

VBO52 – VBO72
Single Phase Rectifier Bride

Features

- Package with screw terminals
- Isolation voltage 3000 V-
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 72873

Applications

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

Advantages

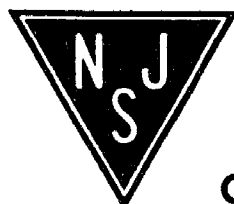
- Easy to mount with two screws
- Space and weight savings
- Improved temperature & power cycling

V_{RSM} V	V_{RRM} V	Type
900	800	VBO 52-08NO7 VBO 72-08NO7
1300	1200	VBO 52-12NO7 VBO 72-12NO7
1700	1600	VBO 52-16NO7 VBO 72-16NO7
1900	1800	VBO 52-18NO7 VBO 72-18NO7

$I_{dAV} = 52/72 \text{ A}$
 $V_{RRM} = 800-1800 \text{ V}$

Symbol	Conditions	Maximum Ratings			
		VBO 52	VBO 72		
I_{dAV}	$T_c = 100^\circ\text{C}$, module	52	72	A	
I_{dAV}	$T_A = 45^\circ\text{C}$ ($R_{thCA} = 0.6 \text{ K/W}$), module	41	49	A	
I_{FSM}	$T_{VJ} = 45^\circ\text{C};$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	550	750	A
		$t = 8.3 \text{ ms}$ (60 Hz), sine	600	820	A
I_{FSM}	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	500	670	A
		$t = 8.3 \text{ ms}$ (60 Hz), sine	550	740	A
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	1520	2800	A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine	1520	2800	A ² s
I^2t	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	1250	2250	A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine	1250	2250	A ² s
T_{VJ}		-40...+150		°C	
T_{VJM}		150		°C	
T_{sig}		-40...+125		°C	
V_{ISOL}	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ min}$	2500	V-	
		$t = 1 \text{ s}$	3000	V-	
M_d	Mounting torque (M5)	5 ±15%		Nm	
	Terminal connection torque (M5)	5 ±15%		Nm	
Weight	typ.	160		g	

Symbol	Conditions	Characteristic Values		
		VBO 52	VBO 72	
I_R	$V_H = V_{RRM}; T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}; T_{VJ} = T_{VJM}$	\leq 0.3	0.3	mA
		\leq 5	5	mA
V_F	$I_F = 150 \text{ A}; T_{VJ} = 25^\circ\text{C}$	\leq 1.8	1.6	V
V_{TD}	For power-loss calculations only	0.8	0.8	V
r_f	$T_{VJ} = T_{VJM}$	8	5	mΩ
R_{thJC}	per diode	1.45	1.1	KW
	per module	0.36	0.28	KW
R_{thJK}	per diode	1.87	1.52	KW
	per module	0.47	0.38	KW
d_s	Creeping distance on surface	10		mm
d_A	Creepage distance in air	9.4		mm
a	Max. allowable acceleration	50		m/s ²



Quality Semi-Conductors

Dimensions in mm (1 mm = 0.0394")

