



DESCRIPTION:

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°C. 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/ μ s. 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.

MAIN FEATURES

1A maximum peak output current

High isolation 5000 VRMS

Buffer logic type

Operating temperature range -40°C to 110°C

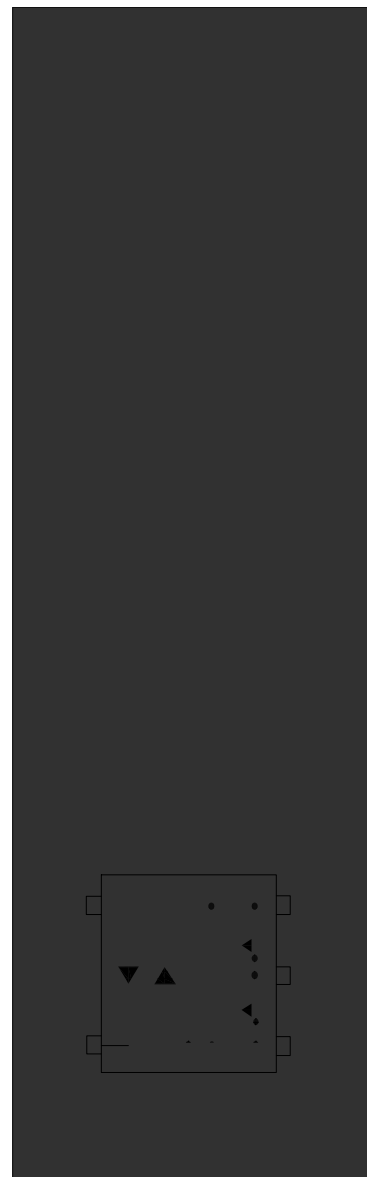
REACH & RoHS compliance

HBM: H3A; MM: M4; CDM: C3

CQC approved

VDE approved

UL approved



Truth Table

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



ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Parameter		Symbol	Value	Unit
LED	Forward Current	I _F	50	mA
	Peak Forward Current	I _{FP}	1	A
	Reverse Voltage	V _R	6	V



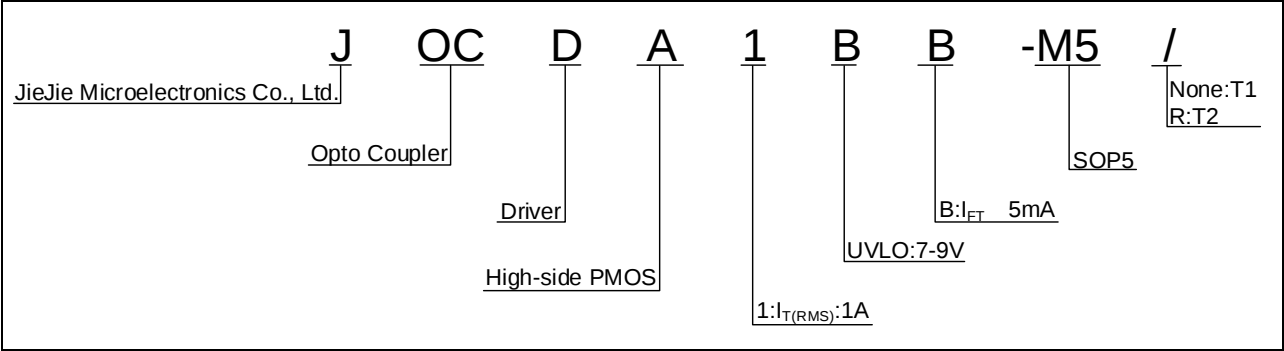
	Low Level Output Voltage	V_{OL}	$I_o=100mA$	-	0.075	0.2	V
	Threshold Input Current	I_{FLH}	$V_o \ 5V$	-	2.5	5	mA
	Threshold Input Voltage	V_{FHL}	$V_o \ 5V$	0.8	-	-	V
	Supply Voltage	V_{CC}	-	10	-	30	V
	UVLO Threshold	VUVLO+	$V_o \ 2.5V,$ $I_F=5mA$	7.5	8.7	9.5	V



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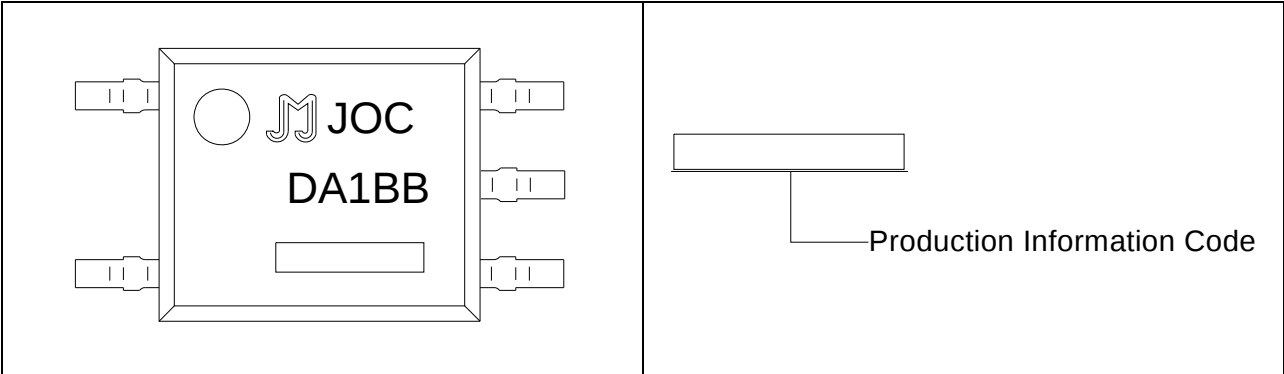
Min.	Typ.	Max.	Unit
7	-	10	mA
0	-	0.8	V
10	-	30	V

ORDERING INFORMATION



Packing Quantity			
Option	Quantity	Quantity – Inner box	Quantity –Outer box

MARKING





Characteristics Curves

FIG.1: Forward Current vs. Forward Voltage

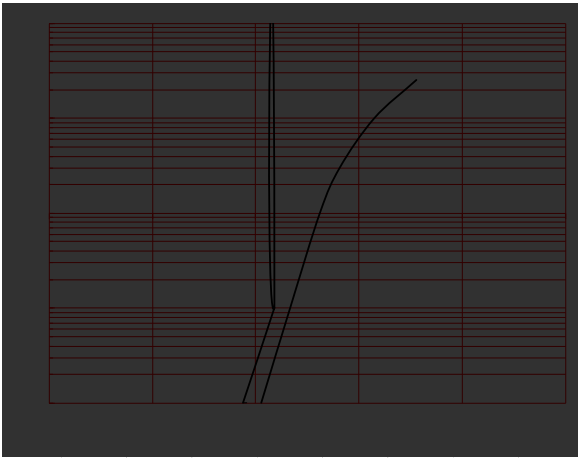


FIG.2: Max. Allowable LED Forward Current vs. Ambient Temperature

FIG.7: Low-level Output Voltage vs. Ambient Temperature

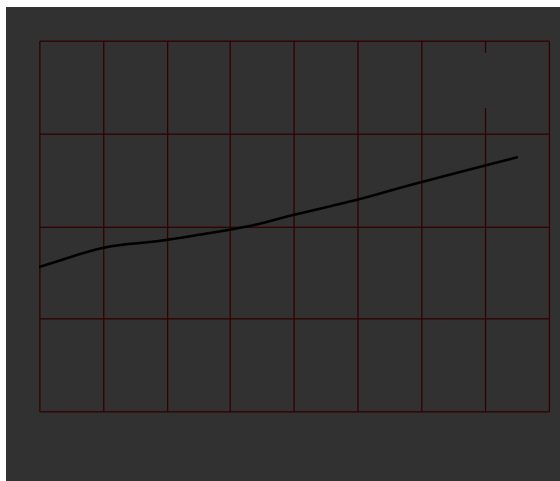


FIG.8: High-level Output Voltage vs. Ambient Temperature

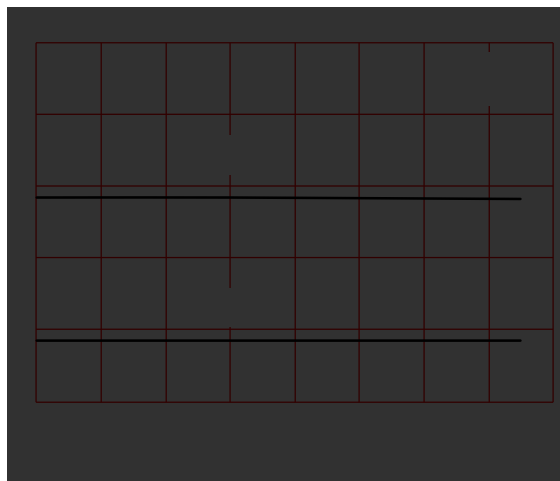


FIG.9: Low-level Output Voltage vs. Peak Low-level Output Current

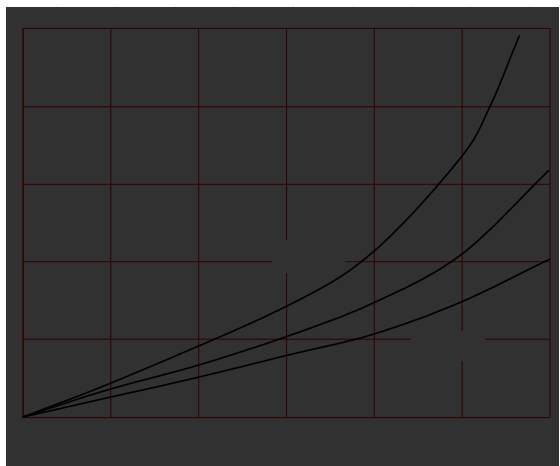


FIG.10: High-level Output Voltage Drop vs. Peak High-level Output Current

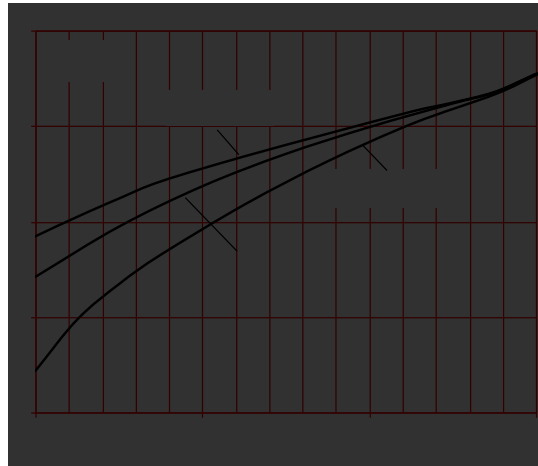


FIG.11: Propagation Delay Time,Pulse Width Distortion vs. Ambient Temperature

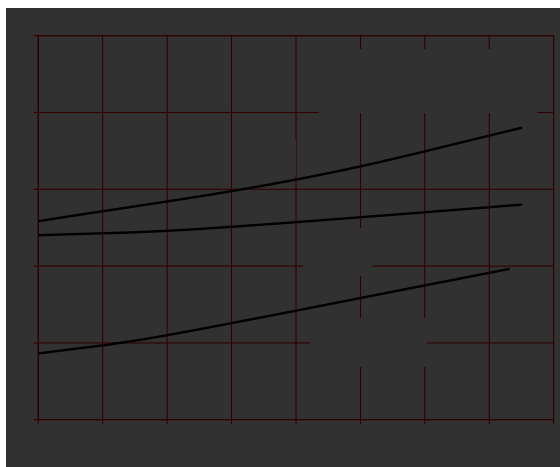


FIG.12: Propagation Delay Time,Pulse Width Distortion vs. Forward Current

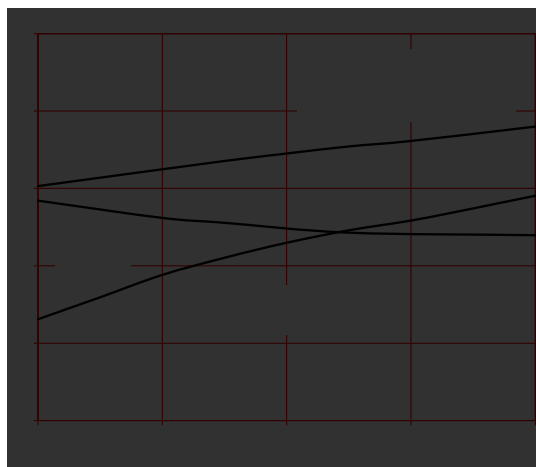
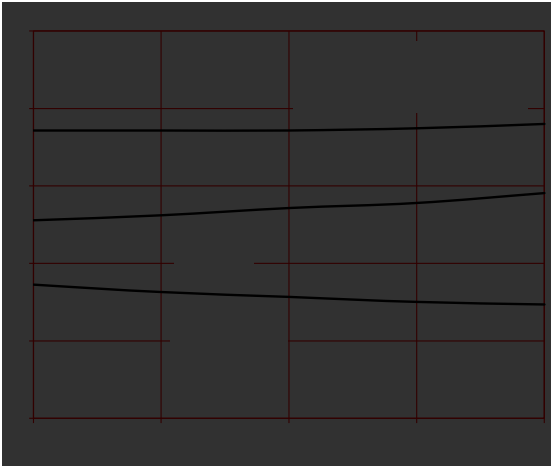


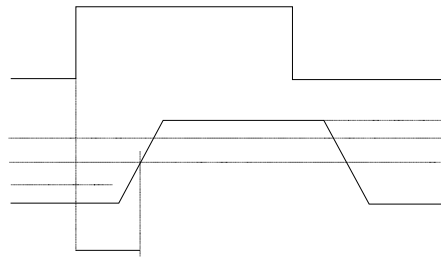
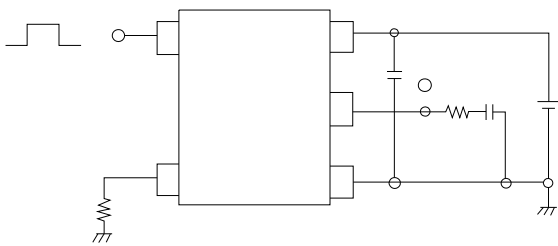


FIG.13: Propagation Delay Time,Pulse Width Distortion vs. Supply Voltage

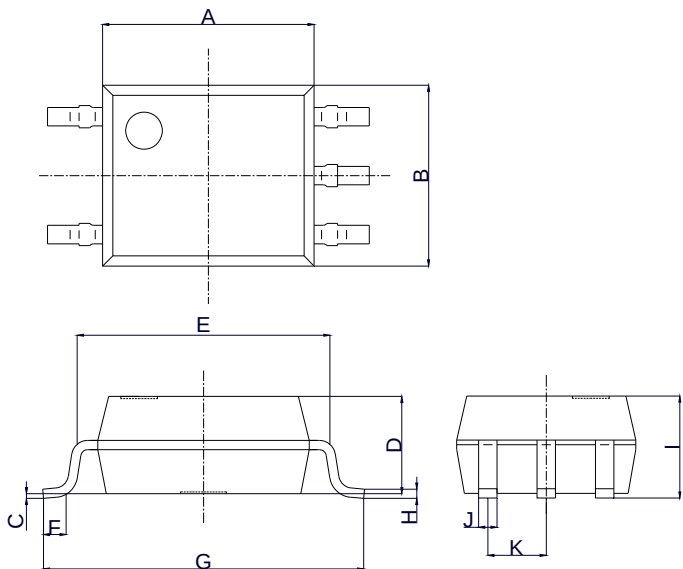


Test Circuits

FIG.14: Switching Time Test Circuit and Waveform

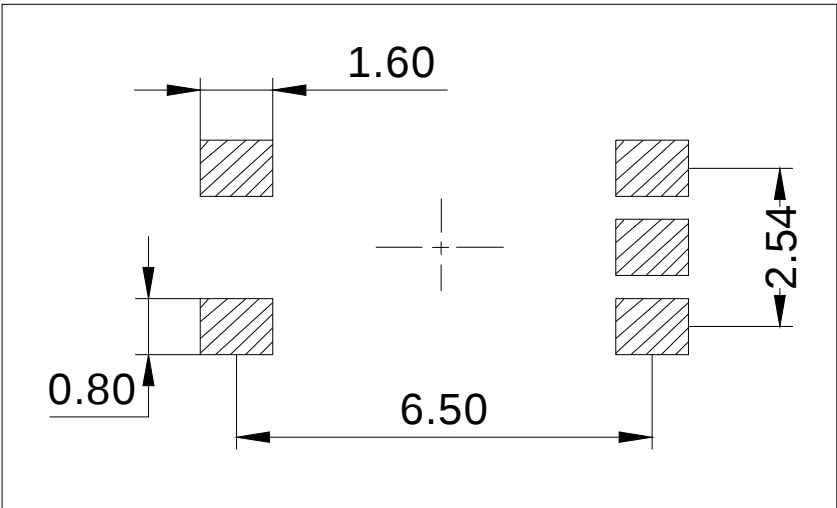


Package Dimension (Unit: mm)



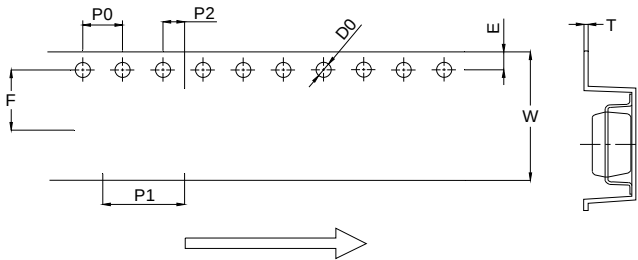
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	3.60		4.20	0.142		0.165
C	0.00		0.20	0.000		0.008
D	1.90		2.30	0.075		0.091
E	5.00		5.60	0.197		0.220
F	0.34		0.94	0.013		0.037
G	6.70		7.30	0.264		0.287
H	0.10		0.30	0.004		0.012
I	2.00		2.40	0.079		0.094
J	0.25		0.55	0.010		0.022
K	1.02		1.52	0.040		0.060

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)



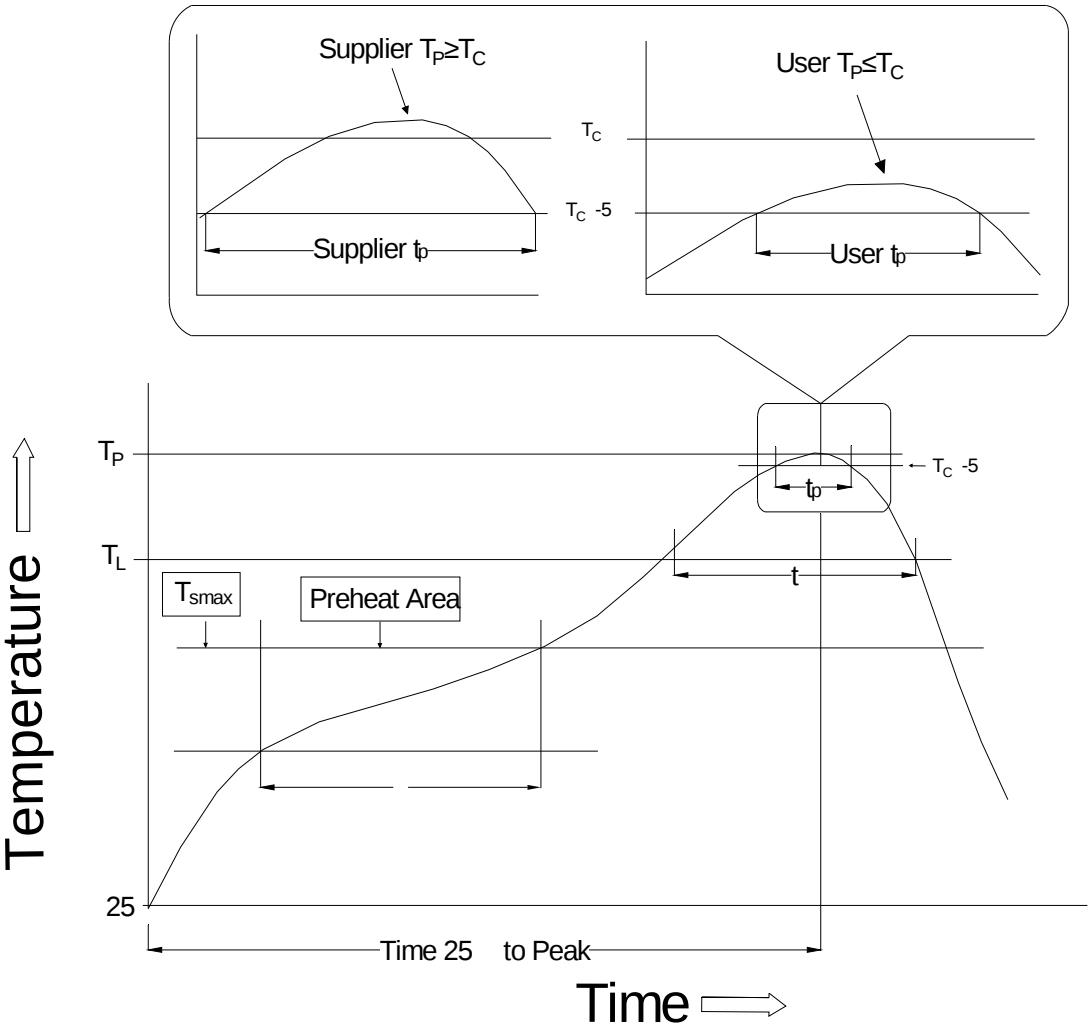
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option None



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0						
P0						
P1						
P2						
E						
F						
T						
W Ā	/					

REFLOW INFORMATION





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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