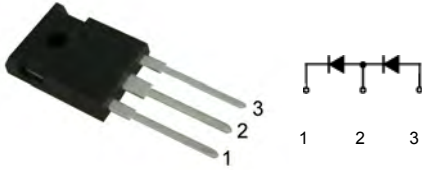
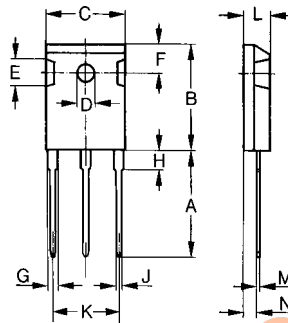


SDD25NXX

Discrete Diodes



Dimensions TO-247AD



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102

	V_{RSM}	V_{RRM}
	V	V
SDD25N01	100	100
SDD25N02	200	200
SDD25N04	400	400
SDD25N08	800	800
SDD25N10	1000	1000
SDD25N12	1200	1200
SDD25N16	1600	1600



Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS}	$T_{VJ}=T_{VJM}$	43	A
$I_{F(AV)M}$	$T_C=100^{\circ}C$; 180° sine	28	
I_{FSM}	$T_{VJ}=45^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine	300	A
	$t=8.3ms$ (60Hz), sine	330	
	$T_{VJ}=150^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine	270	
	$t=8.3ms$ (60Hz), sine	300	
I^2t	$T_{VJ}=45^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine	450	A^2s
	$t=8.3ms$ (60Hz), sine	450	
	$T_{VJ}=150^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine	340	
	$t=8.3ms$ (60Hz), sine	325	
T_{VJ}		-40...+180	$^{\circ}C$
T_{VJM}		180	
T_{stg}		-40...+150	
M_d	Mounting torque	0.8...1.2	Nm
F_c	Mounting force with clip	20...120	N
Weight	Typical	6	g

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$T_{VJ}=150^{\circ}C$; $V_R=V_{RRM}$	≤ 2	mA
V_F	$I_F=25A$; $T_{VJ}=25^{\circ}C$	≤ 1.25	V
V_{TO}	For power-loss calculations only	0.8	V
r_T	$T_{VJ}=T_{VJM}$	15	$m\Omega$
R_{thJC}	DC current	1.5	K/W
R_{thCK}	DC current (with heatsink compound) typ.	0.4	

Sirectifier®

SDD25NXX

Discrete Diodes

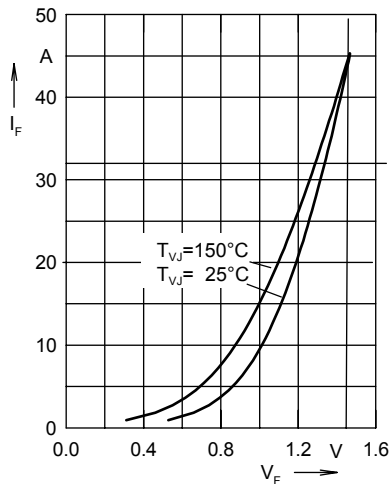


Fig. 1 Forward current versus voltage drop per diode

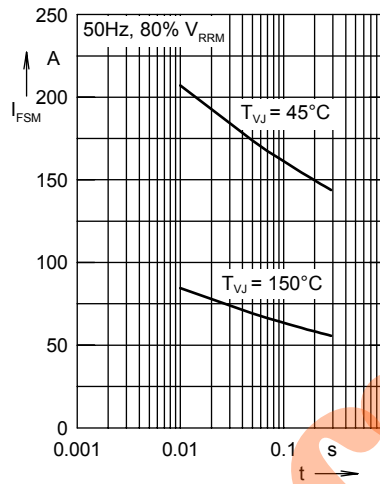


Fig. 2 Surge overload current

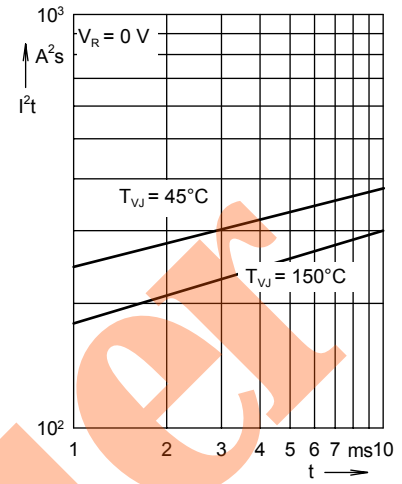


Fig. 3 I^2t versus time per diode

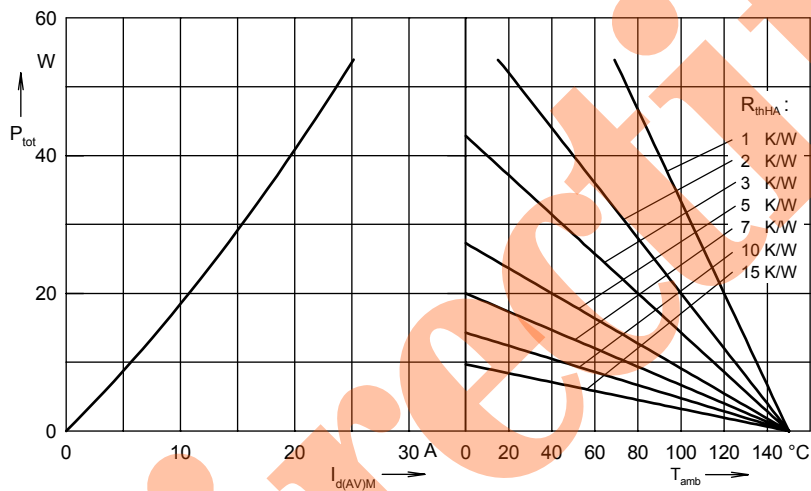


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180 °

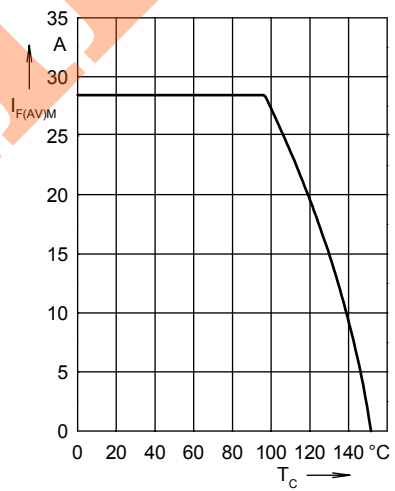


Fig. 5 Max. forward current versus case temperature

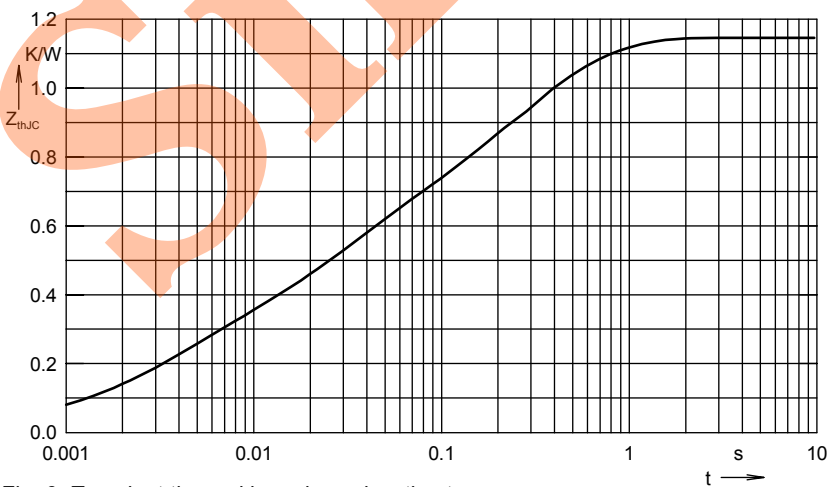


Fig. 6 Transient thermal impedance junction to case

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.01362	0.0001
2	0.1962	0.00316
3	0.267	0.023
4	0.3052	0.4
5	0.218	0.15