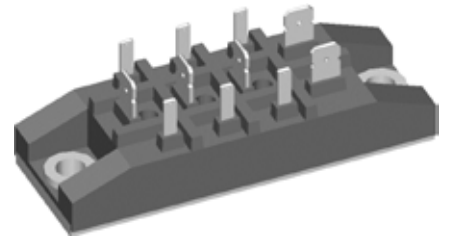
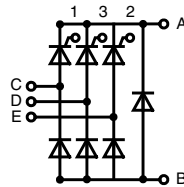


Three Phase Rectifier Bridge

$I_{dAV} = 70 \text{ A}$
 $V_{RRM} = 1600 \text{ V}$

V_{RSM}	V_{RRM}	Type
V_{DSM}	V_{DRM}	
V	V	
1700	1600	VVZF 70-16io7



Symbol	Conditions	Maximum Ratings	
I_{dAV} ①	$T_C = 85^\circ\text{C}$, module	70	A
I_{dAVM} ①	module	70	A
I_{FRMS} , I_{TRMS}	per leg	36	A
I_{FSM} , I_{TSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz)	550	A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	600	A
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz)	500	A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	550	A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz)	1520	A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	1520	A ² s
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz)	1250	A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	1250	A ² s
$(di/dt)_{cr}$	$T_{VJ} = 125^\circ\text{C}$ $f = 50 \text{ Hz}$; $t_p = 200 \mu\text{s}$	repetitive; $I_T = 50 \text{ A}$	150 A/ μs
	$V_D = \frac{2}{3} V_{DRM}$ $I_G = 0.3 \text{ A}$ $di_G/dt = 0.3 \text{ A}/\mu\text{s}$	non repetitive; $I_T = \frac{1}{2} I_{dAV}$	500 A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$; $V_D = \frac{2}{3} V_{DRM}$ $R_{GK} = \infty$, method 1 (linear voltage rise)		1000 V/ μs
V_{RGM}		10	V
P_{GM}	$T_{VJ} = T_{VJM}$	$t_p = 30 \mu\text{s}$	10 W
	$I_T = I_{TAVM}$	$t_p = 500 \mu\text{s}$	5 W
		$t_p = 10 \mu\text{s}$	1 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	$t = 1 \text{ min}$	2500 V~
	$I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ s}$	3000 V~
M_d	Mounting torque (M5) (10-32 UNF)	5 ±15%	Nm
		44 ±15%	lb.in.
Weight	Typ.	100	g

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

Features

- Package with copper base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- ¼" fast-on power terminals

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

Symbol	Conditions	Characteristic Values
$I_D; I_R$	$V_R = V_{RRM}; V_D = V_{DRM}$	$T_{VJ} = T_{VJM} \leq 5$ mA
V_T	$I_T = 80$ A	$T_{VJ} = 25^\circ\text{C} \leq 1.64$ V
V_{T0}	For power-loss calculations only	0.85 V
r_t		11 m Ω
V_{GT}	$V_D = 6$ V	$T_{VJ} = 25^\circ\text{C} \leq 1.5$ V $T_{VJ} = -40^\circ\text{C} \leq 1.6$ V
I_{GT}	$V_D = 6$ V	$T_{VJ} = 25^\circ\text{C} \leq 100$ mA $T_{VJ} = -40^\circ\text{C} \leq 200$ mA
V_{GD}	$V_D = \frac{2}{3}V_{DRM}$	$T_{VJ} = T_{VJM} \leq 0.2$ V
I_{GD}		≤ 5 mA
I_L	$t_p = 10$ μs $I_G = 0.45$ A; $di_G/dt = 0.45$ A/ μs	$T_{VJ} = 25^\circ\text{C} \leq 450$ mA
I_H	$V_D = 6$ V; $R_{GK} = \infty$	$T_{VJ} = 25^\circ\text{C} \leq 200$ mA
t_{gd}	$V_D = \frac{1}{2}V_{DRM}$ $I_G = 0.45$ A; $di_G/dt = 0.45$ A/ μs	$T_{VJ} = 25^\circ\text{C} \leq 2$ μs
t_q	$I_T = 20$ A; $t_p = 200$ μs $V_R = 100$ V; $di/dt = -10$ A/ μs $dv/dt = -15$ V/ μs ; $V_D = \frac{2}{3}V_{DRM}$	$T_{VJ} = 25^\circ\text{C} \leq 250$ μs
R_{thJC}	per thyristor / diode; DC per module	0.9 K/W 0.15 K/W
R_{thJH}	per thyristor / diode; DC per module	1.1 K/W 0.157 K/W
d_s	Creeping distance on surface	16.1 mm
d_A	Creepage distance in air	7.5 mm
a	Max. allowable acceleration	50 m/s ²

Dimensions in mm (1 mm = 0.0394")
