SCOMES

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SCD1700

Power Rectifier Diodes

Applications

- Power Supplies
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting

Features

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

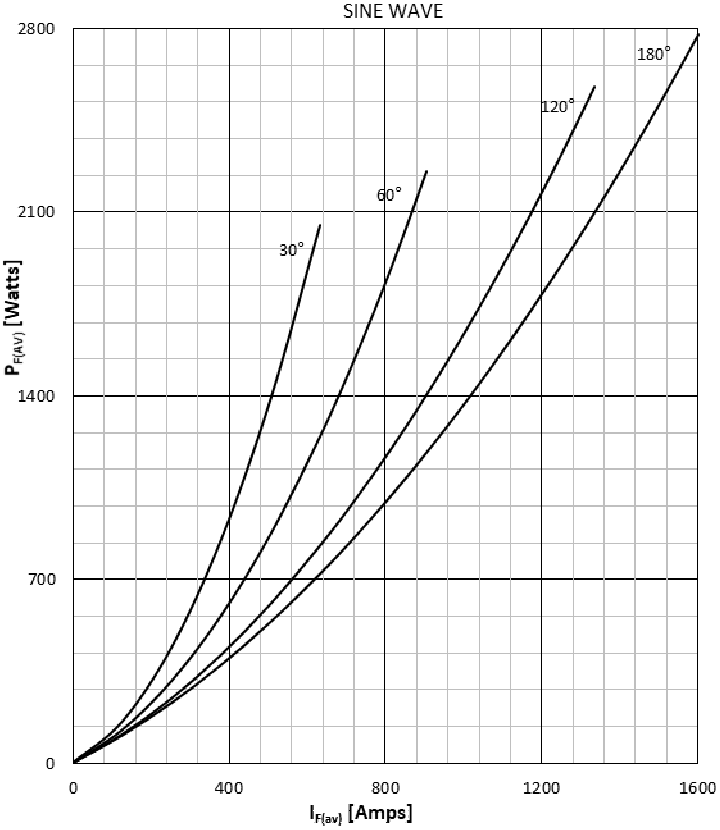
Key Parameters

V_{RRM} = 1200V
$I_{F(AV)}$ = 1600A
I_{FSM} = 17500A
$V_{F(TO)}$ = 0.75V
r_F = 0.25mΩ

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		190	1200	V
V_{RSM}	Non-repetitive peak reverse voltage		190	1300	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	190	50	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin,50 Hz, T_c=85°C , double side cooled		1680	A
I_{FRMS}	RMS current			2512	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	17500	A
			190	16000	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	1531 x 10^3	A^2s
			190	1280 x 10^3	A^2s
V_F	Forward voltage	On-state current = 3000A	190	1.65	V
$V_{F(TO)}$	Threshold voltage		190	0.75	V
r_F	Forward slope resistance		190	0.25	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, double side cooled		0.04	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, double side cooled		0.01	°C/W
T_j	Max. junction temperature			190	°C
T_{stg}	Storage temperature			-40 190	°C
M	Clamping force			9.8	KN
W	Weight (Approx.)			90	gm

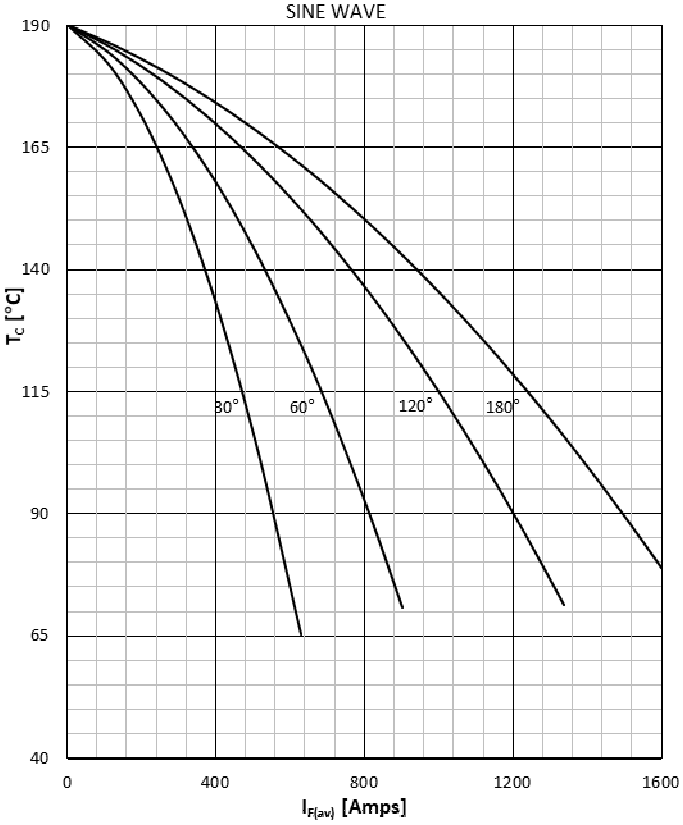
DISSIPATION CHARACTERISTICS

SINE WAVE



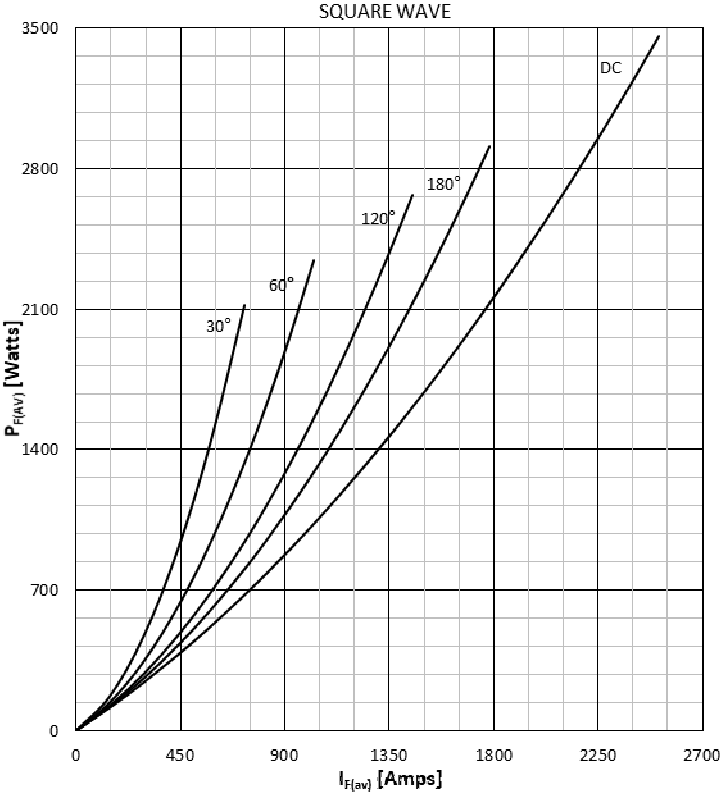
FORWARD CURRENT DERATING CURVE

SINE WAVE



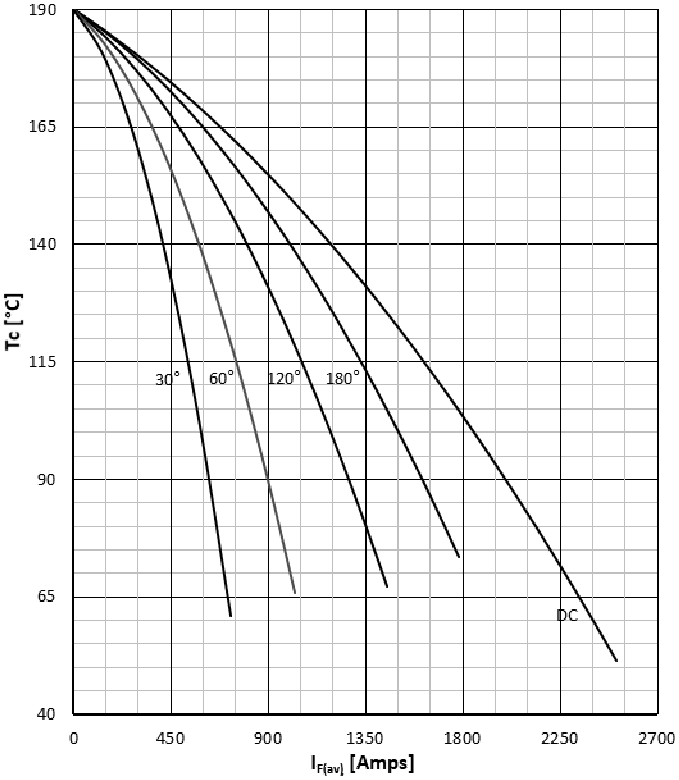
DISSIPATION CHARACTERISTICS

SQUARE WAVE

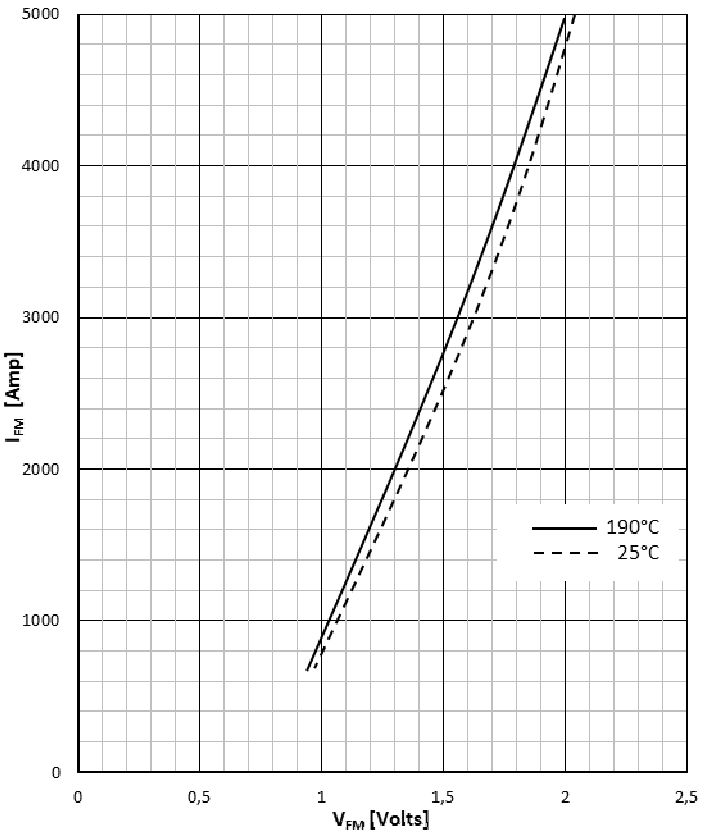


FORWARD CURRENT DERATING CURVE

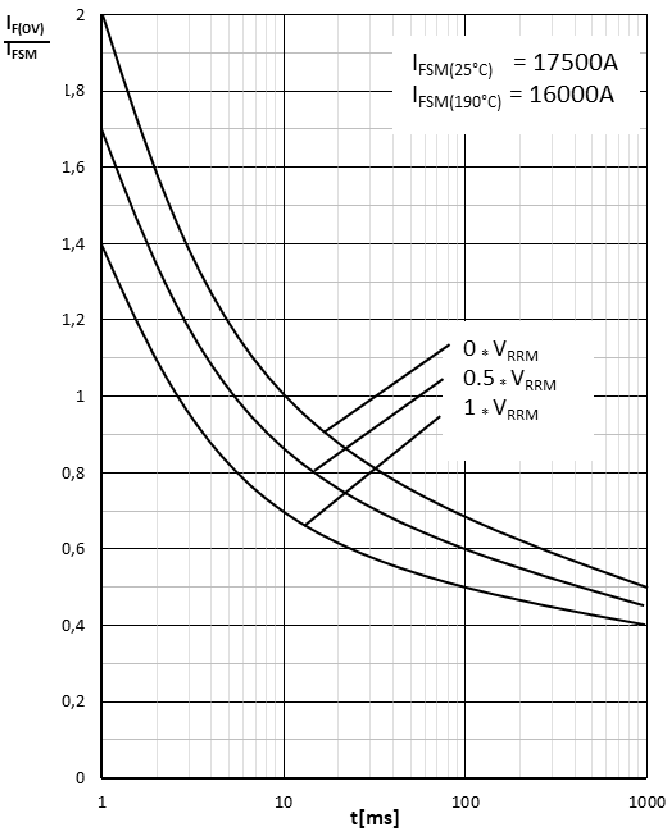
SQUARE WAVE



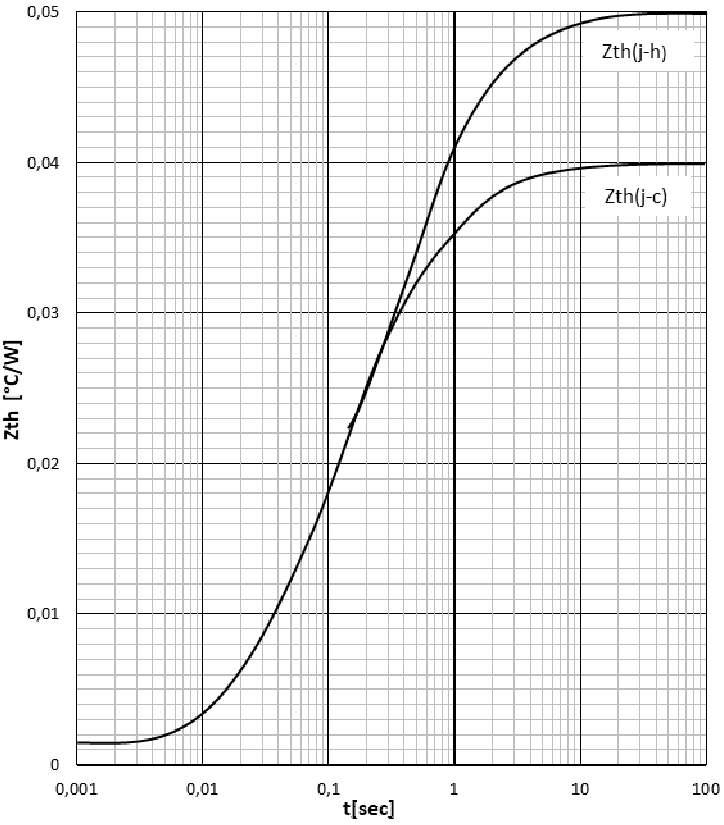
FORWARD CHARACTERISTIC

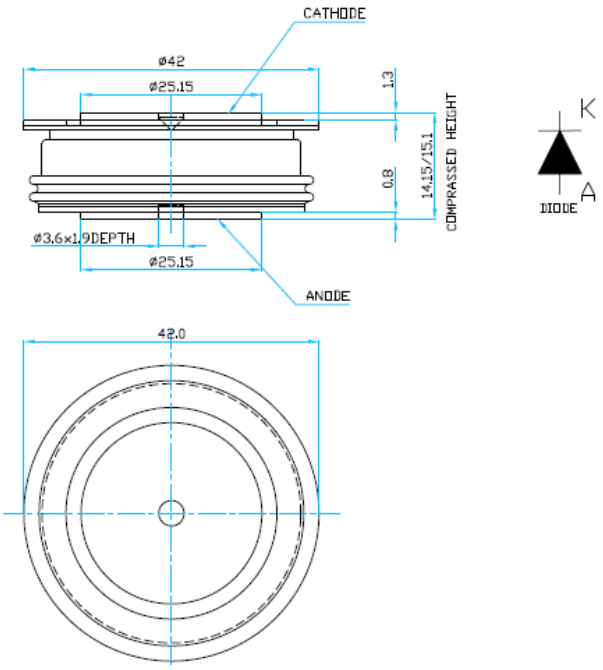


SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE





Scomes srl reserves the right to change any specification without notice

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