

Features

- Full blocking capability over wide temperature range
- Hermetic sealed ceramic package

Key Parameters

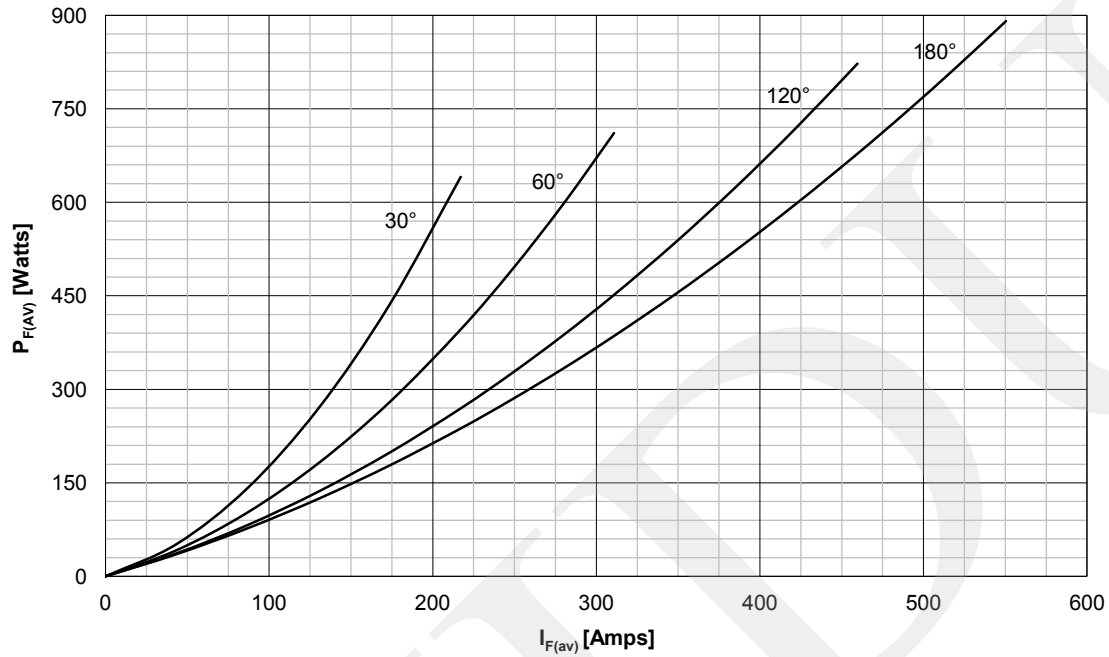
V_{RRM}	= 1800V
$I_{F(AV)}$	= 550A
I_{FSM}	= 6.8kA
$V_{F(TO)}$	= 0.75V
r_F	= 0.64mΩ

Applications

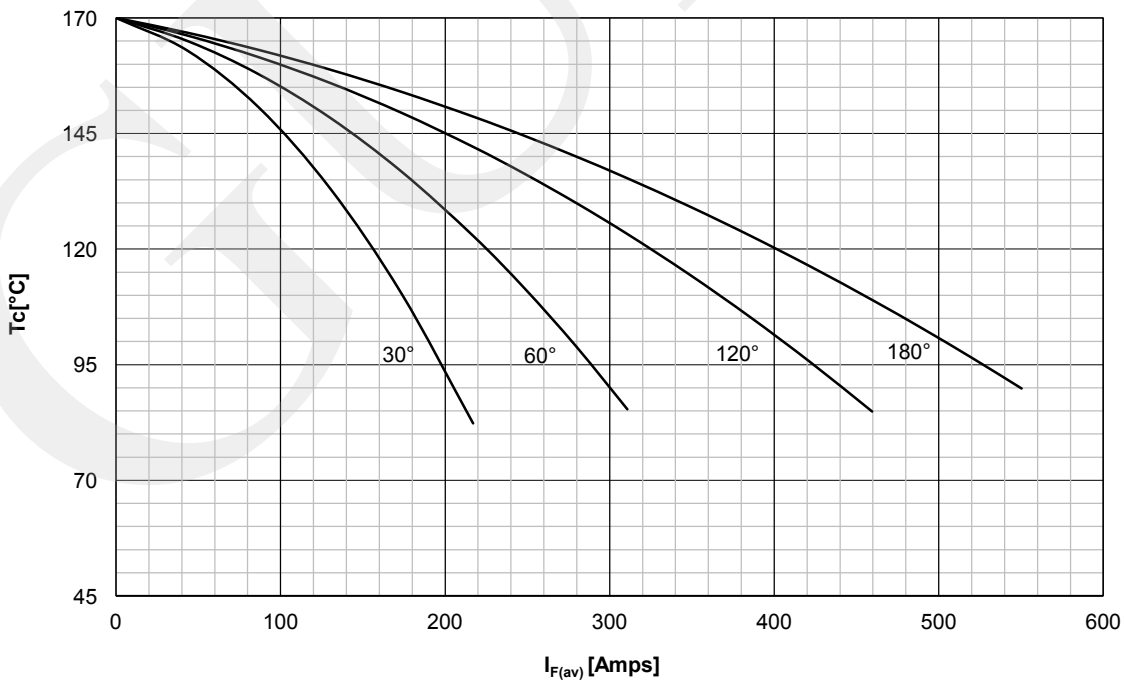
- Uncontrolled Rectifiers
- Battery Chargers
- Power Supplies

Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		170	200 - 1800	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	170	50	mA
CONDUCTING					
$I_{F(AV)}$	Mean Forward current	180° sin, 50 Hz, T _c = 90°C, Double side cooled		550	A
I_{FRMS}	RMS Forward current			864	A
I_{FSM}	Surge Forward current	Sine wave, 10 ms Without reverse voltage	25	6800	A
			170	6000	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	231 x 10 ³	A ² s
			170	180 x 10 ³	A ² s
V_F	Peak Forward voltage	Peak forward current = 1600A	170	1.85	V
$V_{F(TO)}$	Threshold voltage		170	0.75	V
r_F	Forward slope resistance		170	0.64	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, Double side cooled		0.09	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, Double side cooled		0.015	°C/W
T_j	Max. junction temperature			170	°C
T_{stg}	Storage temperature			-40 170	°C
M	Mounting Torque			5 - 6	kN
W	Weight (Approx.)			70	gm

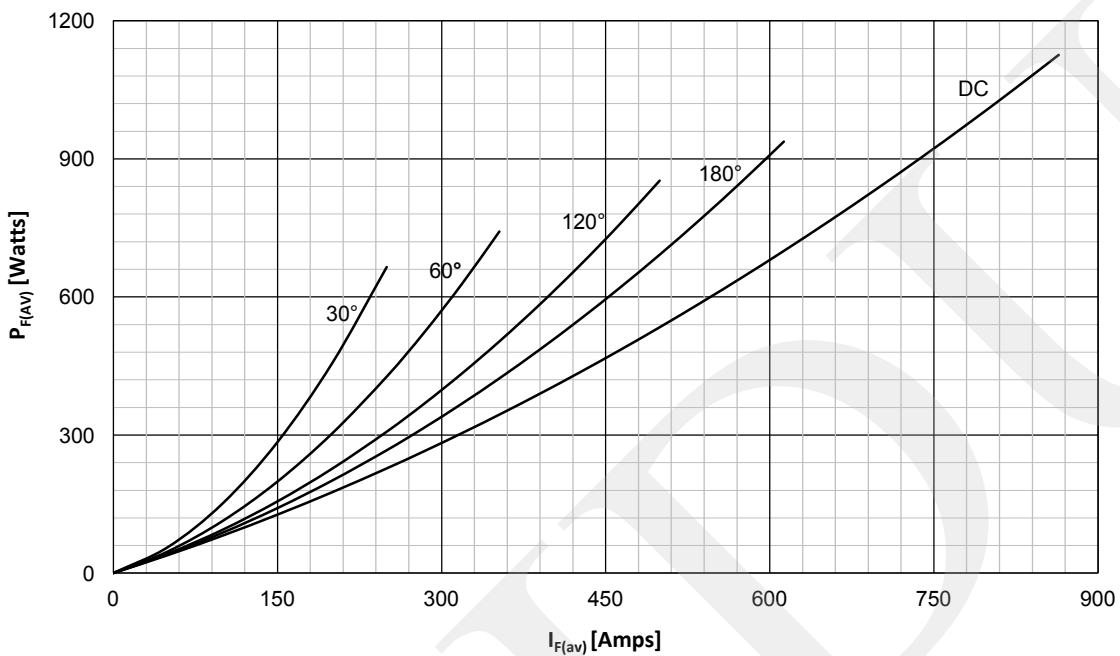
DISSIPATION CHARACTERISTICS
SINE WAVE



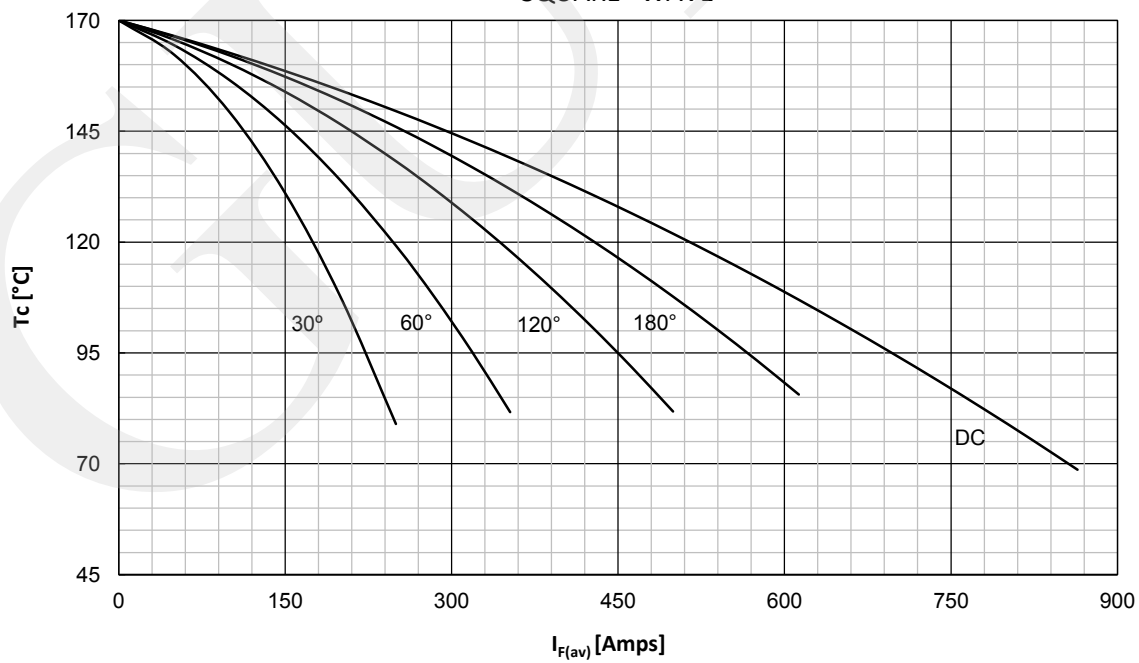
FORWARD CURRENT DERATING CURVE
SINE WAVE



DISSIPATION CHARACTERISTICS
SQUARE WAVE

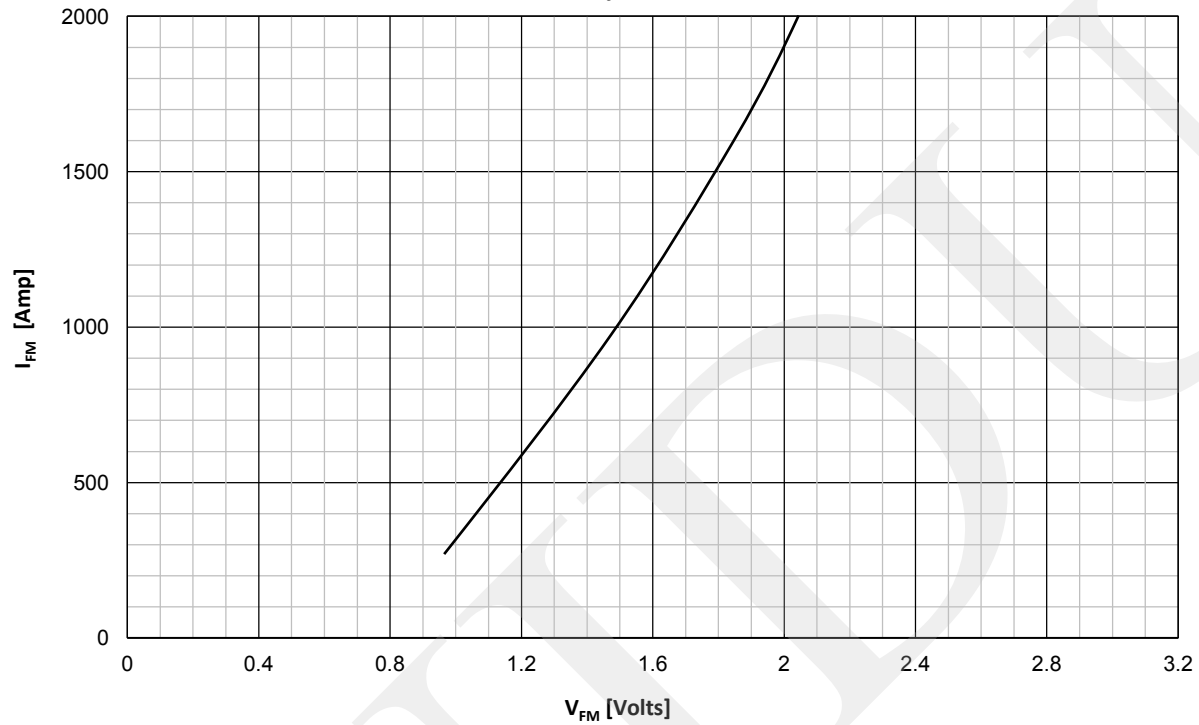


FORWARD CURRENT DERATING CURVE
SQUARE WAVE

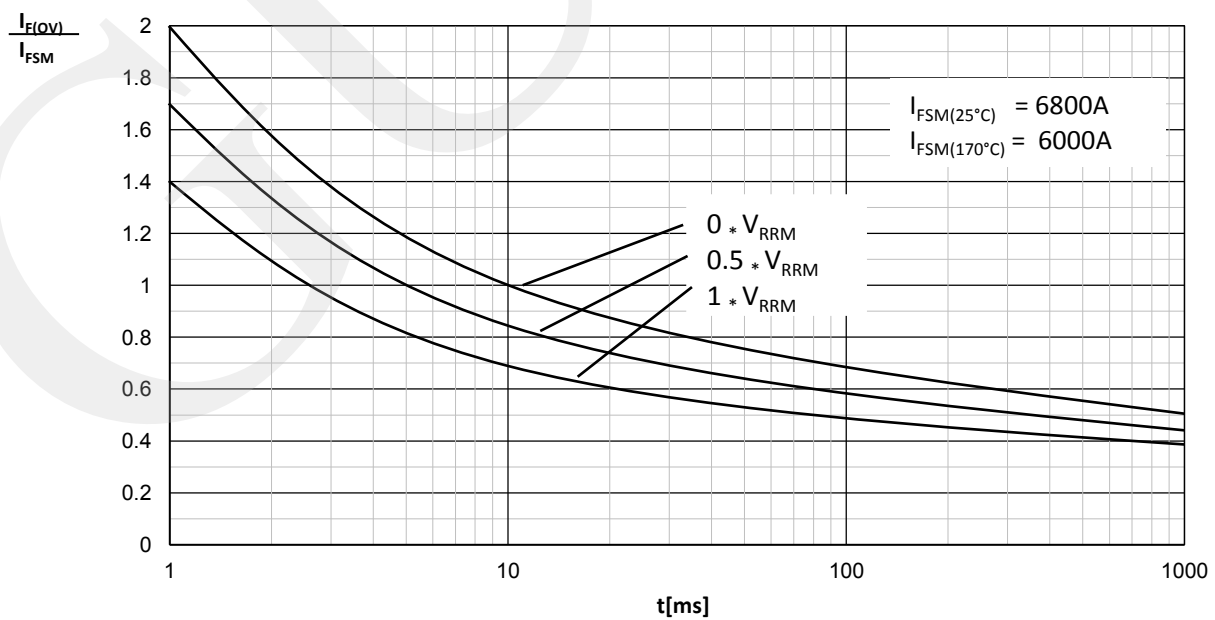


FORWARD CHARACTERISTICS

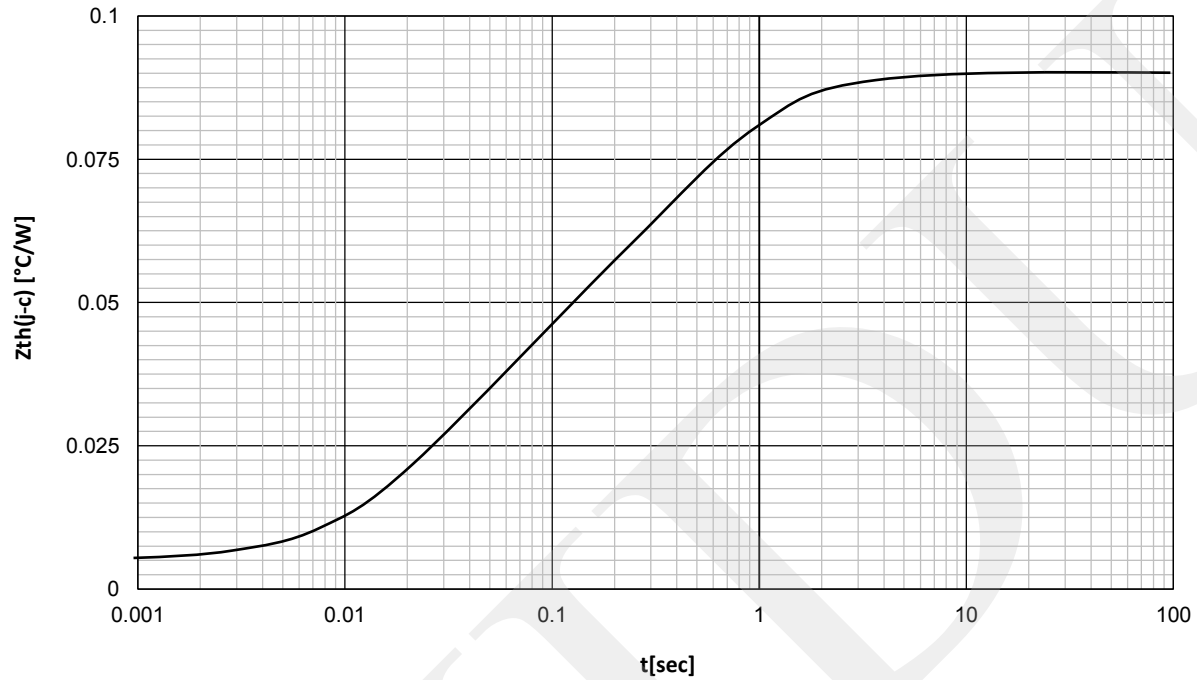
$T_j = 170^\circ\text{C}$



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, DSC



ORDERING INFORMATION

GDZP	550	C	X X
Rectifier Diode	Current code	Capsule Package	Voltage Code Code X 100 = V_{RRM}

Order Code GDZP550C18 – 1800V V_{RRM} , Capsule diode

Outline

