

Features

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

Applications

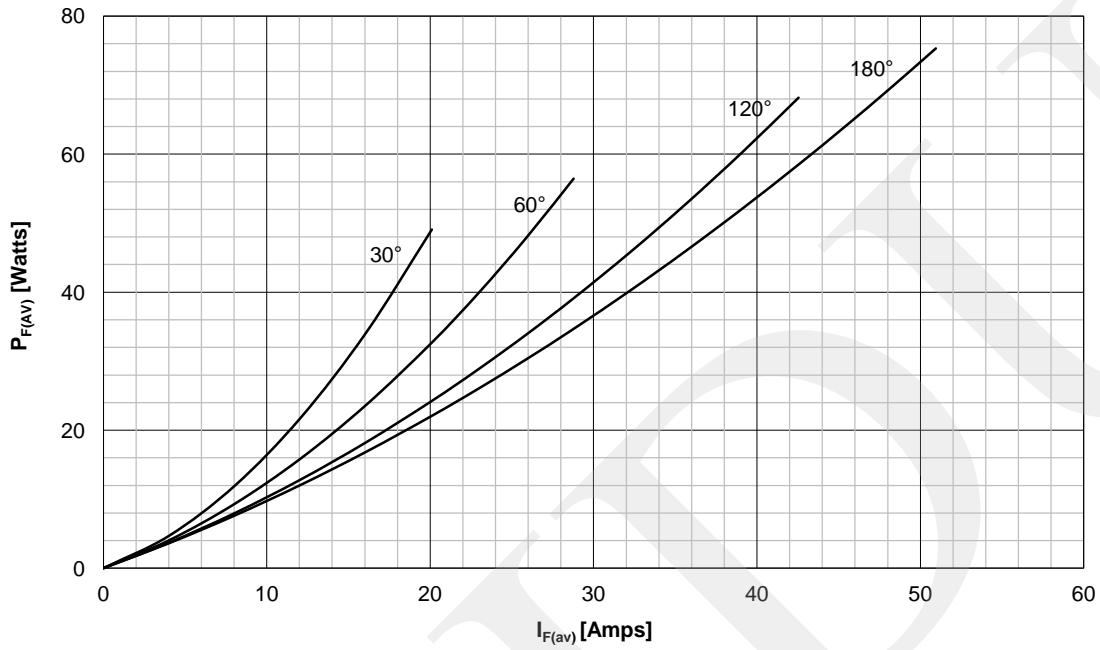
- Power Supplies
- Free-wheeling Diodes
- Uncontrolled Rectifiers

Key Parameters

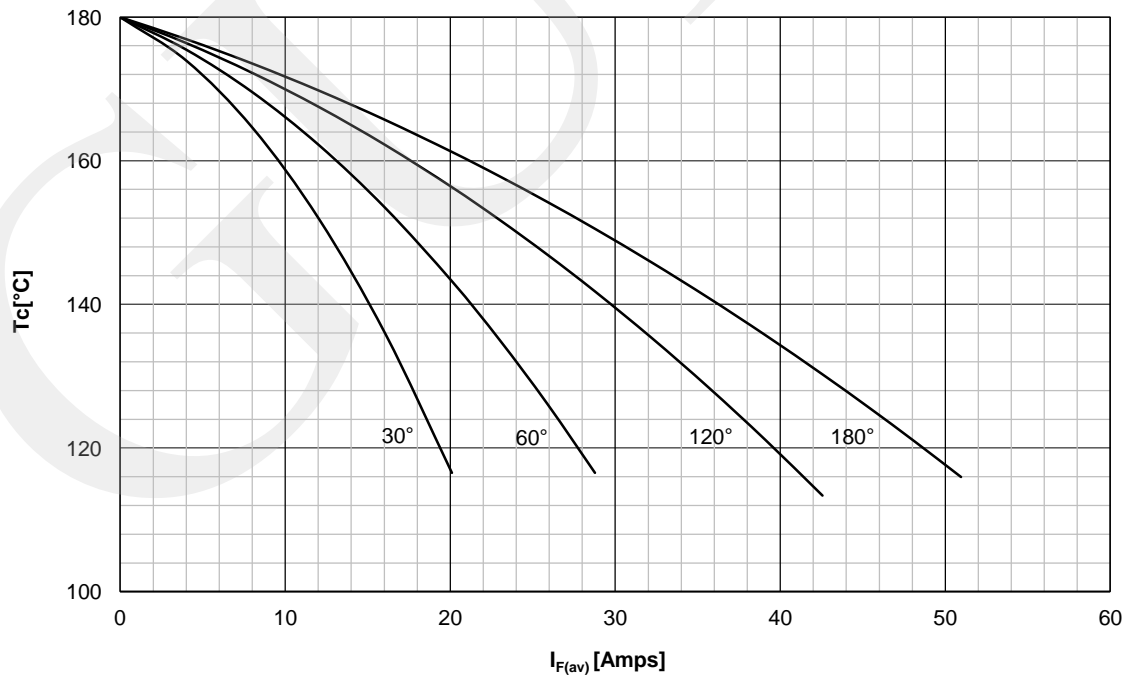
V_{RRM}	= 1600V
$I_{F(AV)}$	= 50A
I_{FSM}	= 700A
$V_{F(TO)}$	= 0.85V
r_F	= 5.0mΩ

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	5	mA
CONDUCTING					
$I_{F(AV)}$	Mean Forward current	180° sin ,50 Hz, T _c =115°C T _c =125°C		50 45	A
I_{FRMS}	RMS Forward current			80	A
I_{FSM}	Surge Forward current	Sine wave, 10 ms Without reverse voltage	25	700	A
			180	600	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	2450	A ² s
			180	1800	A ² s
V_F	Peak Forward voltage	Peak forward current = 150A	180	1.60	V
$V_{F(TO)}$	Threshold voltage		180	0.85	V
r_F	Forward slope resistance		180	5.0	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case		0.85	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink		0.25	°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

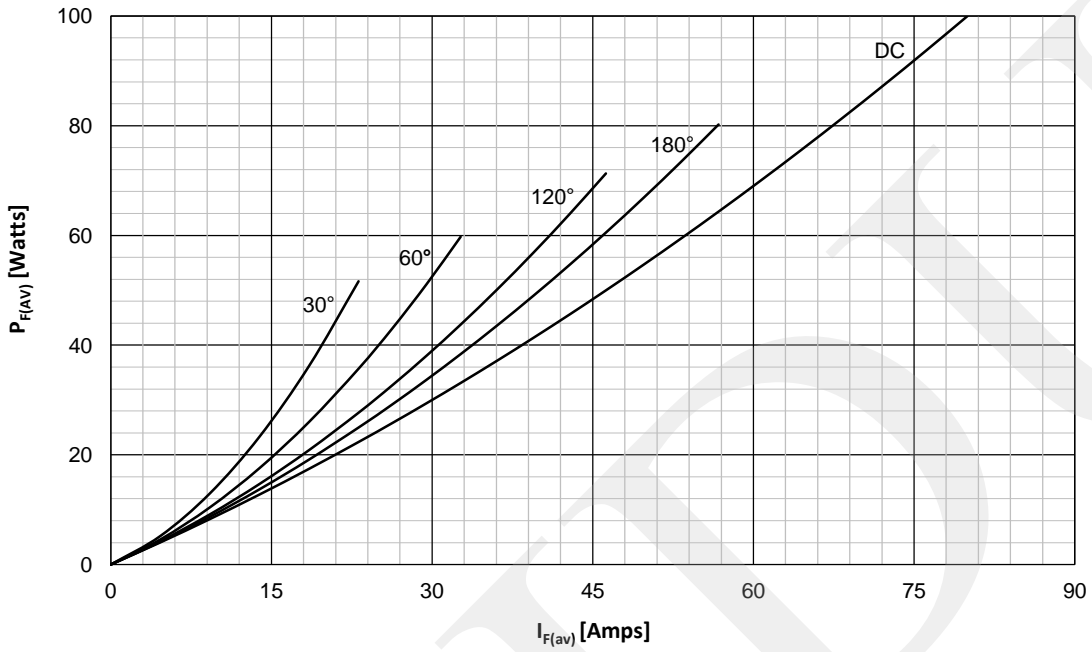
DISSIPATION CHARACTERISTICS
SINE WAVE



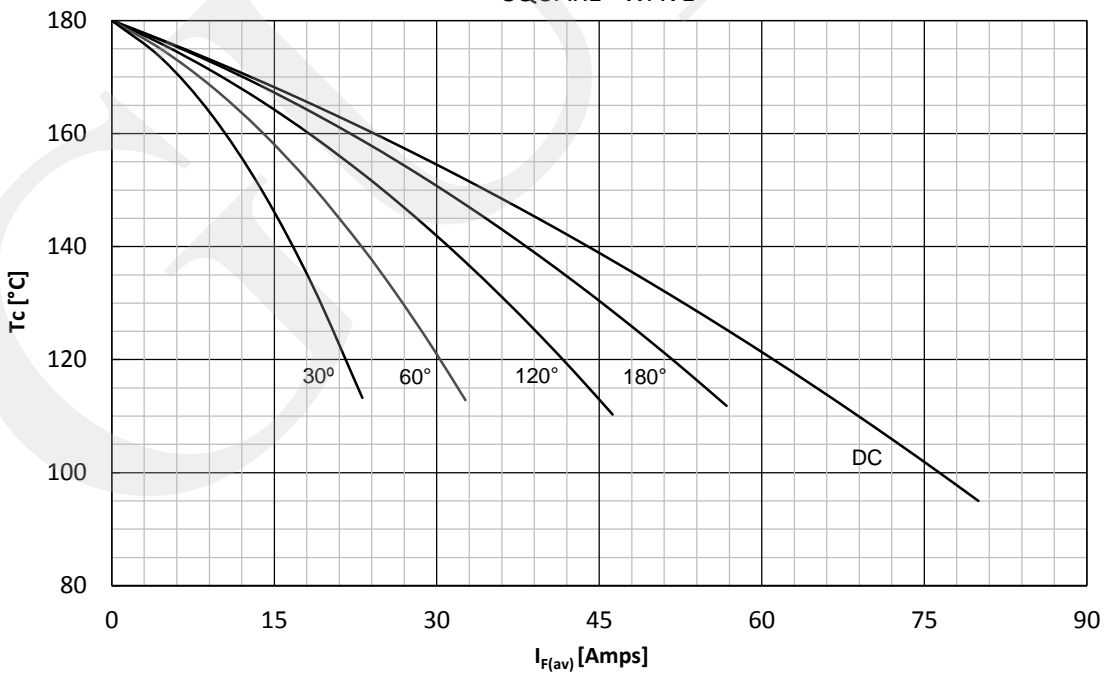
FORWARD CURRENT DERATING CURVE
SINE WAVE



DISSIPATION CHARACTERISTICS
SQUARE WAVE

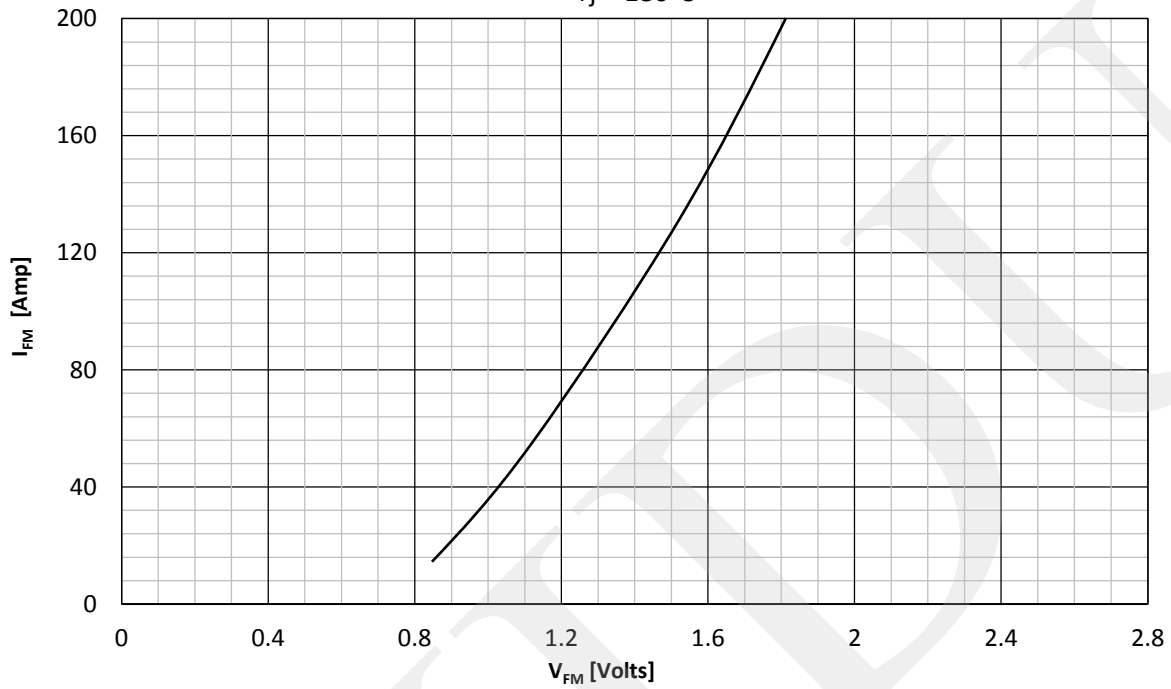


FORWARD CURRENT DERATING CURVE
SQUARE WAVE

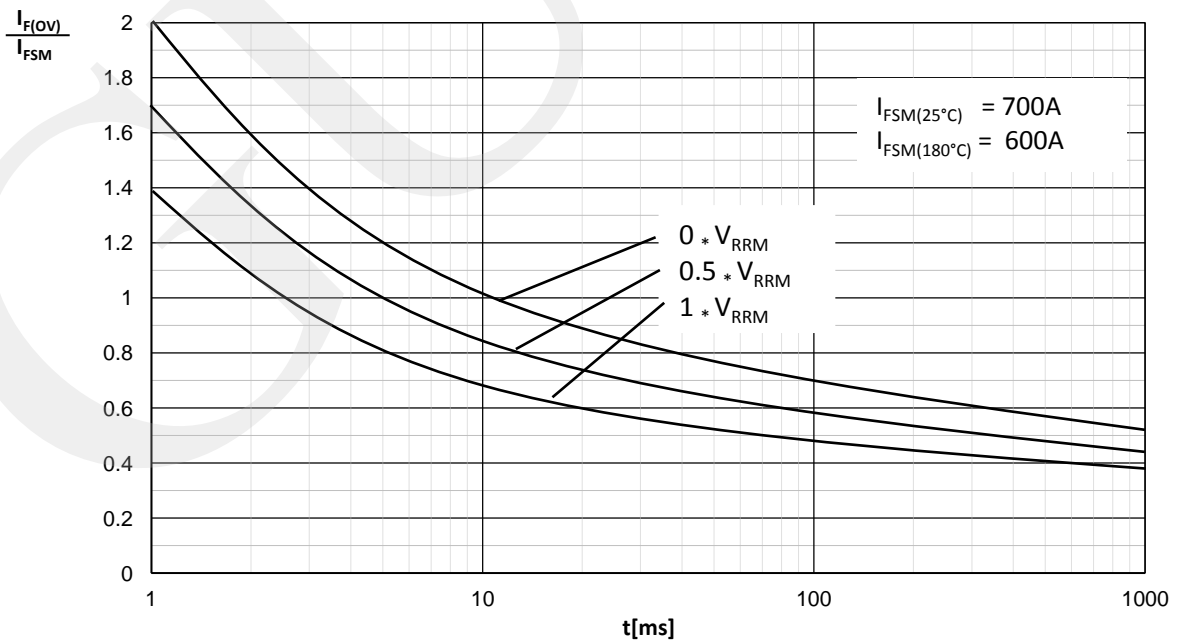


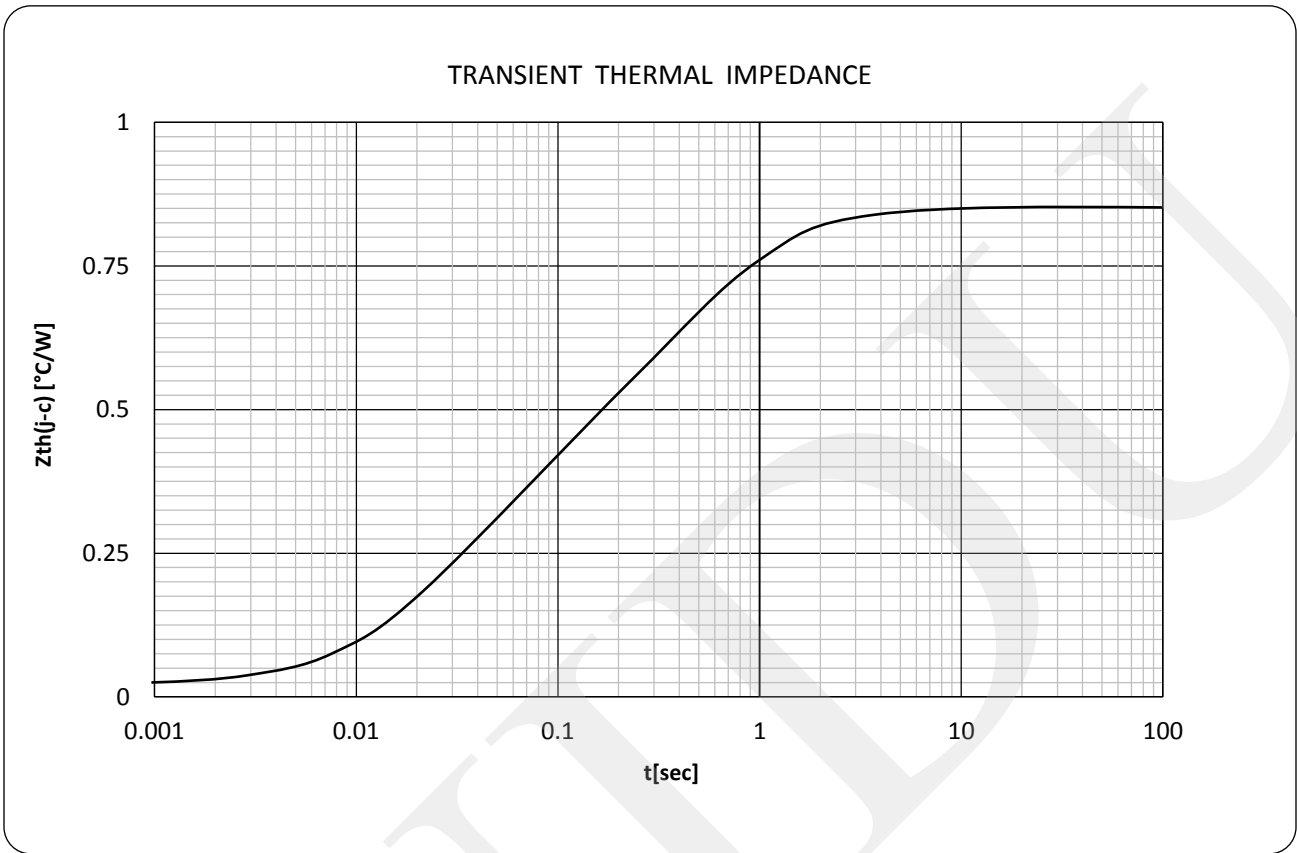
FORWARD CHARACTERISTICS

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



SURGE CHARACTERISTICS





ORDERING INFORMATION

GDZP	45	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 M8 X 1.25 U = Stud 1/4" UNF

Order Code GDZP45R16M – 1600V V_{RRM} , M8 Stud, Diode with stud anode.

Outline

