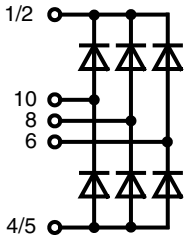
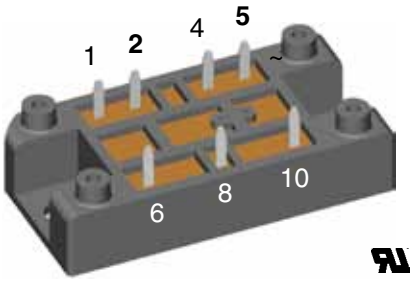
Three Phase Rectifier Bridge

I_{dAV} = 20 A
V_{RRM} = 800-1800 V

$V_{RSM/DSM}$ V	$V_{RRM/DRM}$ V	Type
900	800	VUO 16-08NO1
1300	1200	VUO 16-12NO1
1500	1400	VUO 16-14NO1
1700	1600	VUO 16-16NO1
1900	1800	VUO 16-18NO1





Symbol	Conditions			Maximum Ratings	
I_{dAV}	T_C = 90°C, module			15	A
I_{dAV}	T_A = 45°C (R_{thKA} = 0.5 K/W), module			20	A
I_{dAVM}	module			20	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms	(50 Hz)	100	A
	V_R = 0	t = 8.3 ms	(60 Hz)	106	A
	T_{VJ} = T_{VJM};	t = 10 ms	(50 Hz)	85	A
	V_R = 0	t = 8.3 ms	(60 Hz)	90	A
I^2t	T_{VJ} = 45°C;	t = 10 ms	(50 Hz)	50	A^2s
	V_R = 0	t = 8.3 ms	(60 Hz)	47	A^2s
	T_{VJ} = T_{VJM};	t = 10 ms	(50 Hz)	36	A^2s
	V_R = 0	t = 8.3 ms	(60 Hz)	33	A^2s
T_{VJ}				-40...+130	°C
T_{VJM}				130	°C
T_{stg}				-40...+125	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min		3000	V~
	$I_{ISOL} \leq$ 1 mA	t = 1 s		3600	V~
M_d	Mounting torque	(M5)		2 - 2.5	Nm
		(10-32 UNF)		18 - 22	lb.in.
Weight	Typ.			35	g

Symbol	Conditions		Characteristic Values	
I_R	V_R = V_{RRM}	T_{VJ} = 25°C	0.3	mA
		T_{VJ} = T_{VJM}	5.0	mA
V_F	I_F = 7 A	T_{VJ} = 25°C	1.15	V
V_{T0}	For power-loss calculations only		0.8	V
r_t			50	mΩ
R_{thJH}	per diode,	120° rect.	4.5	K/W
	per module,	120° rect.	0.75	K/W
d_S	Creeping distance on surface		12.7	mm
d_A	Creepage distance in air		9.4	mm
a	Max. allowable acceleration		50	m/s^2

Data according to IEC 60747 and refer to a single diode unless otherwise stated.

Features

- Package with DCB ceramic base plate
- Isolation voltage 3600 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 72873

Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Advantages

- Easy to mount with one screw
- Space and weight savings
- Improved temperature & power cycling

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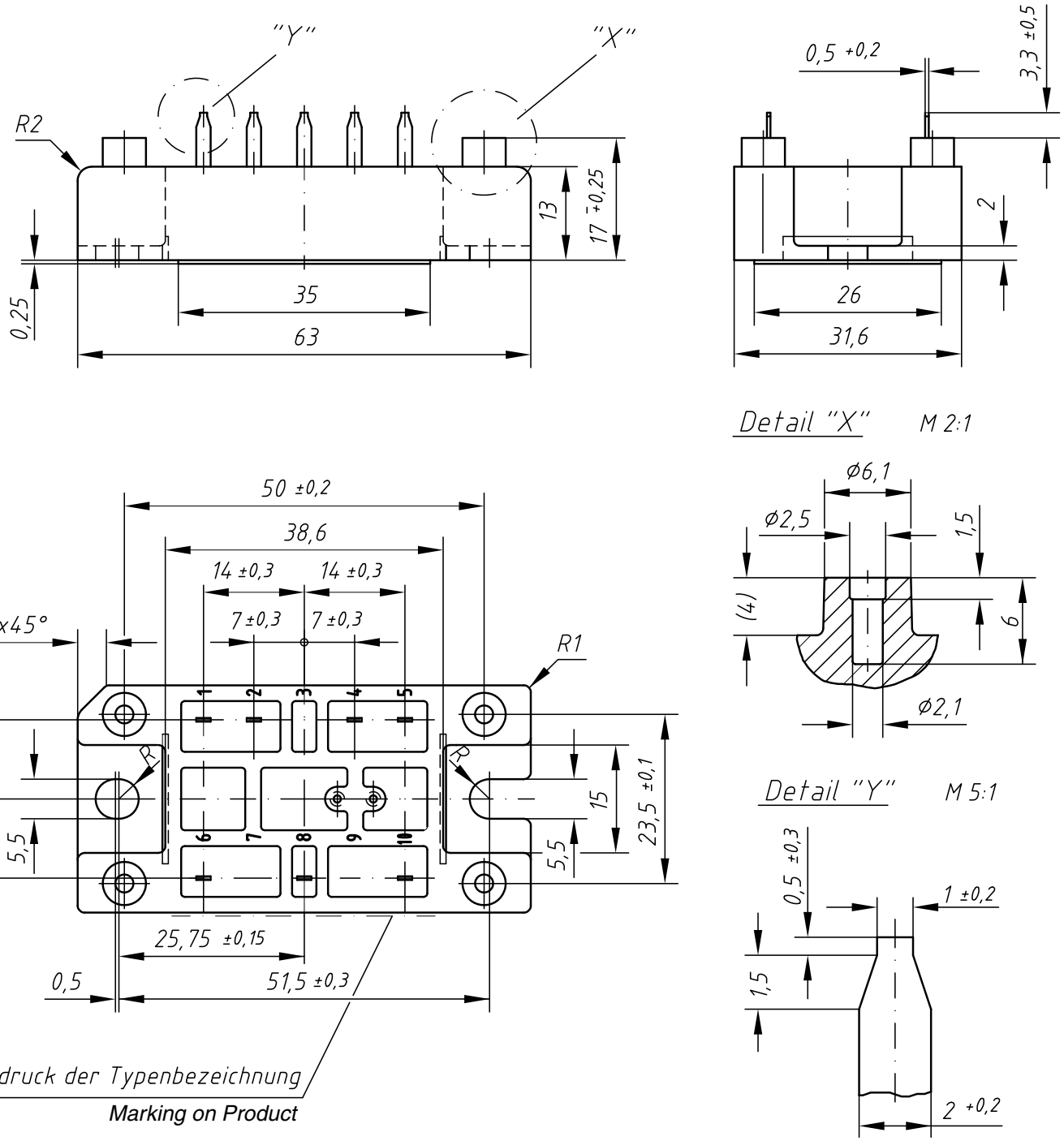
Dimensions in mm (1 mm = 0.0394“)



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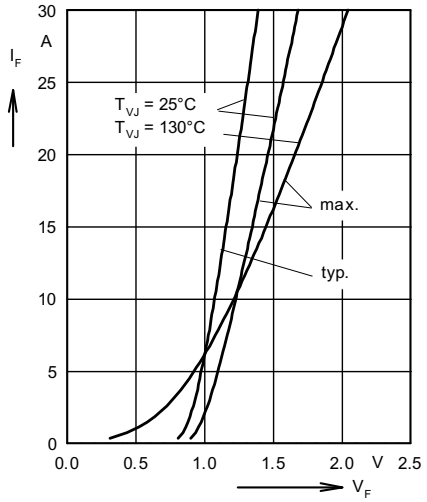

Fig. 1 Forward current versus voltage drop per diode

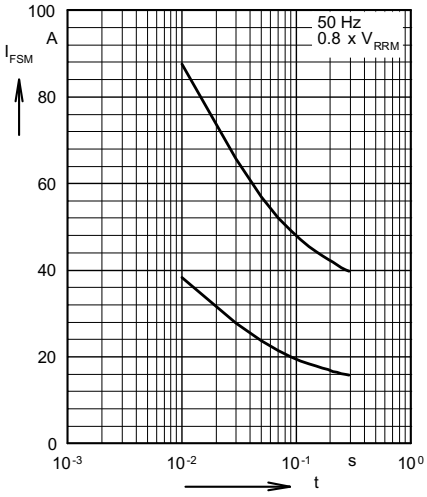

Fig. 2 Surge overload current per diode
I_{FSM}: Crest value. t: duration

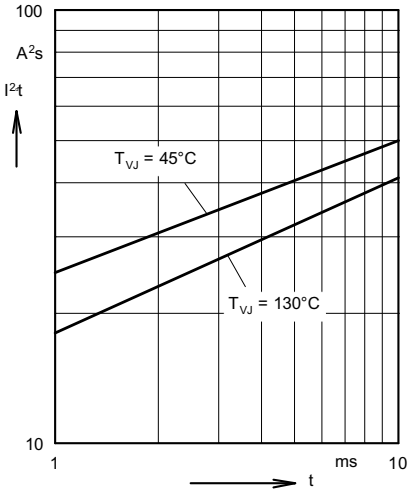

Fig. 3 I^2t versus time (1-10 ms) per diode

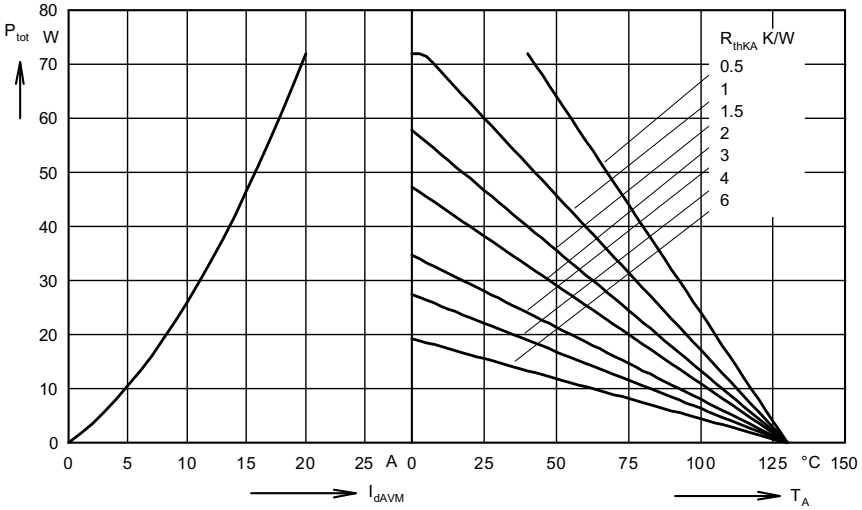

Fig. 4 Power dissipation versus direct output current and ambient temperature

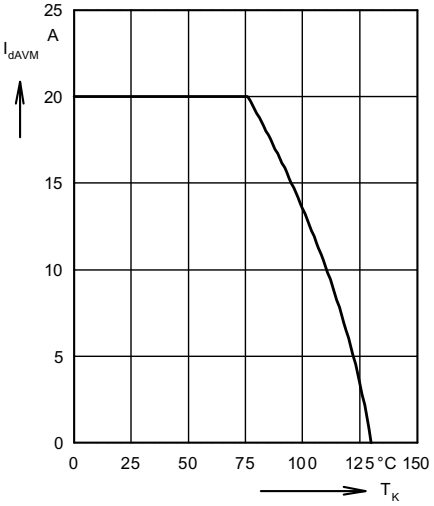

Fig. 5 Maximum forward current at case temperature

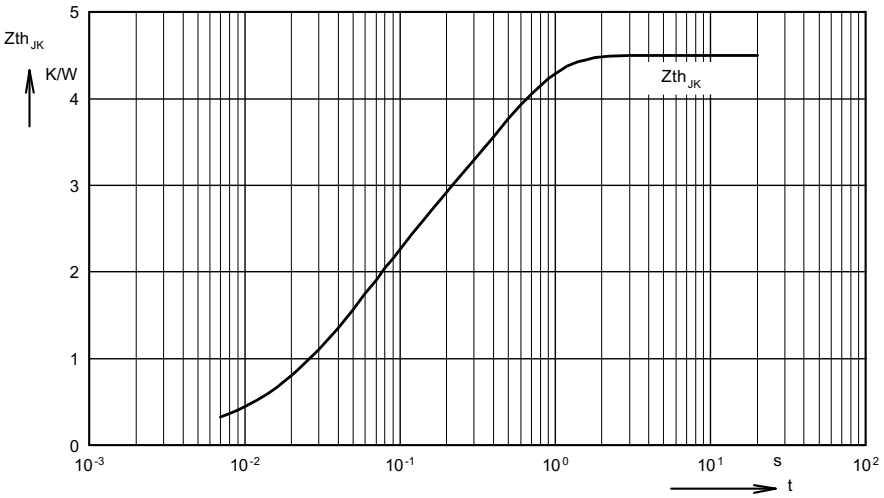

Fig. 6 Transient thermal impedance per diode

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.005	0.008
2	0.1	0.02
3	1.835	0.05
4	2.55	0.4

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