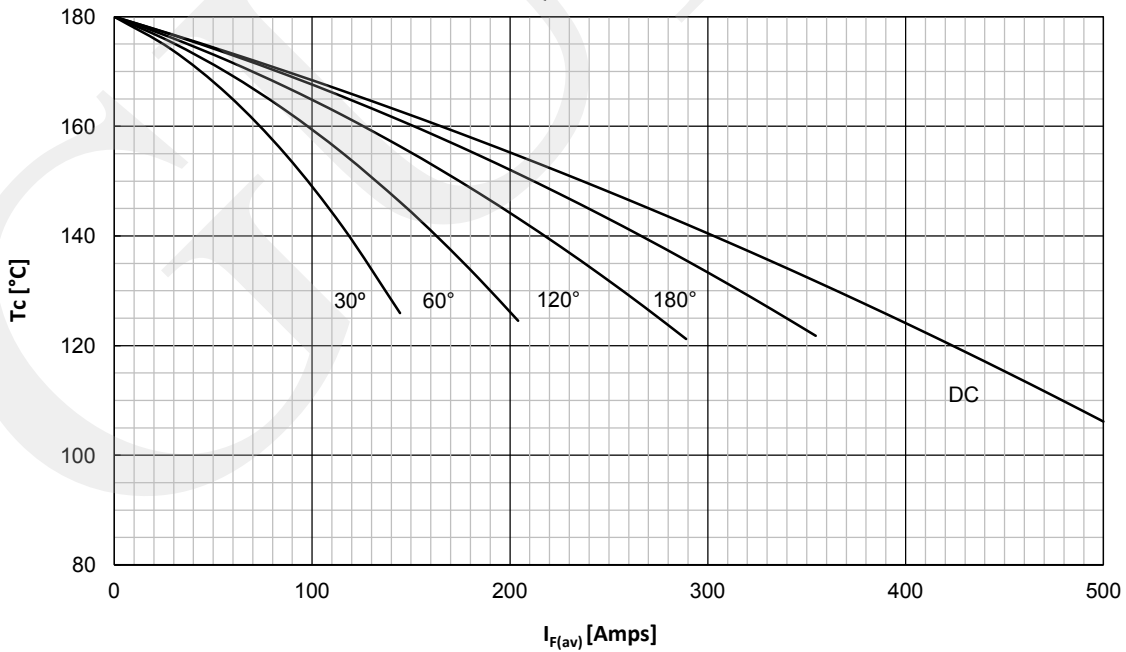
FORWARD CURRENT DERATING CURVE
SINE WAVE



DISSIPATION CHARACTERISTICS
SQUARE WAVE

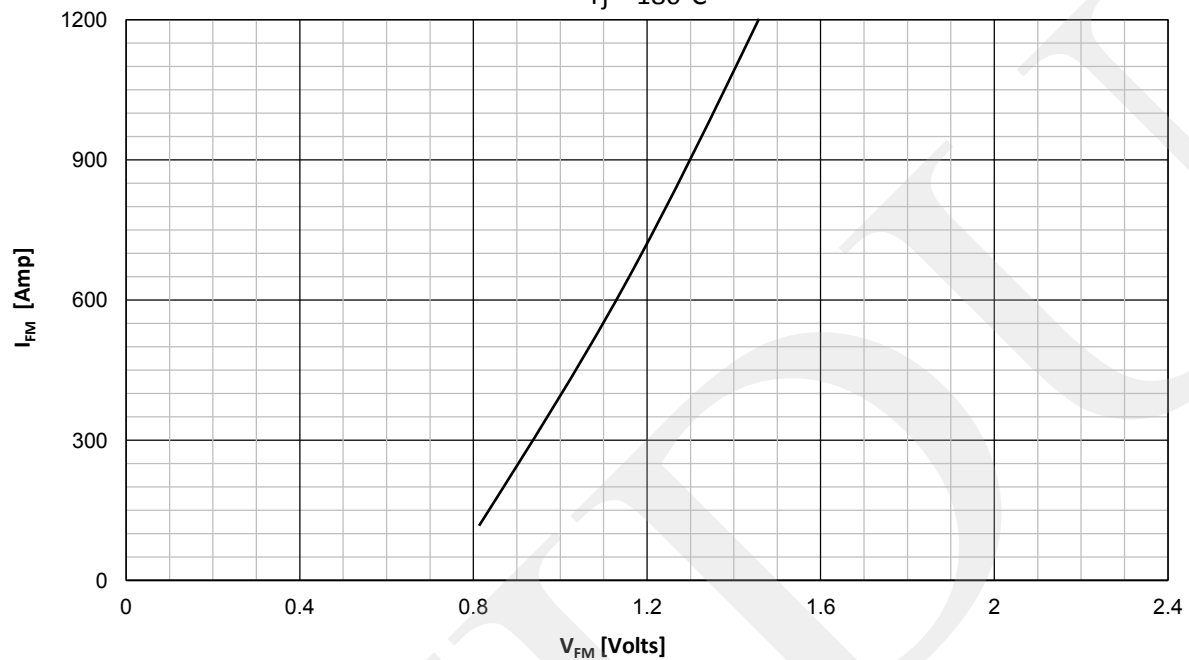


FORWARD CURRENT DERATING CURVE
SQUARE WAVE

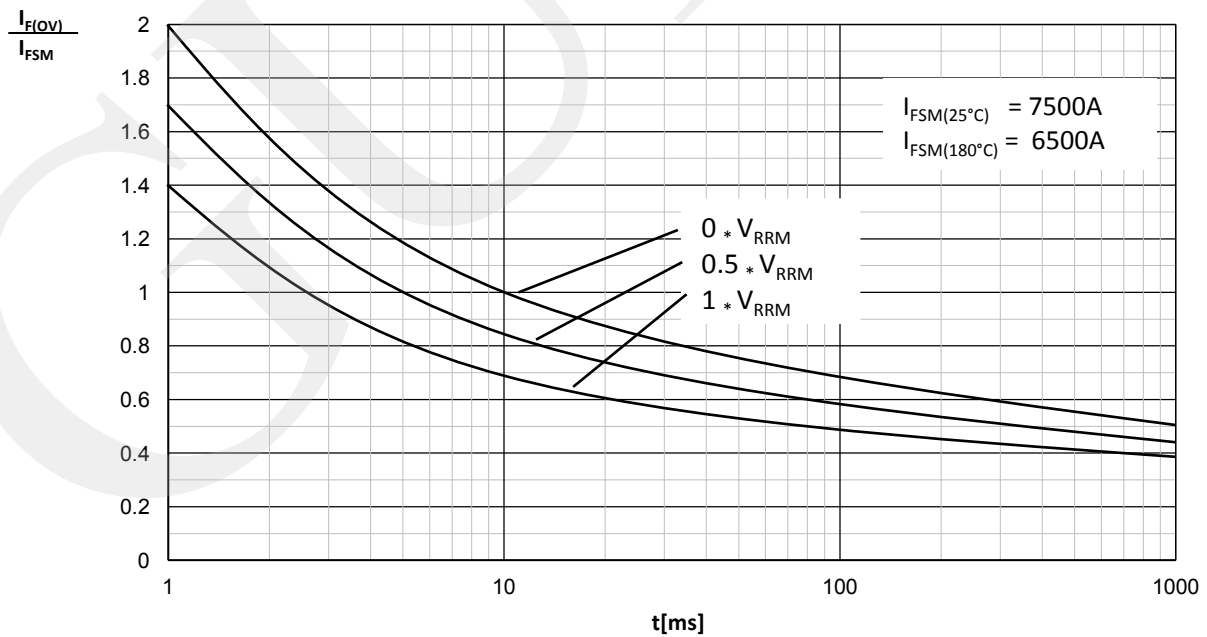


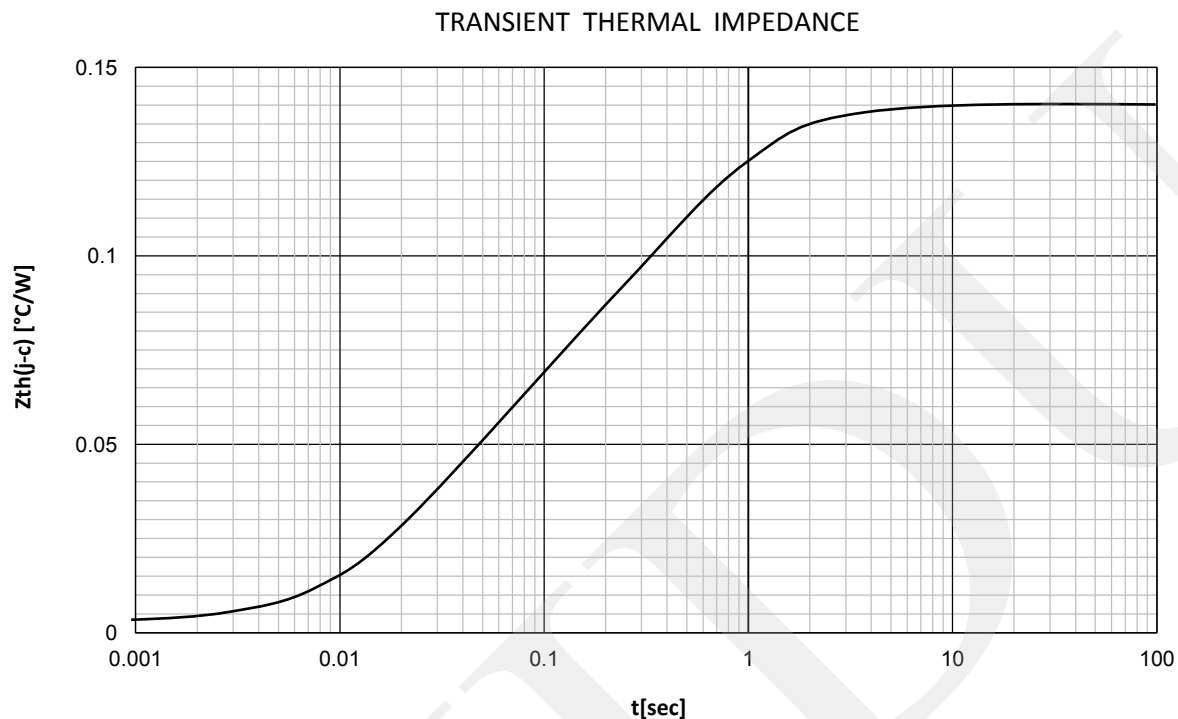
FORWARD CHARACTERISTICS

$T_j = 180^\circ\text{C}$



SURGE CHARACTERISTICS





ORDERING INFORMATION

GDZP	320	N	X X	M
Rectifier Diode	Current code	Polarity R= Stud Anode N= Stud Cathode	Voltage Code Code X 100 = V_{RRM}	Stud Threads M = Stud M20 X 1.5 U = 3/4" -16UNF-2A

Order Code GDZP320R16M – 1600V V_{RRM} , M20 Stud, Diode with stud anode.

Outline

