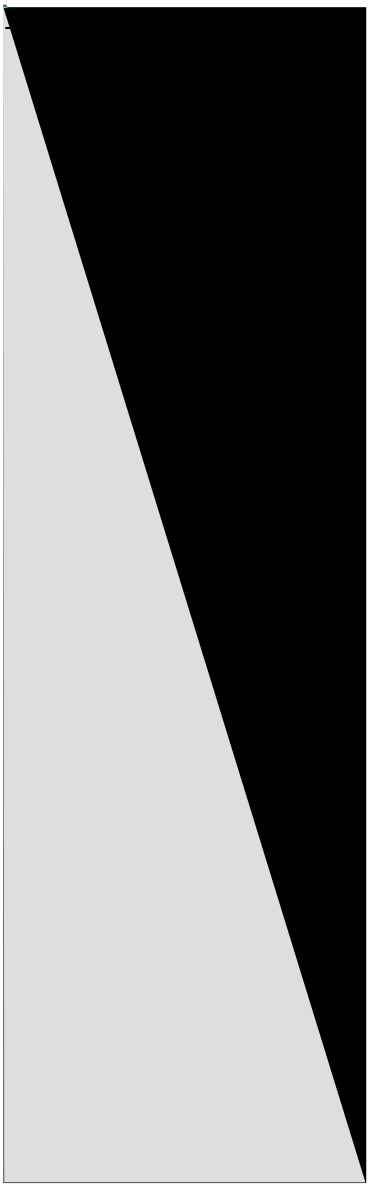
JOCDA1BB-M5

Rev.A.1.0

The products are gate driver opto-couplers in the SOP5 package. The device consists of an infrared LED optically coupled to an integrated high-gain, high-speed photodetector IC chip. It provides guaranteed performance and specifications at temperature up to 110 . It is physically smaller and compliant with international safety standards for reinforced insulation. It thus provides a smaller footprint solution for applications that require safety standard certification. An internal noise shield provides a guaranteed common-mode transient immunity of ±35 kV/μs. It is ideal for small class IGBT and power MOSFET gate drive. The products are widely used in industrial inverters, IGBT gate drivers, MOSFET gate drivers, induction cooktop and home appliances.



1A maximum peak output current
High isolation 3750 VRMS
Buffer logic type
Operating temperature range -40°C to 110°C
REACH & RoHS compliance
HBM: H3A; MM: M4; CDM: C3
CQC approved
VDE approved
UL approved

LED	V_{CC}-V_{EE} (Positive Going)	V_{CC}-V_{EE} (Negative Going)	Output
OFF	0-30V	0-30V	Low
ON	0-6.9V	0-5.9V	Low
ON	6.9V-8.7V	5.9V-7.5V	TRANSITION
ON	8.7V-30V	7.5V-30V	HIGH

(Temperature=25°C)

Parameter	Symbol	Value	Unit
Forward Current	I_F	5	

LED

	Low Level Output Voltage	V_{OL}	I_O=100mA	-	0.075	0.2	V
	Threshold Input Current	I_{FLH}	V_O 5V	-	2.5	5	mA
	Threshold Input Voltage	V_{FHL}	V_O 5V	0.8	-	-	V
	Supply Voltage	V_{CC}	-	10	-	30	V

Characteristics	Symbol	Min.	Typ.	Max.	Unit
Input On-state Current	$I_{F(ON)}$	7	-	10	mA
Input Off-state Voltage	$V_{F(OFF)}$	0	-	0.8	V
Supply Voltage	V_{CC}	10	-	30	V
Operating Frequency	f	-	-	50	kHz

: The recommended operating conditions are given as a design guide necessary to obtain the intended performance of the device. Each parameter is an independent value. When creating a system design using this device, the electrical characteristics specified in this datasheet should also be considered.

: Aceramic capacitor(0.1μF) should be connected between pin 6 (V_{CC}) and pin 4 (GND) to stabilize the operation of a high-gain linear amplifier. Otherwise, this photocoupler may not switch properly. The bypass capacitor should be placed within 1 cm of each pin.

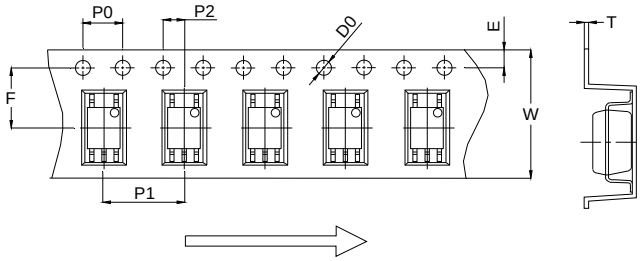
: The rise and fall times of the input on-current should be less than 0.5 μs.

: If the rising slope of the supply voltage (V_{CC}) for the detector is steep, stable operation of the internal circuits cannot be guaranteed. Be sure to set 3 V/μs or less for a rising slope of the V_{CC}.

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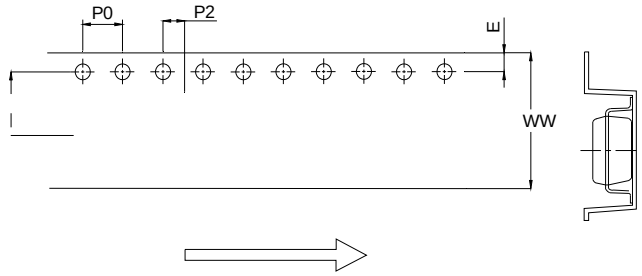
JOCDA1BB

Option None



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	4.40	4.50	4.60	0.173	0.177	0.181
T	0.25	0.30	0.35	0.010	0.012	0.014
W	11.90	12.00	12.30	0.469	0.472	0.484

Option R



Note:

1. Reflow soldering is recommended at the temperatures and times shown, no more than three times.

2. Avoid direct contact between the epoxy body and any tools or surfaces exceeding its maximum storage temperature.

3. Application of pressure on the epoxy body is prohibited at elevated temperatures. In specific scenarios, any applied force must not exceed 2.5N.

4. Ensure the component has cooled to ambient temperature before proceeding with any subsequent manufacturing steps.

5. The component has a shelf life of one year when stored under standard conditions.

6. Recommend storage Temp.: 0~40°C;

Recommend storage humidity: <60%;

MSL level: MSL 1

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