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[VVZF70-16IO7](#)

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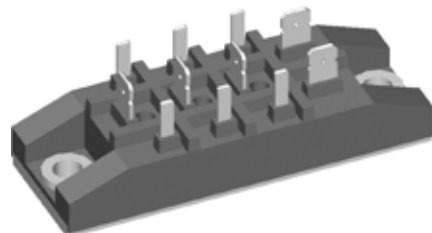
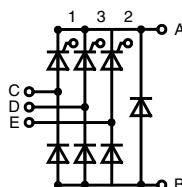
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## Three Phase Rectifier Bridge

$$I_{dAV} = 70 \text{ A}$$

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

$V_{RSM}$	$V_{RRM}$	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 <sup>2</sup> s
	$V_R = 0$ ; $t = 8.3 \text{ ms}$ (60 Hz)	1520	A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$ ; $t = 10 \text{ ms}$ (50 Hz)	1250	A <sup>2</sup> s
	$V_R = 0$ ; $t = 8.3 \text{ ms}$ (60 Hz)	1250	A <sup>2</sup> 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/ $\mu\text{s}$
	$V_D = 2/3 V_{DRM}$ $I_G = 0.3 \text{ A}$ $di_G/dt = 0.3 \text{ A}/\mu\text{s}$	non repetitive; $I_T = 1/2 I_{dAV}$	500 A/ $\mu\text{s}$
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$ ; $V_D = 2/3 V_{DRM}$ $R_{GK} = \infty$ , method 1 (linear voltage rise)		1000 V/ $\mu\text{s}$
$V_{RGM}$		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	$^\circ\text{C}$
$T_{VJM}$		125	$^\circ\text{C}$
$T_{stg}$		-40...+125	$^\circ\text{C}$
$V_{ISOL}$	50/60 Hz, RMS	$t = 1 \text{ min}$	2500 V~
	$I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ s}$	3000 V~
$M_d$	Mounting torque (M5) (10-32 UNF)	5 $\pm$ 15%	Nm
		44 $\pm$ 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
- 1/4" 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 mΩ
$V_{GT}$	$V_D = 6$ V $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	$\leq 1.5$ V $\leq 1.6$ V
$I_{GT}$	$V_D = 6$ V $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	$\leq 100$ mA $\leq 200$ mA
$V_{GD}$	$V_D = \frac{2}{3}V_{DRM}$ $T_{VJ} = T_{VJM}$	$\leq 0.2$ V
$I_{GD}$		$\leq 5$ mA
$I_L$	$t_p = 10 \mu\text{s}$ $I_G = 0.45$ A; $di_G/dt = 0.45$ A/ $\mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 450$ 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/ $\mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 2$ $\mu\text{s}$
$t_q$	$I_T = 20$ A; $t_p = 200 \mu\text{s}$ $V_R = 100$ V; $di/dt = -10$ A/ $\mu\text{s}$ $dv/dt = -15$ V/ $\mu\text{s}$ ; $V_D = \frac{2}{3}V_{DRM}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 250$ $\mu\text{s}$
$R_{thJC}$	per thyristor / diode; DC	0.9 K/W
	per module	0.15 K/W
$R_{thJH}$	per thyristor / diode; DC	1.1 K/W
	per module	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 <sup>2</sup>

Dimensions in mm (1 mm = 0.0394")

