



Power Rectifier Diodes

Applications

- Traction Rectifiers
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting

Features

- Full blocking capability over wide temperature range
- Hermetically sealed ceramic package
- High case non-rupture current

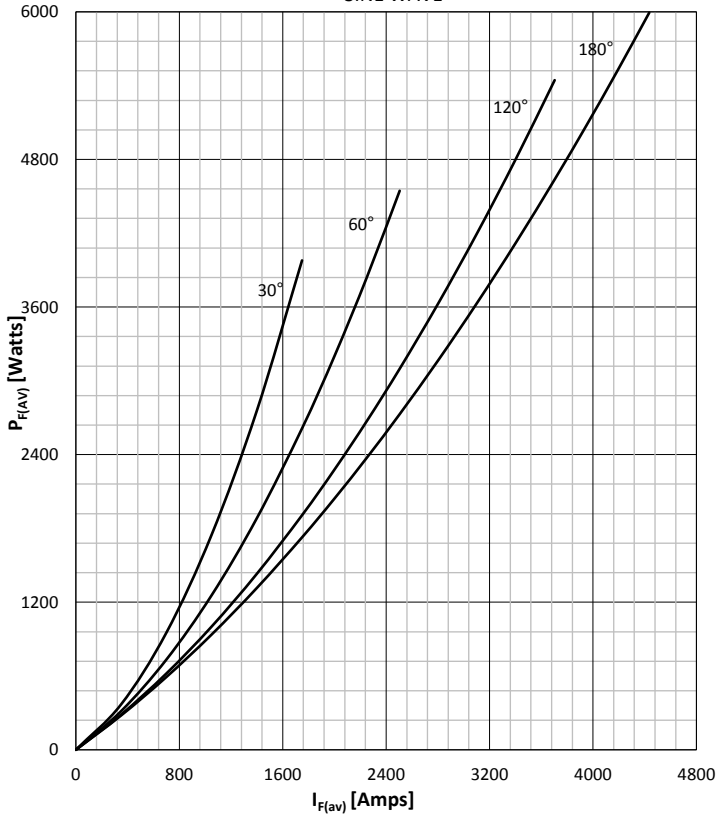
Key Parameters

V_{RRM}	= 800V
$I_{F(AV)}$	= 4435A
I_{FSM}	= 47000A
$V_{F(TO)}$	= 0.75V
r_F	= 0.055mΩ

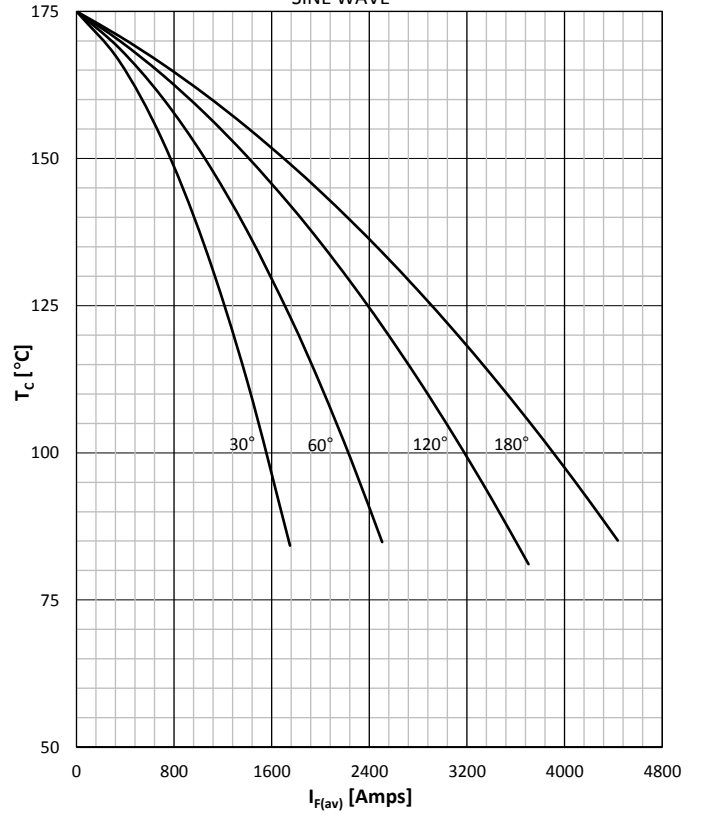
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		175	800	V
V_{RSM}	Non-repetitive peak reverse voltage		175	900	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	175	75	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin, 50 Hz, T _c =85°C, double side cooled		4435	A
I_{FRMS}	RMS current			6963	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	47000	A
			175	44800	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	11045 x 10 ³	A ² s
			175	10035 x 10 ³	A ² s
V_F	Forward voltage	On-state current = 4500A	25	1.16	V
$V_{F(TO)}$	Threshold voltage		175	0.75	V
r_F	Forward slope resistance		175	0.055	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, double side cooled		0.015	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, double side cooled		0.006	°C/W
T_j	Max. junction temperature			175	°C
T_{stg}	Storage temperature			-40 175	°C
M	Clamping force			22 - 24	KN
W	Weight (Approx.)			550	gm

DISSIPATION CHARACTERISTICS

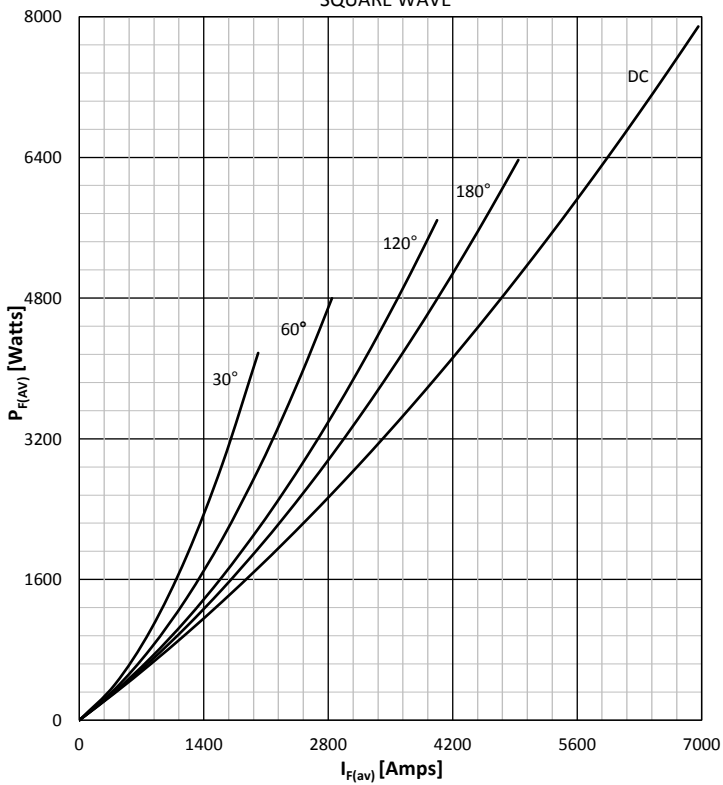
SINE WAVE


FORWARD CURRENT DERATING CURVE

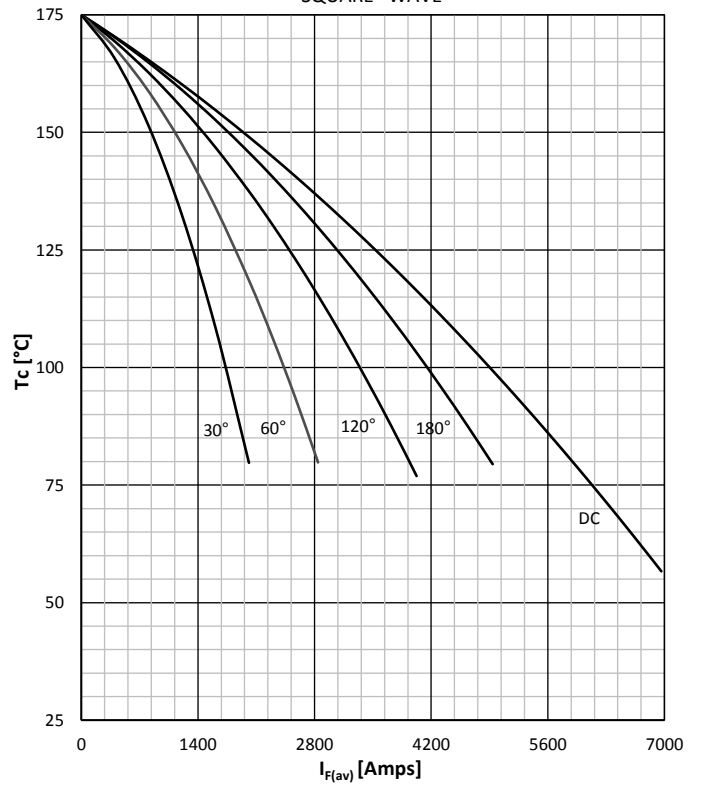
SINE WAVE


DISSIPATION CHARACTERISTICS

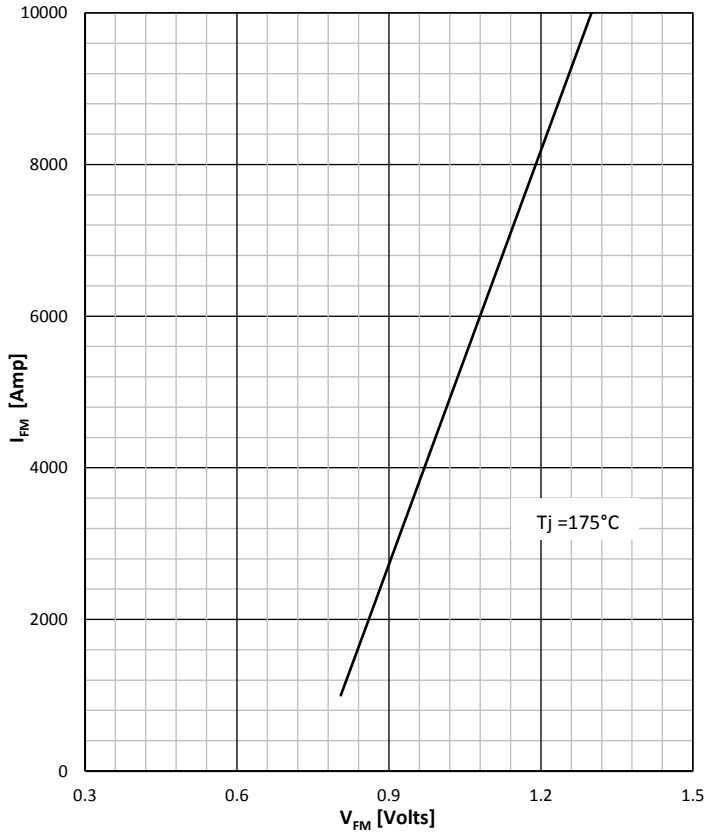
SQUARE WAVE


FORWARD CURRENT DERATING CURVE

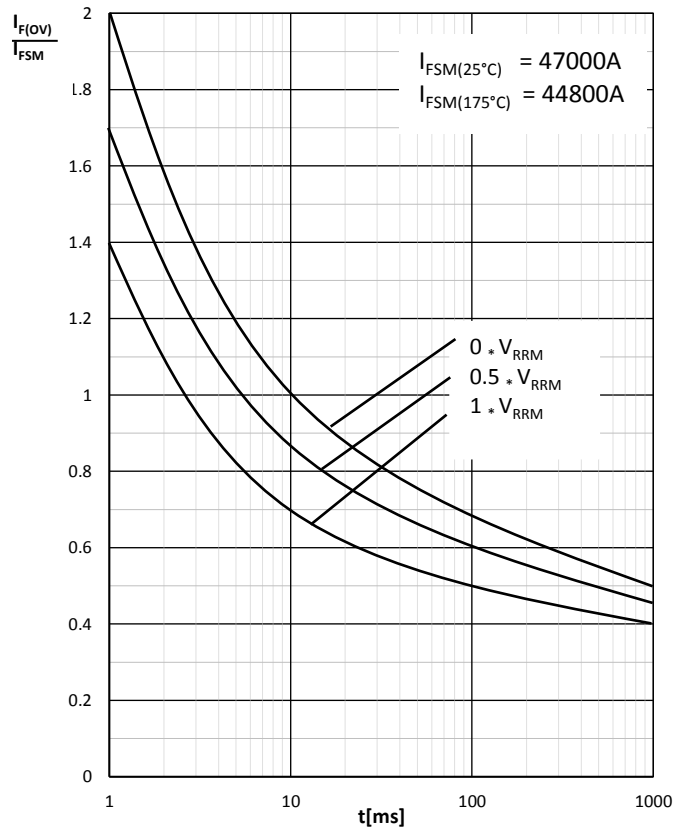
SQUARE WAVE



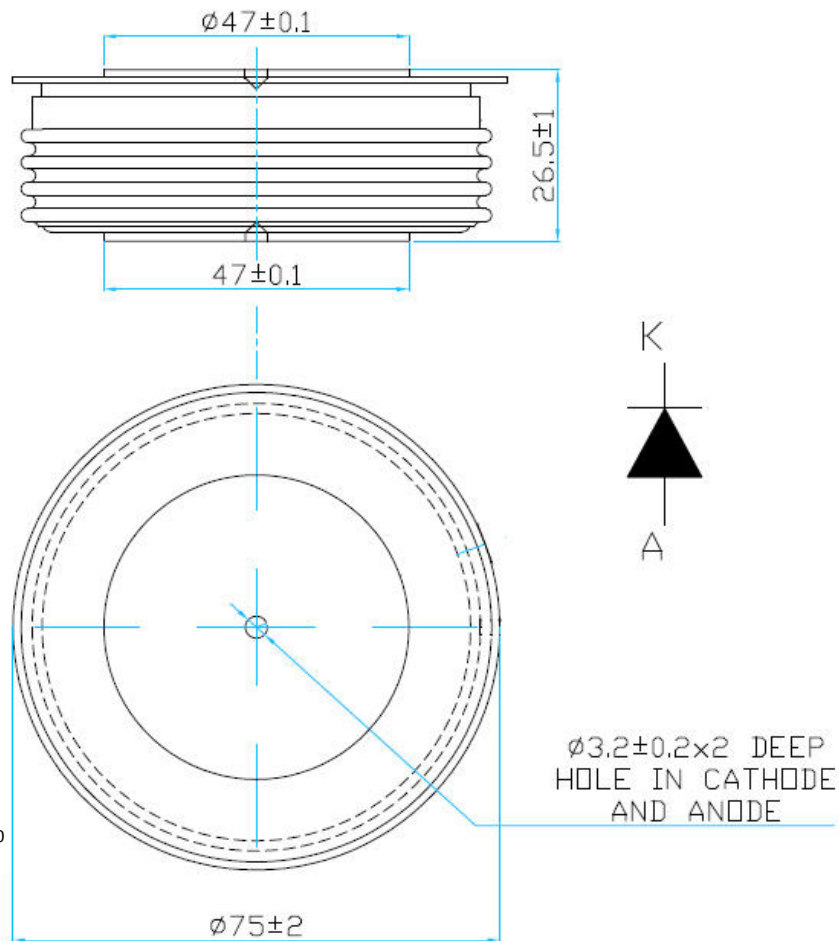
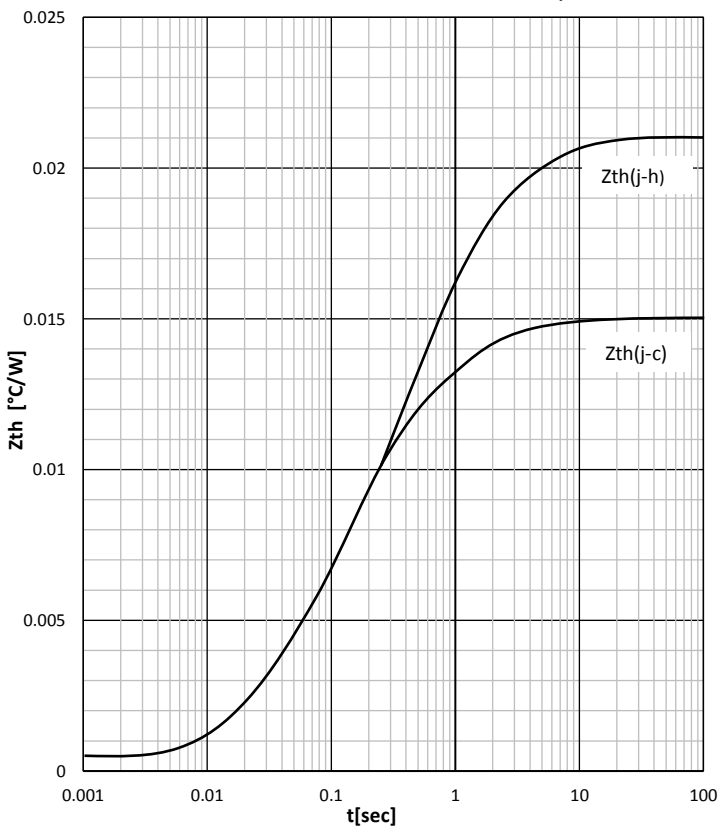
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, DSC



Scomes srl reserves the right to change any specification without notice

issue:jul-2019