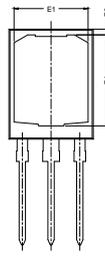
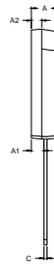
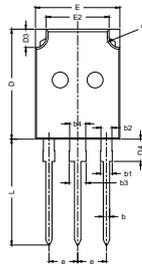
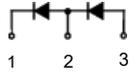


SDD46NXX

Discrete Diodes



Dimensions TO-247P

Dim.	Millimeter		Dim.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.85	5.10	D2	0.96	1.25
A1	2.31	2.51	D3	3.35	3.80
A2	1.85	2.10	D4	3.95	4.45
b	1.16	1.26	E	15.80	16.05
b1	/	2.25	E1	13.50	14.40
b2	1.96	2.15	E2	11.25	12.45
b3	/	3.25			
b4	2.96	3.15	e	5.44(BSC)	
c	0.59	0.66	L	19.80	20.25
D	20.85	21.10			
D1	17.15	17.75	R	1.90	2.10

	V_{RSM} V	V_{RRM} V
SDD46N01	100	100
SDD46N02	200	200
SDD46N04	400	400
SDD46N08	800	800
SDD46N10	1000	1000
SDD46N12	1200	1200
SDD46N16	1600	1600

Symbol	Test Conditions	Maximum Ratings	Unit
I _{F(AV)M}	T _C =105°C; 180° sine, each Die	46	A
I _{FSM}	T _{VJ} =45°C; V _R =0V; t=10ms (50Hz), sine t=8.3ms (60Hz), sine	485 520	A
	T _{VJ} =150°C; V _R =0V; t=10ms(50Hz), sine t=8.3ms(60Hz), sine	415 445	
I ² _t	T _{VJ} =45°C; V _R =0V; t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1160 1130	A ² s
	T _{VJ} =150°C; V _R =0V; t=10ms(50Hz), sine t=8.3ms(60Hz), sine	850 810	
T _{VJ} T _{VJM} T _{stg}		-40...+175 175 -55...+150	°C
M _d	Mounting torque	0.8...1.2	Nm
Weight	Typical	6	g

Symbol	Test Conditions	Characteristic Values	Unit
I _R	T _{VJ} =T _{VJM} ; V _R =V _{RRM}	< 1.00	mA
V _F	I _F =45A; T _{VJ} =25°C	< 1.25	V
V _{FO}	For power-loss calculations only	0.80	V
r _F	T _{VJ} =T _{VJM}	9.0	mΩ
R _{thJC} R _{thCH}	DC current typical	0.55 0.20	K/W



SDD46NXX

Discrete Diodes

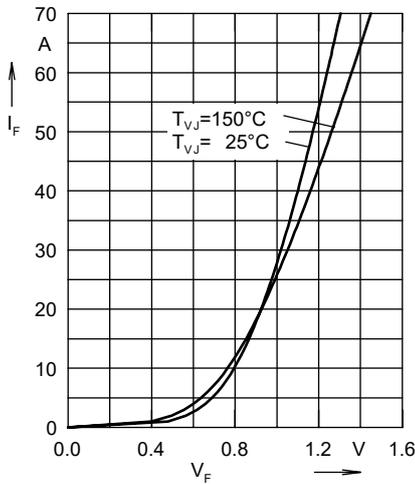


Fig. 1 Forward current versus voltage drop per diode

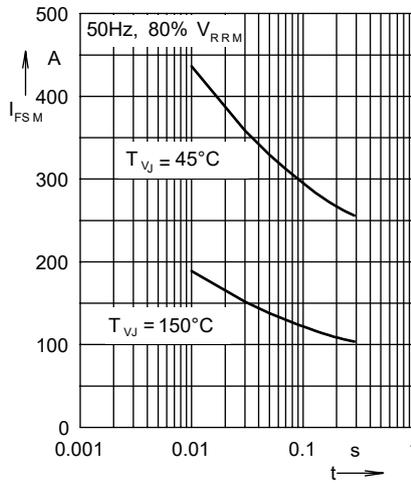


Fig. 2 Surge overload current

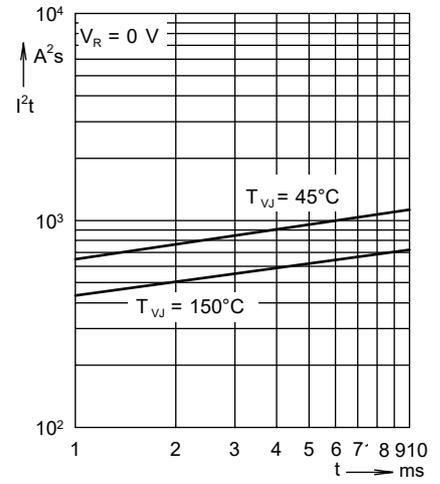


Fig. 3 I²t versus time per diode

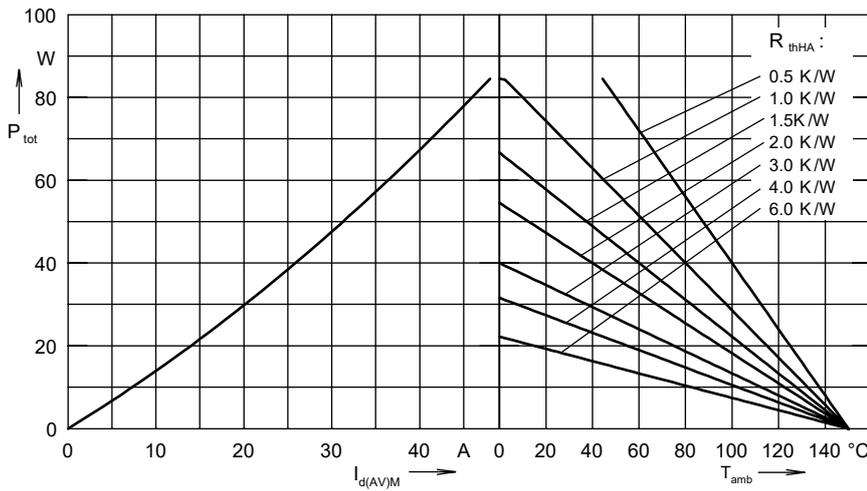


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180°

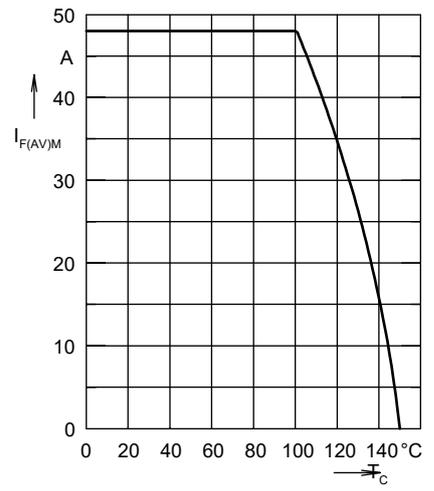


Fig. 5 Max. forward current versus case temperature

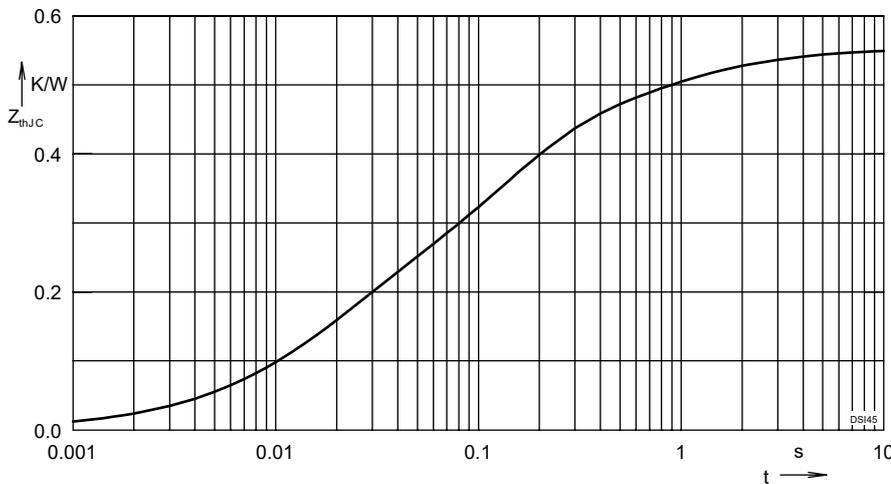


Fig. 6 Transient thermal impedance junction to case



Constants for Z_{thJC} calculation:

i	(R_{thi} K/W)	t_i (s)
1	0.033	0.0006
2	0.095	0.0039
3	0.164	0.0330
4	0.258	0.272