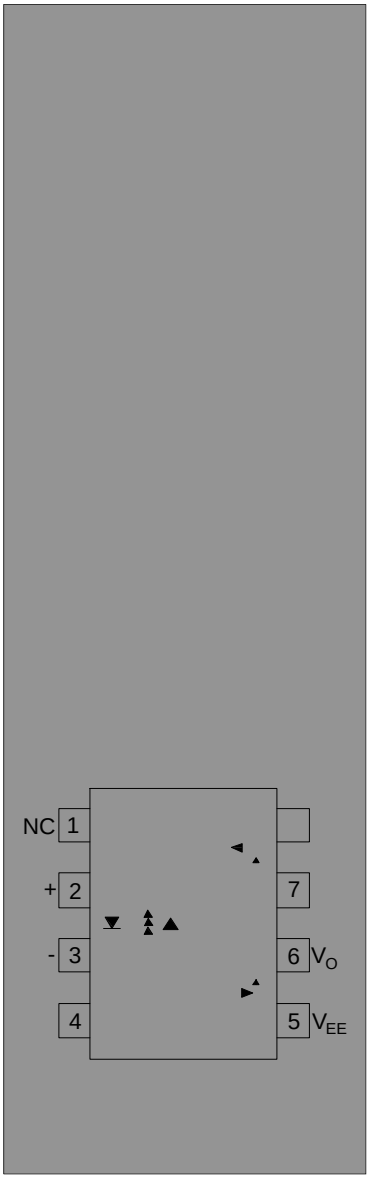
JOCDA3AB-W8

Rev.A.1.0

The products are gate driver opto-couplers in a plastic WSOP8 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.



3A maximum peak output current
High isolation 7500 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	0-12.1V	0-11.1V	Low
ON	12.1V-13.5V	11.1V-12.4V	TRANSITION
ON	13.5V-30V	12.4V-30V	HIGH

(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
	Power Dissipation	P_D	100	mW
Detector	Output Voltage	V_O	35	V
	Supply Voltage	V_{CC}	35	V
	Power Dissipation	P_C	400	mW
Isolation Voltage		V_{iso}	7500	Vrms
Operating Temperature		T_{opr}	-40~110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~125	
Total Power Dissipation		P_{tot}	500	mW
Soldering Temperature		T_{sol}	260	

: 100μs pulse, 100Hz frequency

: AC for 1minute, R.H.=40~60%

(Temperature=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V					

Input

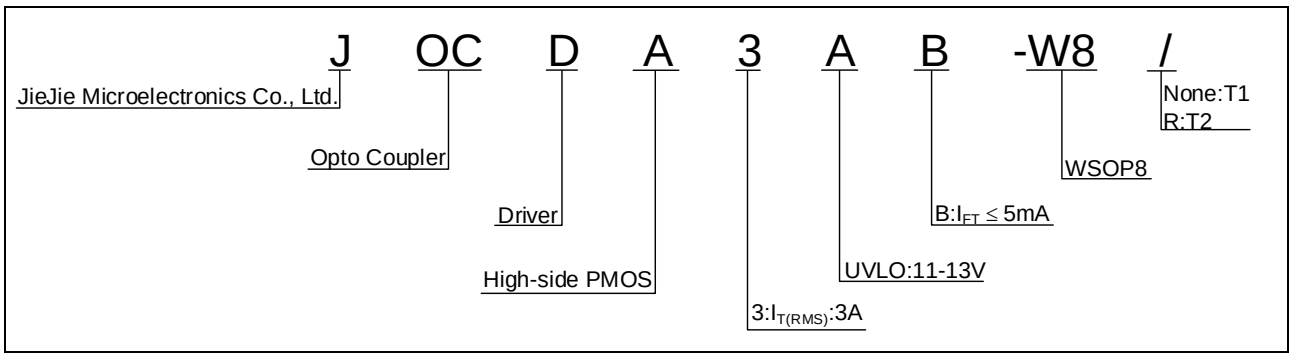
	High Level Output Voltage	V_{OH}	I_F=5mA, V_{CC}=10V, I_O=-100mA	6	8.4	-	V
	Low Level Output Voltage	V_{OL}	V_F=0.8V, V_{CC}=10V, I_O=100mA	-	0.3	1	V
	Threshold Input Current	I_{FLH}					

Common Mode Transient Immunity at Low Level Output	$\|CM_L\|$	I_F=0mA V_{CC}=30V, T_a=25 , V_O(max)=1V V_{CM}=1000Vpp	±35	-	-	kV/μs

All Typical values at T_a=25

: Input signal (f=25kHz,duty=50%, tr=tf=5ns or less). C_L is less than 15 pF which includes probe and stray wiring capacitance.

: CM_H is the maximum rate of fall of the common mode voltage that can be sustained with the output voltage in the logic high state (VO 26V).



None/R	1200 Units/Reel

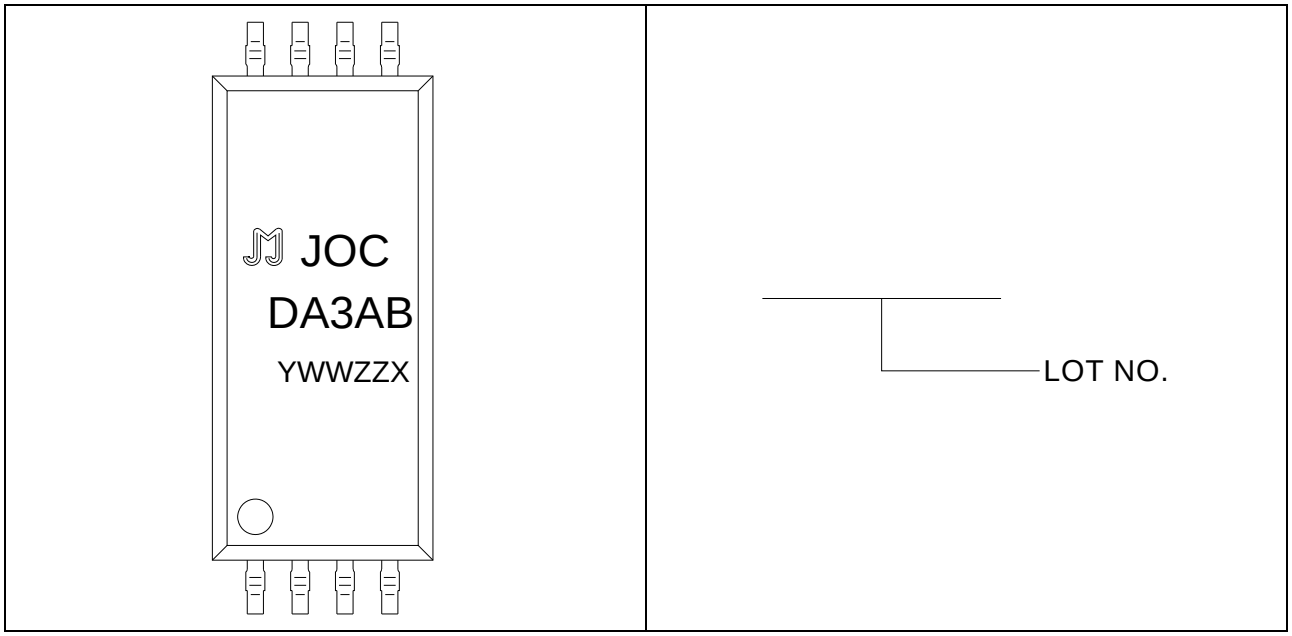


FIG.1: Forward Current vs. Forward Voltage

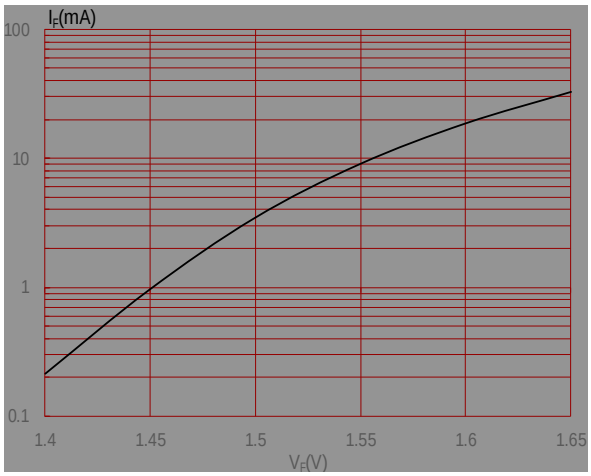


FIG.2: Max. Allowable LED Forward Current vs. Ambient Temperature

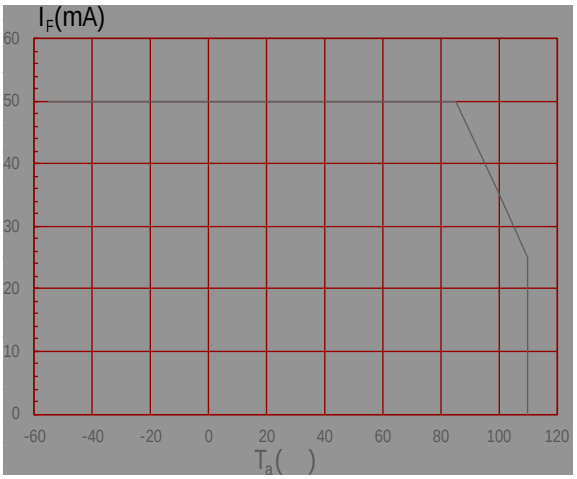


FIG.3: Collector Power Dissipation vs. Ambient Temperature

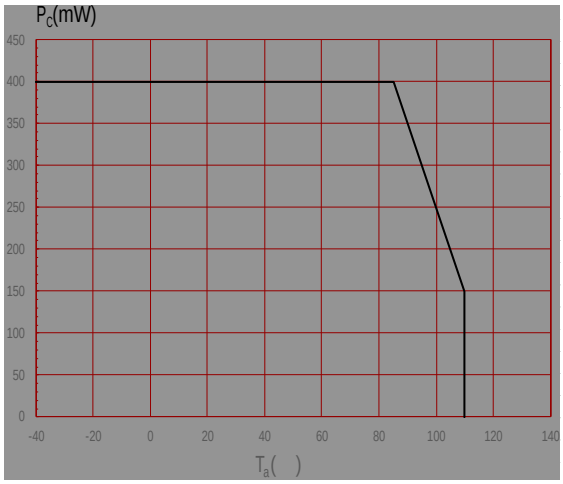


FIG.4: Threshold Input Current vs. Ambient Temperature

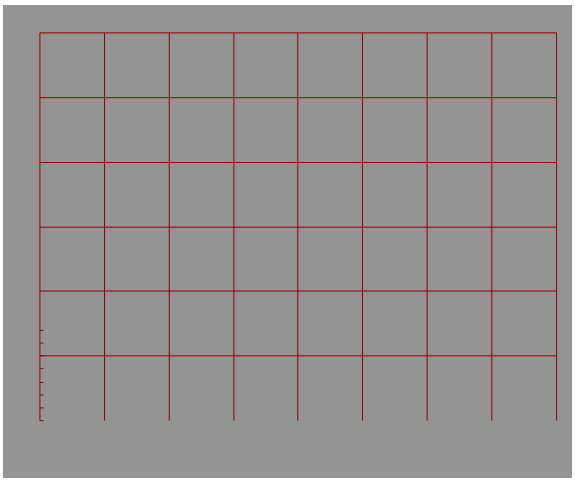


FIG.13: Propagation Delay Time vs. Supply Voltage

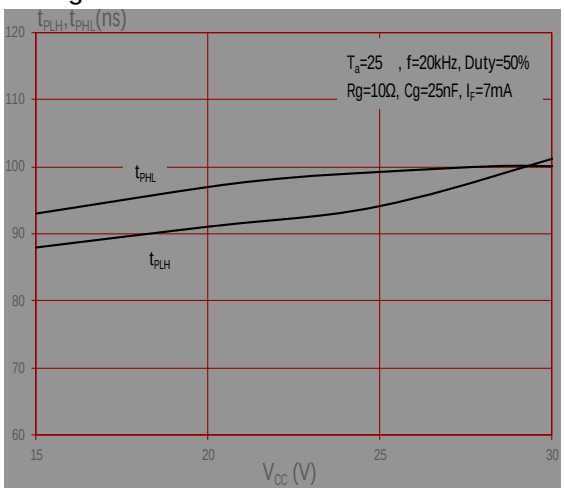
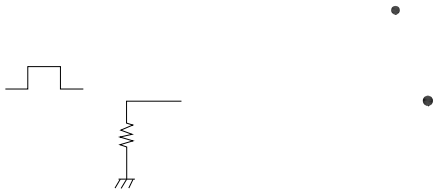
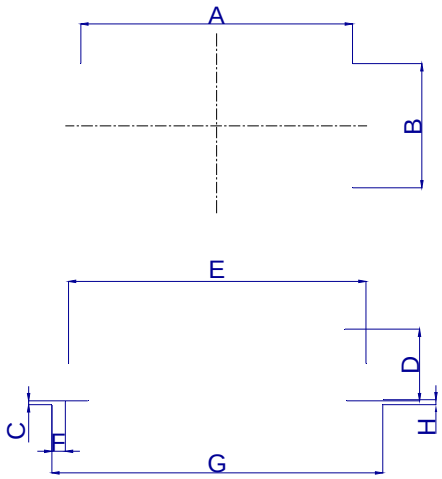
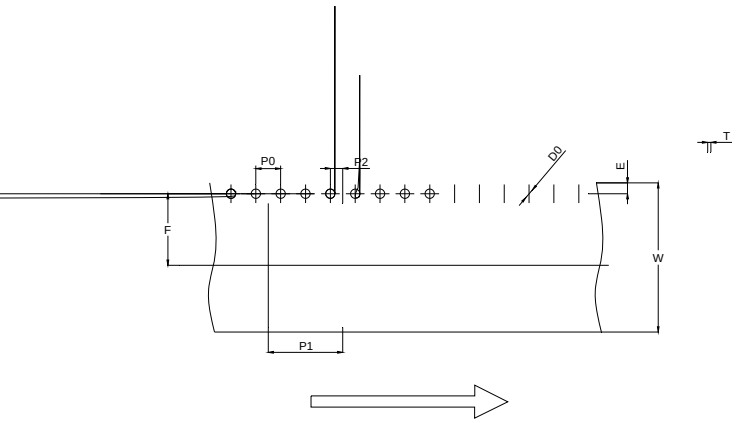


FIG.14: Switching Time Test Circuit and Waveform

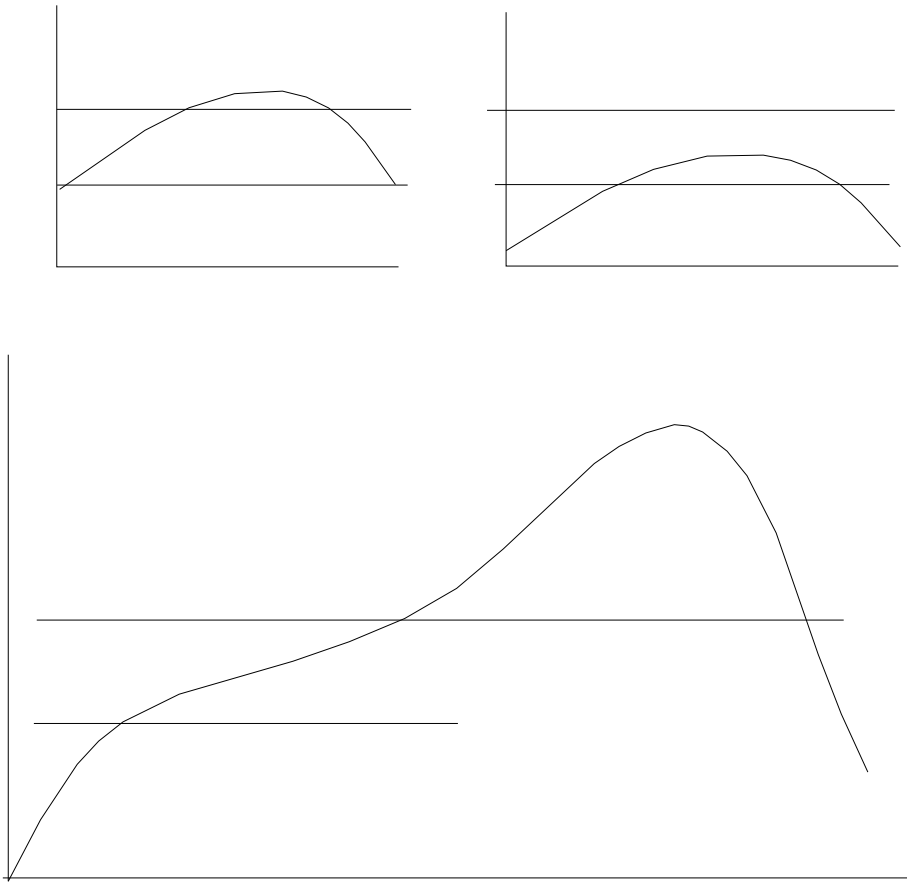




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	13.50		13.70	0.531		0.539
B	6.15		6.35	0.242		0.250
C	0.10		0.30	0.004		0.012
D	3.50		3.70	0.138		0.146
E	14.71		15.31	0.579		0.603
F	0.52		1.02	0.020		0.040
G	16.36		16.86	0.644		0.664
H	0.10		0.40	0.004		0.016
I	3.65		3.95	0.144		0.156
J	0.307		0.607	0.012		0.024
K						



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0	1.40	1.50	1.60	0.055	0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	11.90	12.00	12.10	0.469	0.472	0.476
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	11.40	11.50	11.60	0.449	0.453	0.457
T	0.35	0.40	0.45	0.014	0.016	0.018
W	23.70	24.00	24.30	0.933	0.945	0.957



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