

# Three Phase Rectifier Bridge

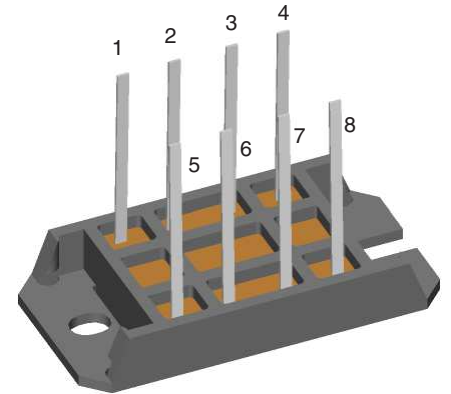
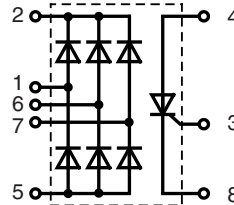
## with Fast Diodes and "Softstart" Thyristor

$$I_{dAVM} = 39 \text{ A}$$

$$I_{TAVM} = 31 \text{ A}$$

$$V_{RRM} = 1200/1600 \text{ V}$$

$V_{RSM}$ V	$V_{RRM}$ V	Type
1300	1200	VUC 36-12go2
1700	1600	VUC 36-16go2



Symbol	Conditions	Maximum Ratings			
		Diode	Thyristor		
$I_{dAV}$	$T_K = 85^\circ\text{C}$ , module	34	-	A	
$I_{dAVM}$	module	39	-	A	
$I_{TAVM}$	$T_K = 85^\circ\text{C}$ , DC	-	31	A	
$I_{FSM}^*, I_{TSM}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine	300 330	400 440	A A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine	270 300	360 400	A A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine	450 460	800 810	$\text{A}^2\text{s}$ $\text{A}^2\text{s}$
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine	365 380	650 670	$\text{A}^2\text{s}$ $\text{A}^2\text{s}$
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ $f = 400 \text{ Hz}$ , $t_p = 200 \mu\text{s}$ $V_D = \frac{2}{3} V_{DRM}$ $I_G = 0.3 \text{ A}$ $di_G/dt = 0.3 \text{ A}/\mu\text{s}$	repetitive, $I_T = 50 \text{ A}$		150	$\text{A}/\mu\text{s}$
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$ ; $V_{DR} = \frac{2}{3} V_{DRM}$ $R_{GK} = \infty$ ; method 1 (linear voltage rise)	non repetitive, $I_T = I_{TAVM}$		500	$\text{A}/\mu\text{s}$
$V_{RGM}$				10	V
$P_{GM}$	$T_{VJ} = T_{VJM}$ $I_T = I_{TAVM}$	$t_p = 30 \mu\text{s}$ $t_p = 10 \text{ ms}$	$\leq$ $\leq$	10 1	W W
$P_{GAVM}$				0.5	W
$T_{VJ}$				-40...+125	$^\circ\text{C}$
$T_{VJM}$				125	$^\circ\text{C}$
$T_{stg}$				-40...+125	$^\circ\text{C}$
$V_{ISOL}$	50/60 Hz, RMS	$t = 1 \text{ min}$		3000	V~
	$I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ s}$		3600	V~
$M_d$	Mounting torque	(M5)		2-2.5	Nm
		(10-32 UNF)		18-22	lb.in.
Weight	typ.			28	g

### Features

- Package with DCB ceramic base plate
- Isolation voltage 3600 V~
- Planar passivated chips
- Fast recovery diodes to reduce EMI
- Separate thyristor for softstart
- Solderable terminals
- UL registered E 72873

### Applications

- Input rectifier for switching power supplies (SMPS)
- Softstart capacitor charging
- Electric drives and auxiliaries

### Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature & power cycling
- Up to 10 dB lower EMI/RFI compared to standard rectifier

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

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