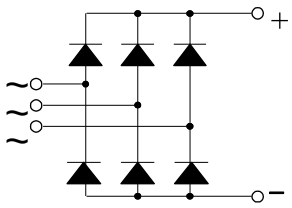
Three Phase Rectifier Bridges

PSD 25T
PSD 25TN

I_{dAVM} = 25 A
V_{RRM} = 1200 V to 1800 V

Preliminary Data Sheet

V_{RSM} V	V_{RRM} V	Type Number	
		Gold-plated terminals	Nickel-plated terminals
1200	1200	PSD 25T/12	PSD 25TN/12
1400	1400	PSD 25T/14	PSD 25TN/14
1600	1600	PSD 25T/16	PSD 25TN/16
1800	1800	PSD 25T/18	PSD 25TN/18



Symbol	Test Conditions			Maximum Ratings	
I_{dAVM}	T_c = 62°C per module			25	A
I_{FSM}	T_{vj} = 45°C, V_R = 0 V	t = 10 ms	50 Hz, sine	380	A
	T_{vj} = T_{vjm}, V_R = 0 V	t = 10 ms	50 Hz, sine	360	A
$\int i^2dt$	T_{vj} = 45°C, V_R = 0 V	t = 10 ms	50 Hz, sine	725	A^2s
T_{vj}				-40 ... +150	°C
T_{vjm}				150	°C
T_{stg}				-40 ... +150	°C
V_{isol}	50/60 Hz, RMS	t = 1 min		2500	V~
	I_{isol} ≤ 1mA	t = 1 s		3000	V~
M_d	Mounting torque	(M5)		2±10%	Nm
		(10-32 UNF)		18±10%	lb in
Weight	typ.			20	g

Symbol	Test Conditions			Characteristic Value	
I_R	V_R = V_{RRM}	T_{vj} = 25°C	≤	0.3	mA
	V_R = V_{RRM}	T_{vj} = T_{vjm}	≤	5.0	mA
V_F	I_F = 150 A	T_{vj} = 25°C	≤	2.2	V
V_{TO}	For power-loss calculations only			0.85	V
r_T	T_{vj} = T_{vjm}			12	mΩ
$R_{th(j-c)}$	per diode; DC current			9.3	K/W
	per module			1.55	K/W
$R_{th(j-s)}$	per diode; DC current			10.2	K/W
	per module			1.7	K/W
d_S	Creeping distance on surface			12.7	mm
d_A	Creeping distance on air			9.4	mm
a	Maximum allowable acceleration			50	m/s^2

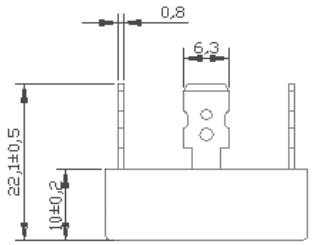
Data according to IEC 60747 refers to a single diode unless otherwise stated

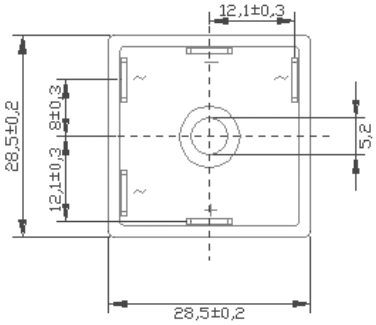
Features
- ¼" gold- or nickel-plated FASTON terminals
- Isolation voltage 3000 V~
- Mesa glass-passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 148688

Applications
- Supplies for DC power equipment
- Input rectifiers for PWM inverters
- Battery DC power supplies
- Field supply of DC motors

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

Package style and outline





Dimensions in mm (1mm = 0.0394")

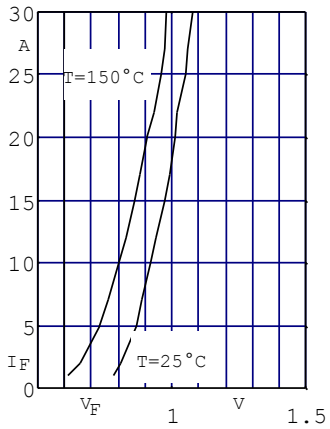


Fig. 1 Forward current versus voltage drop per diode

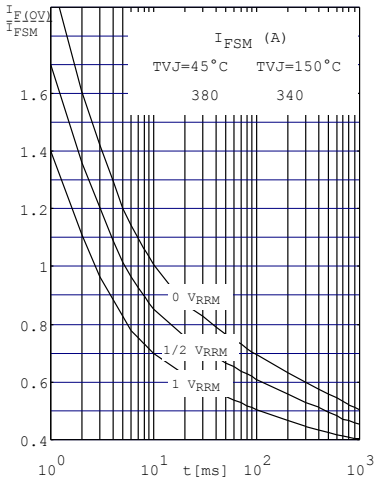


Fig. 2 Surge overload current per diode I_{FSM}: Crest value. t: duration

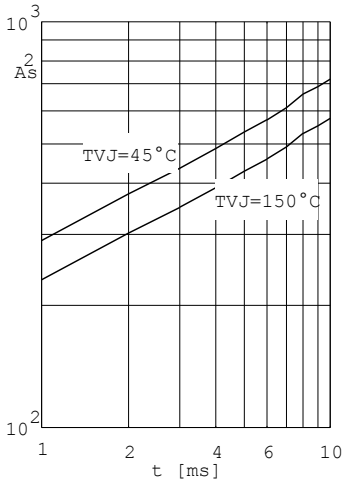


Fig. 3 $\int i^2 dt$ versus time (1-10ms) per diode (or thyristor)

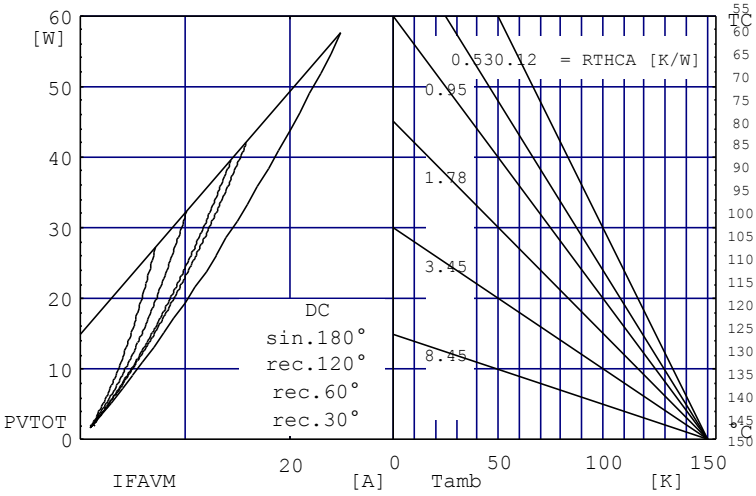


Fig. 4 Power dissipation versus direct output current and ambient temperature

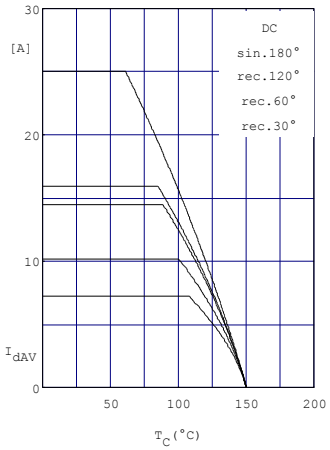


Fig.5 Maximum forward current at case temperature

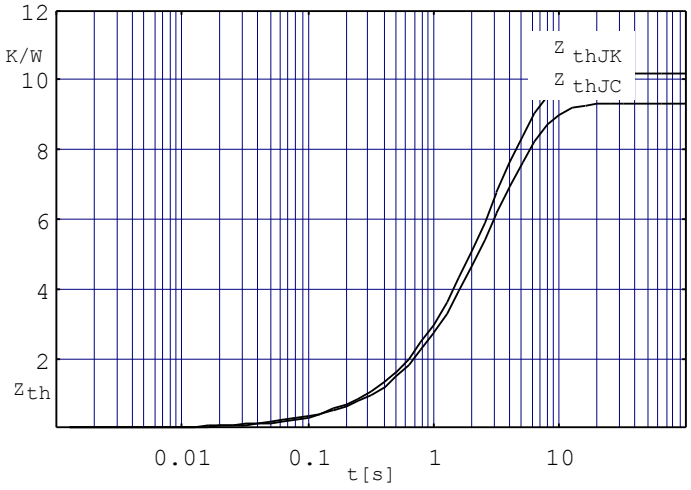


Fig. 6 Transient thermal impedance per diode (or thyristor), calculated

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