FEATURES

* International standard package
* Planar passivated chips
* Isolation voltage 3600 V~

ADVANTAGES

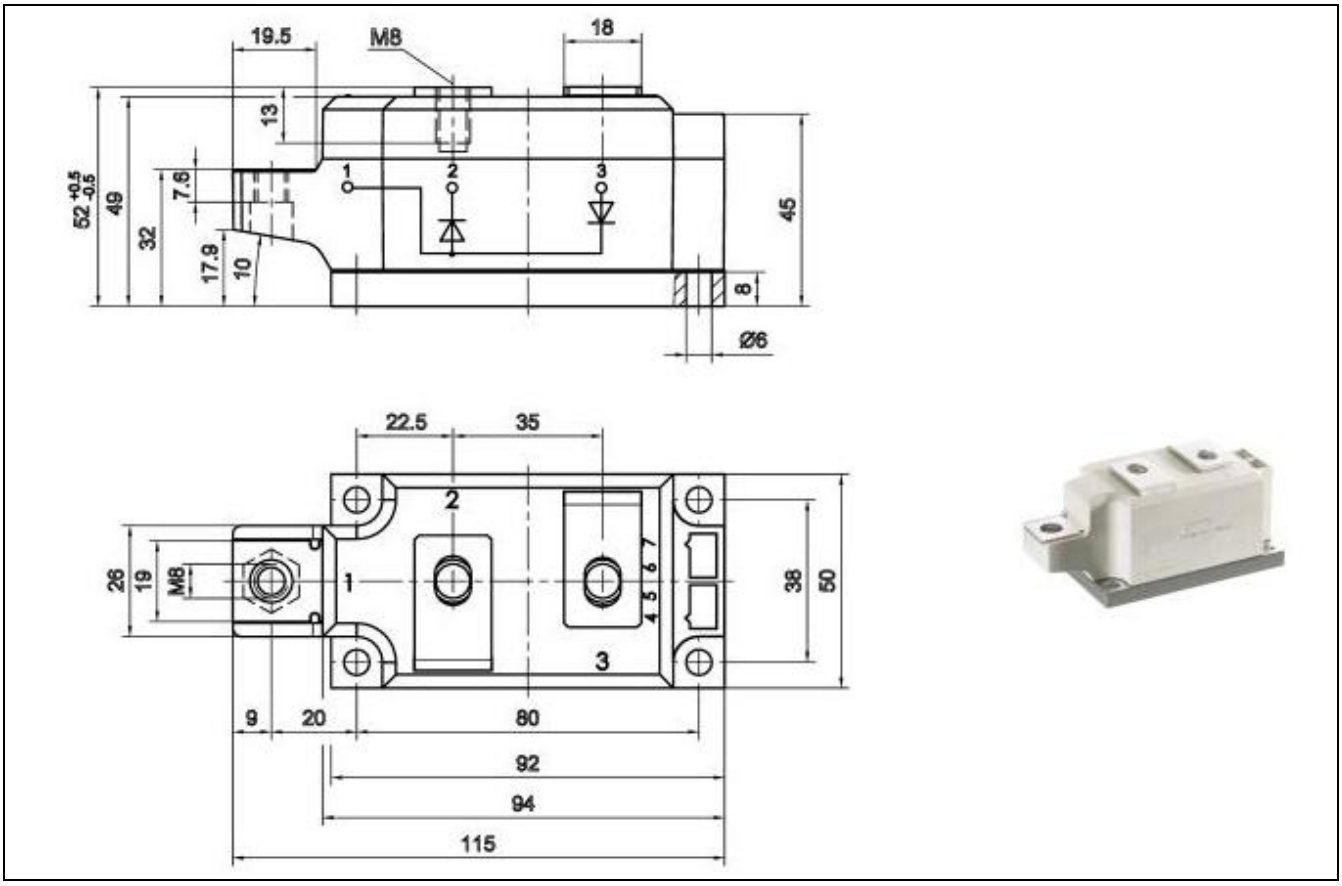
* Space and weight savings
* Simple mounting with two screws
* Improved temperature and power cycling
* Reduced protection circuits

Type	VRSM VDSM V	VRRM VDRM V
DD350-10	**900**	**800**
DD350-12	**1300**	**1200**
DD350-14	**1500**	**1400**
DD350-16	**1700**	**1600**
DD350-18	**1900**	**1800**

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS} I_{FAVM}	$T_{VJ}=T_{VJM}$ T_C=100℃; 180。 sine	560 350	A
I_{TSM},I2t	T_{VJ}=45℃ t=10ms (50Hz), sine V_R=0 t=8.3ms (60Hz), sine	11500 12200	A
	$T_{VJ}=T_{VJM}$ t=10ms(50Hz), sine V_R=0 t=8.3ms(60Hz), sine	9600 10200	
∫ i2dt	T_{VJ}=45℃ t=10ms (50Hz), sine V_R=0 t=8.3ms (60Hz), sine	662000 620000	A^2s
	$T_{VJ}=T_{VJM}$ t=10ms(50Hz), sine V_R=0 t=8.3ms(60Hz), sine	460000 430000	
T_{VJ} T_{VJM} T_{stg}		-40...+125 150 -40...+125	^oC
V_{ISOL}	50/60Hz, RMS t=1min $I_{ISOL}\leqslant$1mA t=1s	3000 3600	V~
M_d	Mounting torque (M5) Terminal connection torque (M8)	2.5-5/22-24 12-13/106-132	Nm/lb.in.
Weight	Typical including screws	750	g

Symbol	Test Conditions	Maximum Ratings	Unit
IRRM	TVJ=TVJM; VR=VRRM; VD=VDRM	40	mA
VF	IF=350A; TVJ=125℃	1.2	V
VTO	For power-loss calculations only	0.75	V
rT	TVJ=TVJM	0.63	mΩ
Qs	TVJ=125℃；IF=400A；-di/dt=50A/us	760	uC
IRM		275	A
Rthjc	Per dione;DC current Per module	0.129 0.065	K/W
Rthjk	Per dione;DC current Per module	0.169 0.0845	K/W
ds	Creepage distance on surface	12.7	mm
dA	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s2

Outline Table



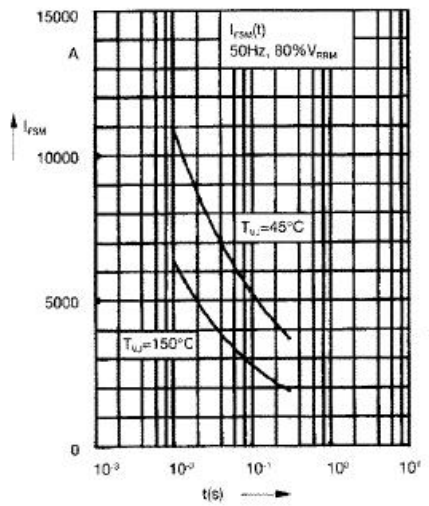


Fig. 1 Surge overload current
I_{FSM}: Crest value, t: duration

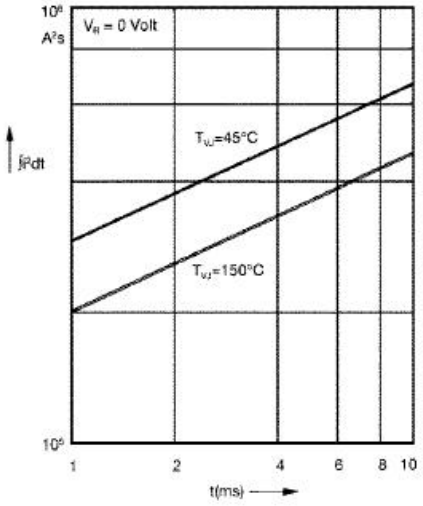


Fig. 2 $\int i^2dt$ versus time (1-10 ms)

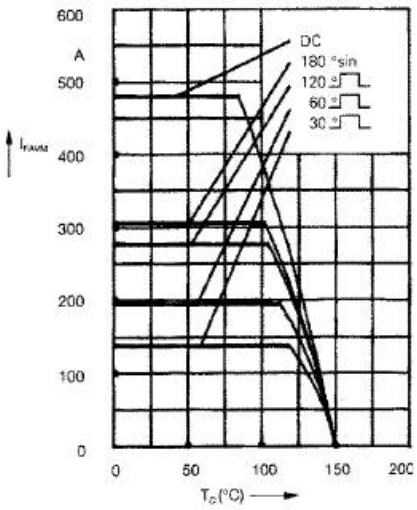


Fig. 2a Maximum forward current at case temperature

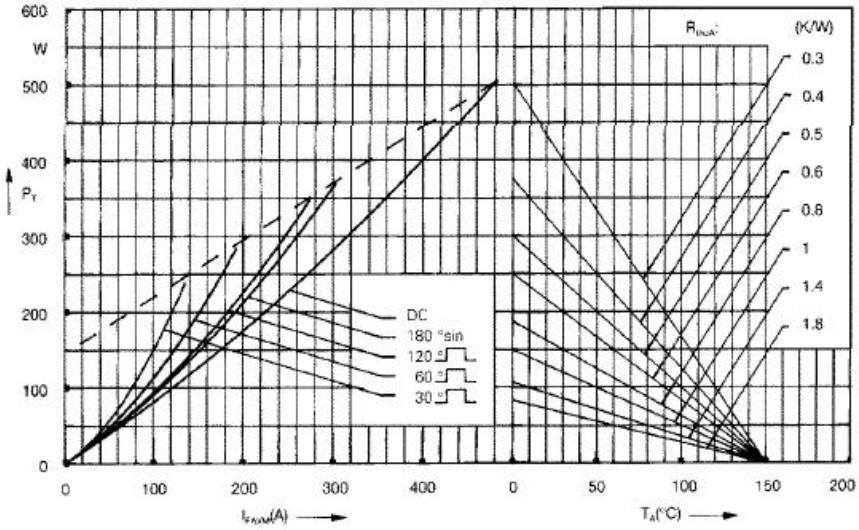


Fig. 3 Power dissipation versus forward current and ambient temperature (per diode)

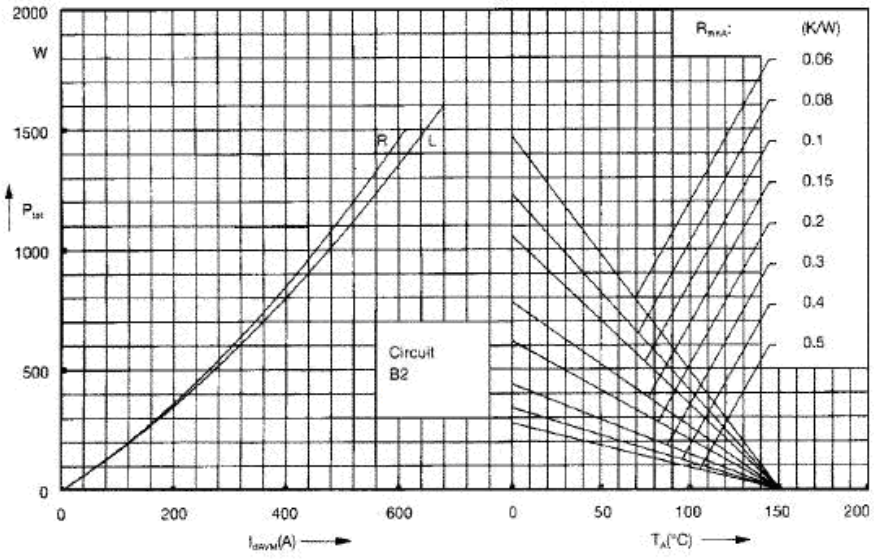


Fig. 4 Single phase rectifier bridge:
Power dissipation versus direct output current and ambient temperature
R = resistive load
L = inductive load

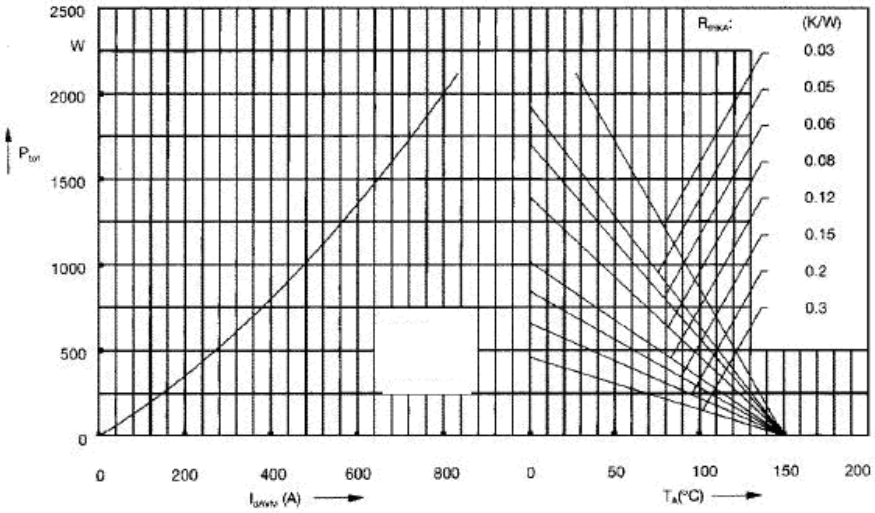


Fig. 5 Three phase rectifier bridge: Power dissipation versus direct output current and ambient temperature

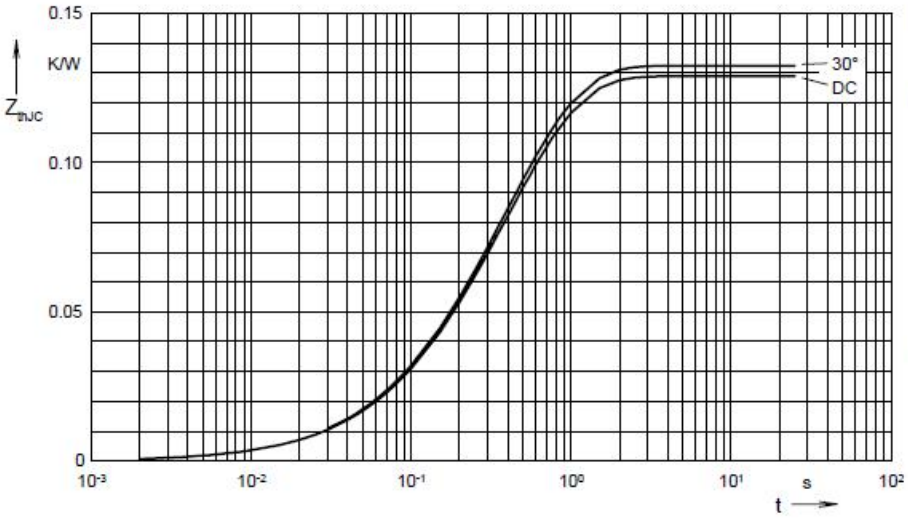


Fig. 6 Transient thermal impedance junction to case (per diode)

R_{thJC} for various conduction angles d:

d	R_{thJC} (K/W)
DC	0.129
180°C	0.131
120°C	0.132
60°C	0.132
30°C	0.133

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.0035	0.0099
2	0.0165	0.168
3	0.1091	0.456

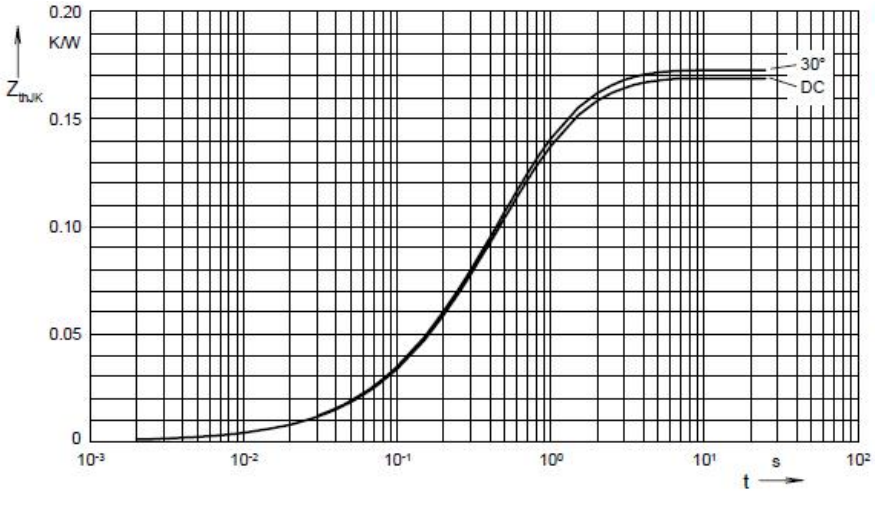


Fig. 7 Transient thermal impedance junction to heatsink (per diode)

R_{thJK} for various conduction angles d:

d	R_{thJK} (K/W)
DC	0.169
180°C	0.171
120°C	0.172
60°C	0.172
30°C	0.173

Constants for Z_{thJK} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.0035	0.0099
2	0.0165	0.168
3	0.1091	0.456
4	0.04	1.36