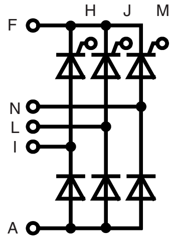
Three Phase Rectifier Bridge

I_{dAV} = 39 A
V_{RRM} = 800/1200 V

Preliminary data

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type	
900	800	VTO 39-08ho7	VVZ 39-08ho7
1300	1200	VTO 39-12ho7	VVZ 39-12ho7



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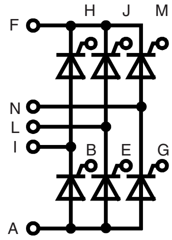

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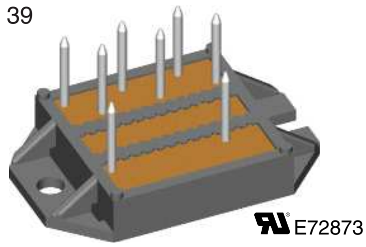

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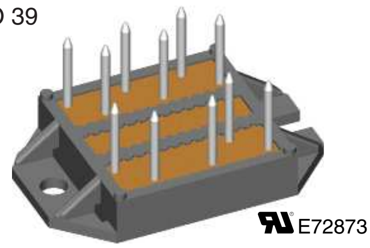


Symbol	Conditions			Maximum Ratings	
I_{dAV} ①	T_C = 85°C; module			39	A
I_{TAVM}	T_C = 85°C (180° sine; per thyristor)			16	A
I_{TSM}	T_{VJ} = 45°C	t = 10 ms	(50 Hz)	200	A
	V_R = 0	t = 8.3 ms	(60 Hz)	210	A
	$T_{VJ} = T_{VJM}$	t = 10 ms	(50 Hz)	180	A
	V_R = 0	t = 8.3 ms	(60 Hz)	190	A
I^2t	T_{VJ} = 45°C	t = 10 ms	(50 Hz)	200	A^2s
	V_R = 0	t = 8.3 ms	(60 Hz)	150	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms	(50 Hz)	160	A^2s
	V_R = 0	t = 8.3 ms	(60 Hz)	150	A^2s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ f = 50 Hz; t_p = 200 µs	repetitive; I_T = 20 A		100	A/µs
	$V_D = {}^2/_3\, V_{DRM}$ I_G = 0.15 A di_G/dt = 0.15 A/µs	non repetitive; $I_T = I_{TAVM}$		500	A/µs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$; $V_D = {}^2/_3\, V_{DRM}$ $R_{GK} = \infty$, method 1 (linear voltage rise)			500	V/µs
V_{RGM}				10	V
P_{GM}	$T_{VJ} = T_{VJM}$	t_p = 30 µs		≤ 5	W
	$I_T = I_{TAVM}$	t_p = 300 µs		≤ 2.5	W
P_{GAVM}				0.5	W
T_{VJ}				-40...+125	°C
T_{VJM}				125	°C
T_{stg}				-40...+125	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min		2500	V~
	I_{ISOL} ≤ 1 mA	t = 1 s		3000	V~
M_d	Mounting torque (M4)			1.5 - 2	Nm
				14 - 18	lb.in.
Weight	Typ.			18	g

① for resistive load at bridge output.

Features

- Package with DCB ceramic base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering

Applications

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

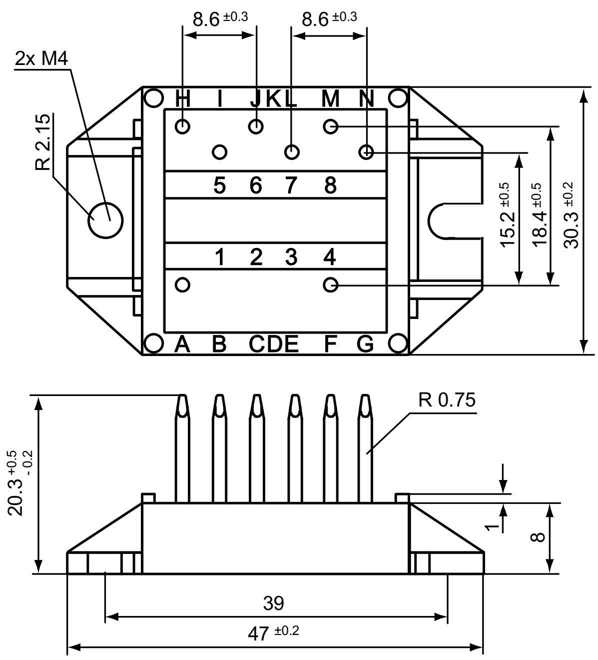
Advantages

- Easy to mount with two screw
- Space and weight savings
- Improved temperature & power cycling capability
- Small and light weight

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

Symbol	Conditions			Characteristic Values	
I_D; I_R	$V_R = V_{RRM}$; $V_D = V_{DRM}$	$T_{VJ} = T_{VJM}$	≤	5	mA
V_T	I_T = 20 A	T_{VJ} = 25°C	≤	1.6	V
V_{T0} r_T	For power-loss calculations only	T_{VJ} = 125°C		0.85 27	V mΩ
V_{GT}	V_D = 6 V	T_{VJ} = 25°C T_{VJ} = -40°C	≤ ≤	1.5 2.5	V V
I_{GT}	V_D = 6 V	T_{VJ} = 25°C T_{VJ} = -40°C	≤ ≤	25 50	mA mA
V_{GD} I_{GD}	$V_D = {}^2/_3 V_{DRM}$	$T_{VJ} = T_{VJM}$	≤ ≤	0.2 3	V mA
I_L	t_p = 10 µs I_G = 0.1 A; di_G/dt = 0.1 A/µs	T_{VJ} = 25°C	≤	75	mA
I_H	V_D = 6 V; $R_{GK} = \infty$	T_{VJ} = 25°C	≤	50	mA
t_{gd}	$V_D = ½V_{DRM}$ I_G = 0.1 A; di_G/dt = 0.1 A/µs	T_{VJ} = 25°C	≤	2	µs
R_{thJC} R_{thJH}	per thyristor / diode; DC per module per thyristor / diode; DC per module			1.3 0.22 1.8 0.3	K/W K/W K/W K/W
d_S d_A a	Creeping distance on surface Creepage distance in air Max. allowable acceleration			11.2 5 50	mm mm m/s^2

Dimensions in mm (1 mm = 0.0394“)



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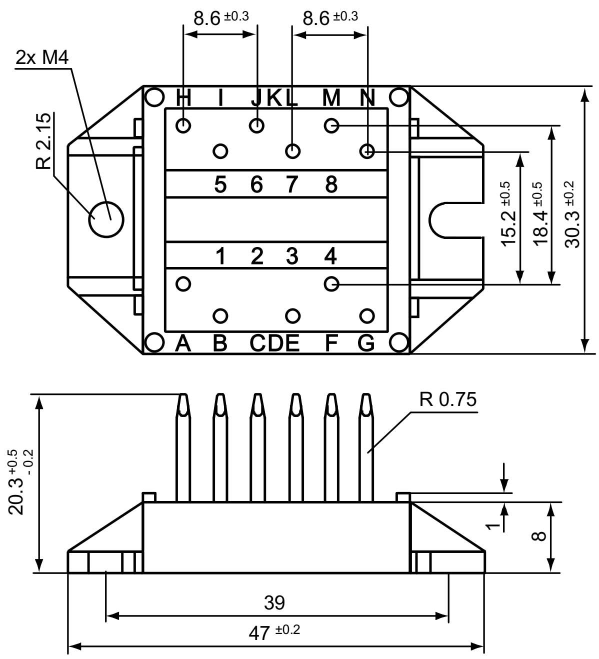

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