



Power Rectifier Diodes

Features

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

Applications

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

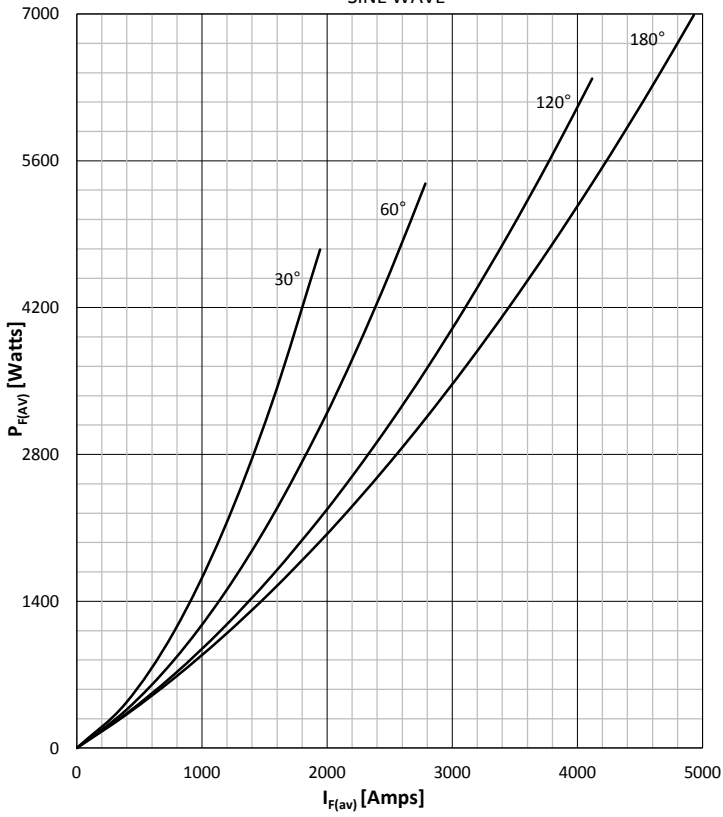
Key Parameters

V_{RRM}	= 1000V
$I_{F(AV)}$	= 4930A
I_{FSM}	= 47000A
$V_{F(TO)}$	= 0.75V
r_F	= 0.055m Ω

Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		190	800 - 1000	V
V_{RSM}	Non-repetitive peak reverse voltage		190	900 - 1100	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	190	75	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin, 50 Hz, T _c =85°C, double side cooled		4930	A
I_{FRMS}	RMS current			7740	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	47000	A
			190	44800	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	11045 x 10 ³	A ² s
			190	10035 x 10 ³	A ² s
V_F	Forward voltage	On-state current = 4500A	25	1.16	V
$V_{F(TO)}$	Threshold voltage		190	0.75	V
r_F	Forward slope resistance		190	0.055	m Ω
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			190	°C
T_{stg}	Storage temperature			-40 ... 190	°C
M	Clamping force			22 - 24	KN
W	Weight (Approx.)			550	gm

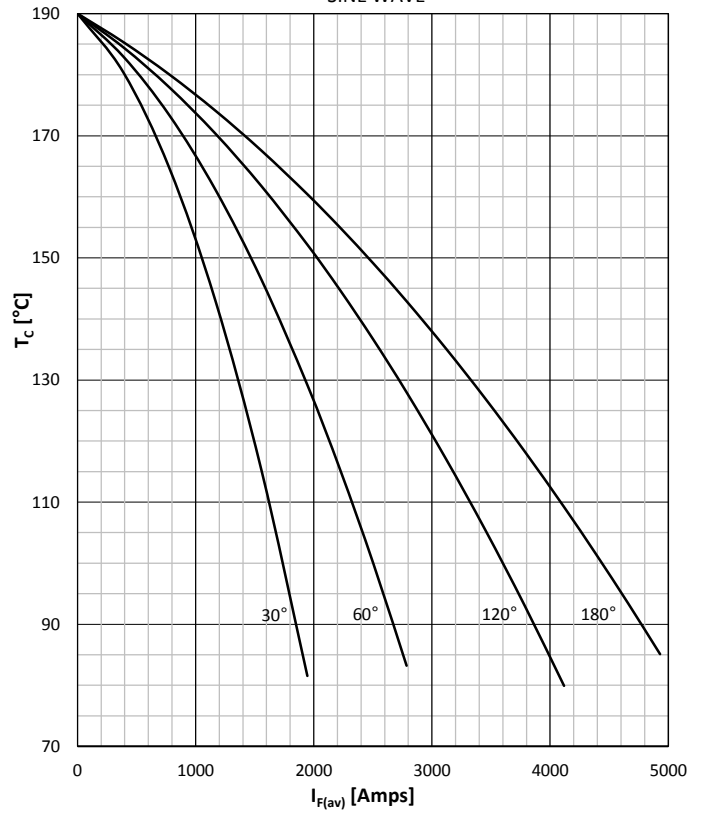
DISSIPATION CHARACTERISTICS

SINE WAVE



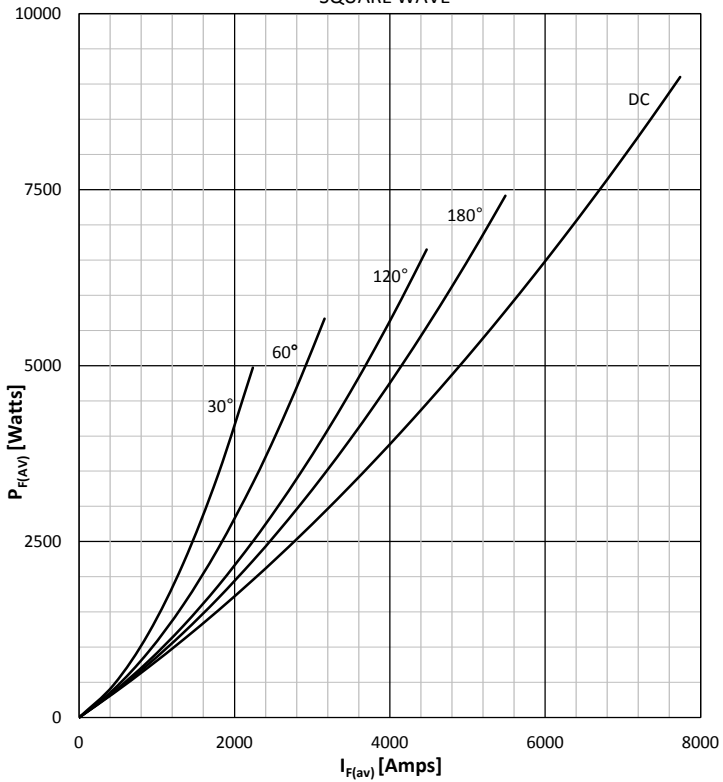
FORWARD CURRENT DERATING CURVE

SINE WAVE



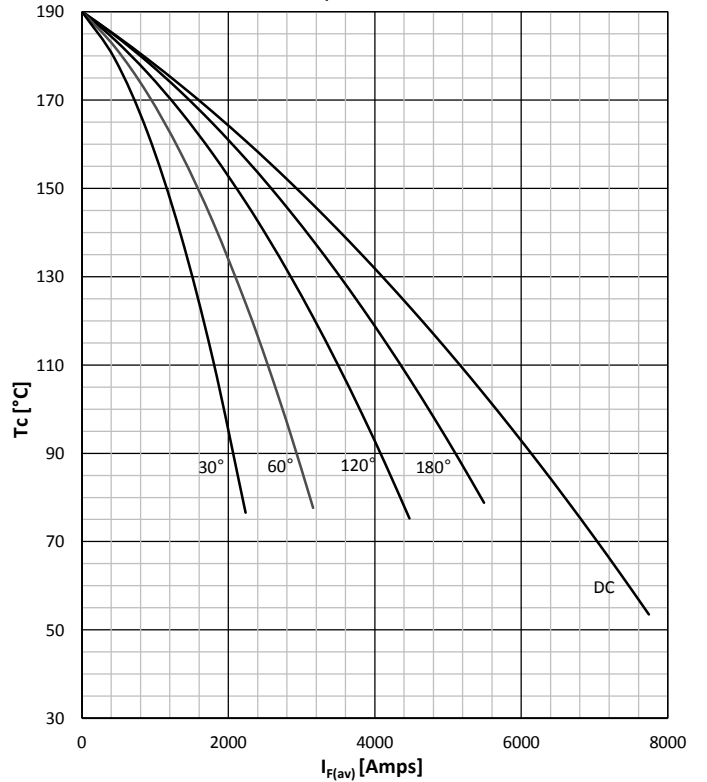
DISSIPATION CHARACTERISTICS

SQUARE WAVE

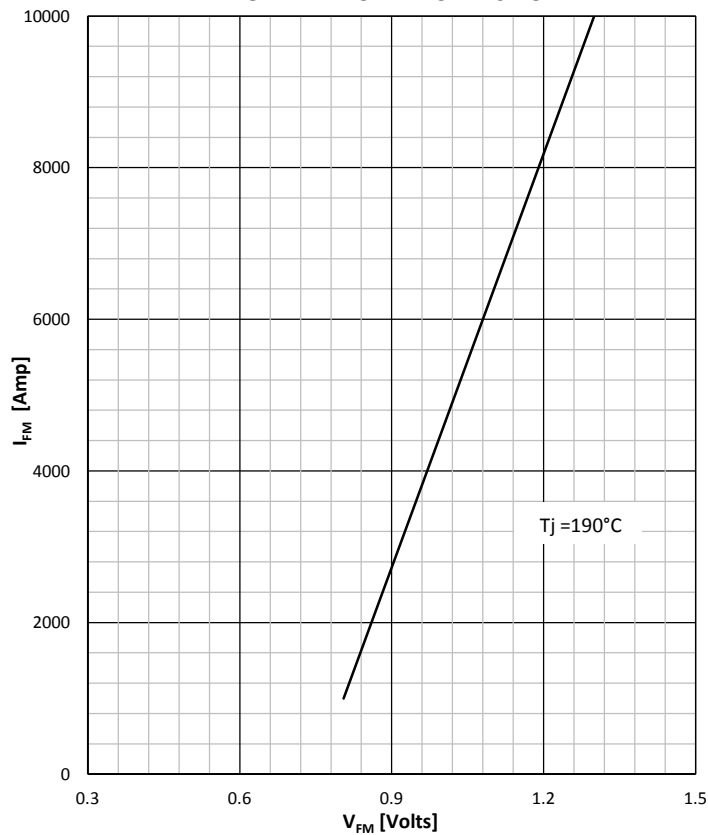


FORWARD CURRENT DERATING CURVE

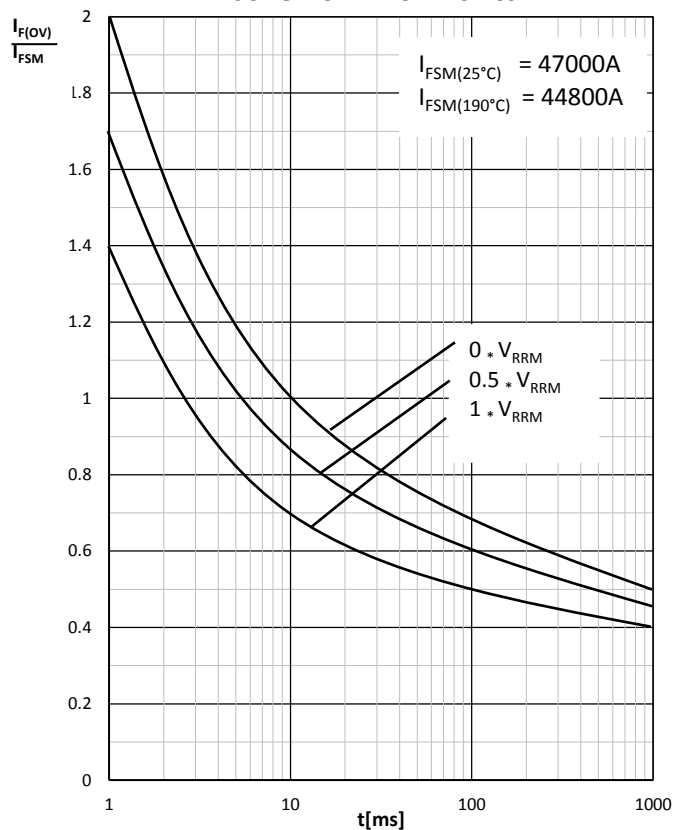
SQUARE WAVE



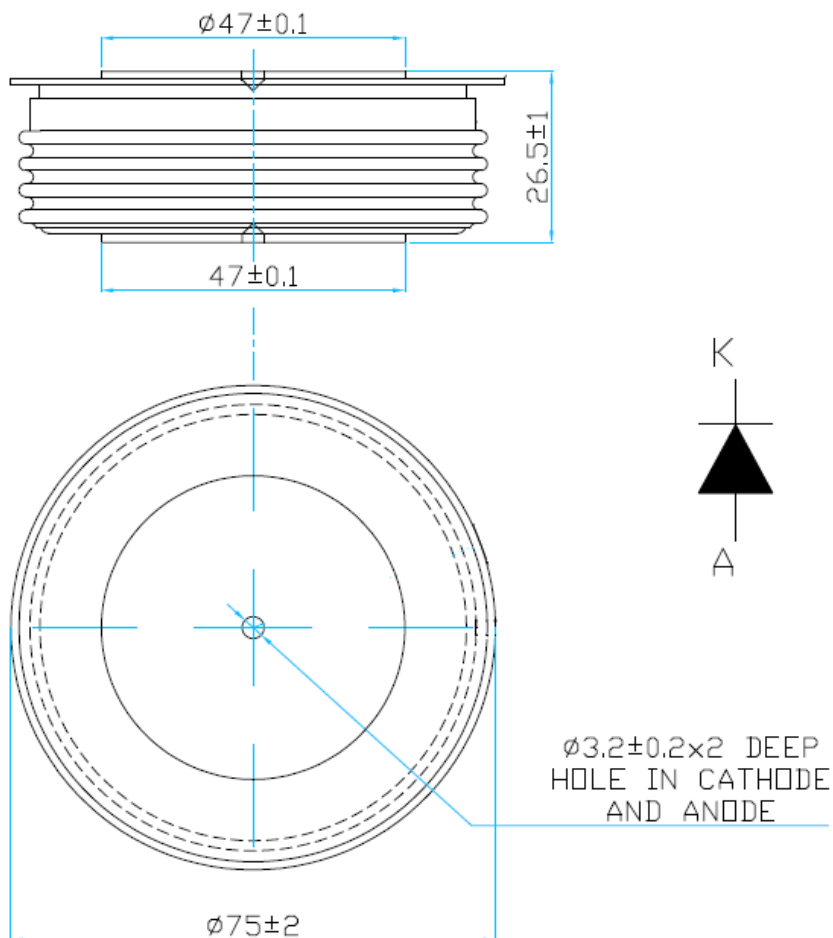
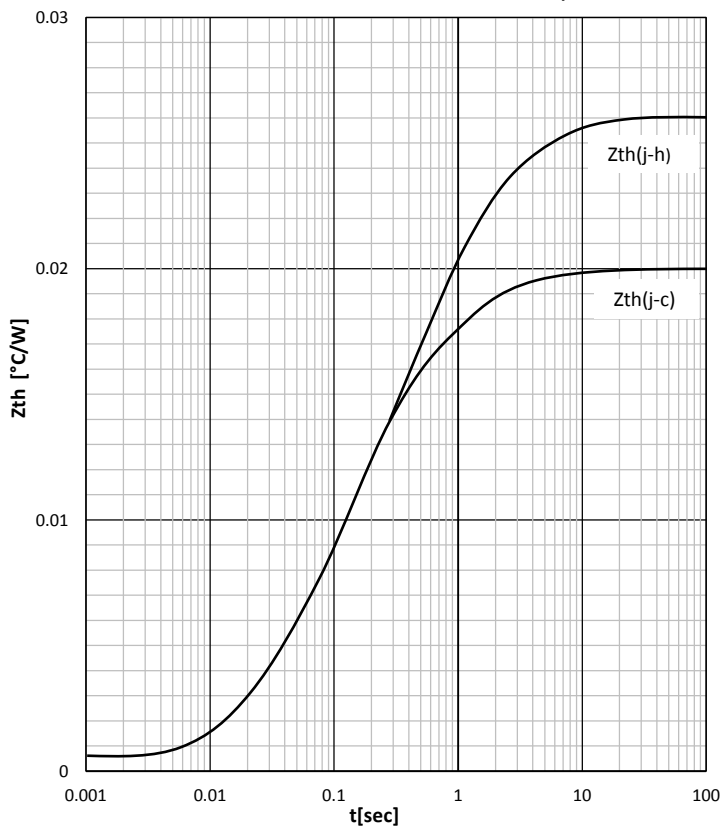
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, DSC



Scomes srl reserves the right to change any specification without notice

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