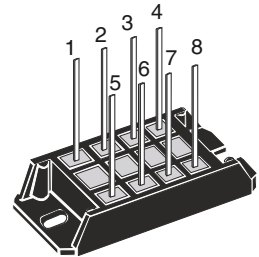
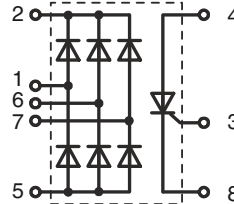


Three Phase Rectifier Bridge

with Fast Diodes and "Softstart" Thyristor

$I_{dAVM} = 28 \text{ A}$
 $I_{TAVM} = 26 \text{ A}$
 $V_{RRM} = 1200-1600 \text{ V}$

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
1300	1200	VUC 25-12go2
1500	1400	VUC 25-14go2
1700	1600	VUC 25-16go2



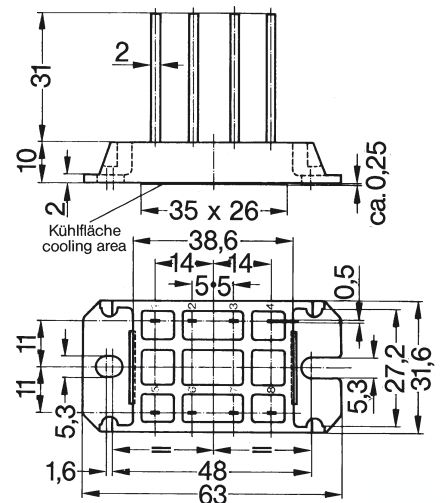
Symbol	Conditions	Maximum Ratings	
		Diode	Thyristor
I_{dAV}	$T_K = 85^\circ\text{C}$; module	25	-
I_{dAVM}	module	28	-
I_{TAVM}	$T_K = 85^\circ\text{C}$; (DC)	-	26
I_{FSM}, I_{TSM}	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	300 330
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	270 300
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	450 460
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	365 380
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ f = 400 Hz, $t_p = 200 \mu\text{s}$ $V_D = 2/3 V_{DRM}$ $I_G = 0.3 \text{ A}$, $di_G/dt = 0.3 \text{ A}/\mu\text{s}$	repetitive, $I_T = 50 \text{ A}$	150
		non repetitive, $I_T = I_{TAVM}$	500
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$; $V_{DR} = 2/3 V_{DRM}$ $R_{GK} = \infty$; method 1 (linear voltage rise)		200
V_{RGM}			10
P_{GM}	$T_{VJ} = T_{VJM}$	$t_p = 30 \mu\text{s}$	≤ 10
	$I_T = I_{TAVM}$	$t_p = 10 \text{ ms}$	≤ 1
P_{GAVM}			0.5
T_{VJ}			-40...+125
T_{VJM}			125
T_{stg}			-40...+125
V_{ISOL}	50/60 Hz, RMS	t = 1 min	3000
	$I_{ISOL} \leq 1 \text{ mA}$	t = 1 s	3600
M_d	Mounting torque (M5) (10-32 UNF)		2-2.5
			18-22
Weight	typ.		28

- 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

Dimensions in mm (1 mm = 0.0394")



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

IXYS reserves the right to change limits, test conditions and dimensions.

20091201a

Symbol	Conditions	Characteristic Values	
		Diode	Thyristor
I_R, I_D	$V_R = V_{RRM}; V_D = V_{DRM}$ $T_{VJ} = T_{VJM}$ $T_{VJ} = 25^\circ\text{C}$	≤ 5 ≤ 0.3	≤ 5 mA ≤ 0.3 mA
V_F, V_T	$I_F = 55$ A; $I_T = 45$ A, $T_{VJ} = 25^\circ\text{C}$	≤ 2.2	≤ 1.5 V
V_{T0}	For power-loss calculations only	1.2	1.1 V
r_T	($T_{VJ} = 125^\circ\text{C}$)	18	11 m Ω
V_{GT}	$V_D = 6$ V; $T_{VJ} = 25^\circ\text{C}$		≤ 1.5 V
I_{GT}	$V_D = 6$ V; $T_{VJ} = 25^\circ\text{C}$		≤ 80 mA
V_{GD}	$T_{VJ} = T_{VJM}; V_D = 2/3 V_{DRM}$		≤ 0.2 V
I_{GD}	$T_{VJ} = T_{VJM}; V_D = 2/3 V_{DRM}$		≤ 5 mA
I_L	$T_{VJ} = 25^\circ\text{C}; t_G = 30$ μs $I_G = 0.3$ A; $di_G/dt = 0.3$ A/ μs		≤ 300 mA
I_H	$T_{VJ} = 25^\circ\text{C}; V_D = 6$ V; $R_{GK} = \infty$		≤ 100 mA
t_{gd}	$T_{VJ} = 25^\circ\text{C}; V_D = 1/2 V_{DRM}$ $I_G = 0.3$ A; $di_G/dt = 0.3$ A/ μs		≤ 2.5 μs
t_q	$T_{VJ} = 125^\circ\text{C}; I_T = 15$ A, $t_p = 300$ μs , $-di/dt = 10$ A/ μs $V_R = 100$ V, $dv/dt = 20$ V/ μs , $V_D = 2/3 V_{DRM}$		typ. 130 μs
t_{rr}	$T_{VJ} = 25^\circ\text{C}; I_F = 10$ A; $-di/dt = 10$ A/ μs , $V_R = 1/2 V_{RRM}$	≤ 1.5	- μs
R_{thJC}	per thyristor (diode); DC current per module	2.3 0.38	0.9 K/W - K/W
R_{thJH}	per thyristor (diode); DC current per module	2.9 0.48	1.1 K/W - K/W
d_s	Creeping distance on surface		7 mm
d_A	Creepage distance in air		7 mm
a	Max. allowable acceleration		50 m/s ²