



JOCDA3ABN-W8

Rev.A.1.0

DESCRIPTION:

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] Ž g de ovi

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Parameter		Symbol	Value	Unit
LED	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1 ^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 ^②	Vrms
Operating Temperature		T_{opr}	-40~110	°C
Junction Temperature		T_j	125	°C
Storage Temperature		T_{stg}	-55~125	°C
Total Power Dissipation		P_{tot}	500	mW
Soldering Temperature		T_{sol}	260	°C

NOTE1: μ **NOTE2:****ELECTRICAL CHARACTERISTICS** (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	$I_F=10\text{mA}$	-	1.35	1.6	V
	Reverse Current	I_R	$V_R=6\text{V}$	-	-	1	μA
	Terminal Capacitance	C_t	$V=0, f=1\text{MHz}$	-	60	-	pF
Output	Peak High-level Output Current	I_{OPH}	$V_O=V_{CC}-4\text{V}$, Pulse width $\leq 50\mu\text{s}$	-1	-	-	A
			$V_O=V_{CC}-15\text{V}$, Pulse width $\leq 10\mu\text{s}$	-3	-	-	A
	Peak Low-level Output Current	I_{OPL}	$V_O=V_{EE}+2.5\text{V}$, Pulse width $\leq 50\mu\text{s}$	1	-	-	A
			$V_O=V_{EE}+15\text{V}$, Pulse width $\leq 10\mu\text{s}$	3	-	-	A
	High Level Supply Current	I_{CCH}	$I_F=7$ to 16mA , $V_O=\text{Open}$	-	-	2.5	mA
	Low Level Supply Current	I_{CCL}	$V_F=-3$ to 0.8V , $V_O=\text{Open}$	-	-	2.5	mA
	High Level Output Voltage	V_{OH}	$I_O=-100\text{mA}$	$V_{CC}-4$	-	-	V

	Low Level Output Voltage	V_{OL}	$I_O=100mA$	-	0.2	0.5	V
	Threshold Input Current	I_{FLH}	$V_O>5V$	-	1.2	5	mA
	Threshold Input Voltage	V_{FHL}	$V_O<5V$	0.8	-	-	V
	Supply Voltage	V_{CC}	-	15	-	30	V
	UVLO Threshold	VUVLO+	$V_O>5V$, $I_F=10mA$	12.1	12.8	13.5	V
		VUVLO-	$V_O<5V$, $I_F=10mA$	11.1	11.8	12.4	V

SWITCHING SPECIFICATION

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Propagation Delay Time to High Output Level	t_{PLH}	$R_g=10\Omega$, $C_g=25nF$, $f=20kHz$, Duty Cycle=50%, $I_F=7mA$, $V_{CC}=30V$	30	-	500	ns
Propagation Delay Time to Low Output Level	t_{PHL}		30	-	500	
Propagation Delay Difference Between Any Two Parts	$t_{PHL} - t_{PLH}$		-	-	350	
Output Rise Time (10 to 90%)	t_r	$R_g=10\Omega$, $C_g=25nF$, $I_F=0 \rightarrow 7mA$, $V_{CC}=30V$	-	50	-	
Output Fall Time (90 to 10%)	t_f	$R_g=10\Omega$, $C_g=25nF$, $I_F=7 \rightarrow 0mA$, $V_{CC}=30V$	-	50	-	
Common Mode Transient Immunity at High Level Output	$ CM_H $	$I_F=7mA$ $V_{CC}=30V$, $T_a=25^\circ C$, $V_O(min)=26V$ $V_{CM}=1500V_{pp}$	± 35	-	-	kV/ μs
Common Mode Transient Immunity at Low Level Output	$ CM_L $	$I_F=0mA$ $V_{CC}=30V$, $T_a=25^\circ C$, $V_O(max)=1V$ $V_{CM}=1500V_{pp}$	± 35	-	-	kV/ μs

Note1

Note2

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Note3

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Recommended Operating Conditions^{①②}

Characteristics	Symbol	Min.	Typ.	Max.	Unit
Input On-state Current	$I_{F(ON)}^{③}$	7	-	10	mA
Input Off-state Voltage	$V_{F(OFF)}$	0	-	0.8	V
Supply Voltage	$V_{CC}^{④}$	15	-	30	V
Operating Frequency	$f^{⑤}$	-	-	25	kHz

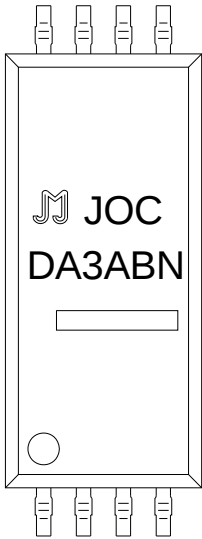
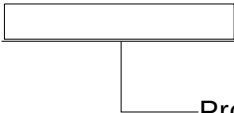
Note1**Note2****Note3****Note4****Note5**

ORDERING INFORMATION

J	OC	D	A	3	A	B	N	-W8	/
JieJie Microelectronics Co., Ltd.	Opto Coupler	Driver	High-side PMOS	3: I _{T(RMS)} : 3A	UVLO: 11-13V	B: I _{FT} ≤ 5mA	Non-rail-to-rail	WSOP8	None: T1 R: T2

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

MARKING

	 Production Information Code
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Characteristics Curves

FIG.1: Forward Current vs. Forward Voltage

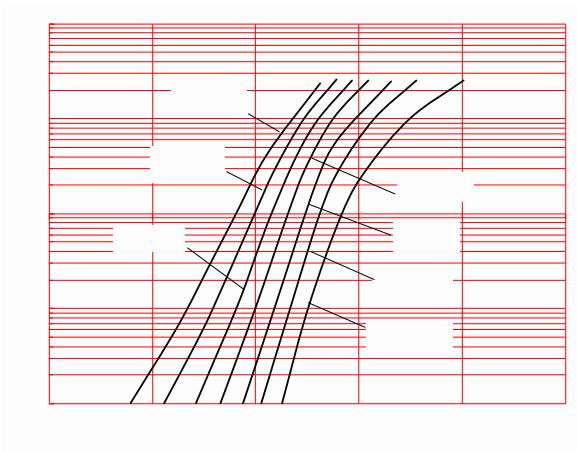


FIG.2: Max. Allowable LED Forward Current vs. Ambient Temperature

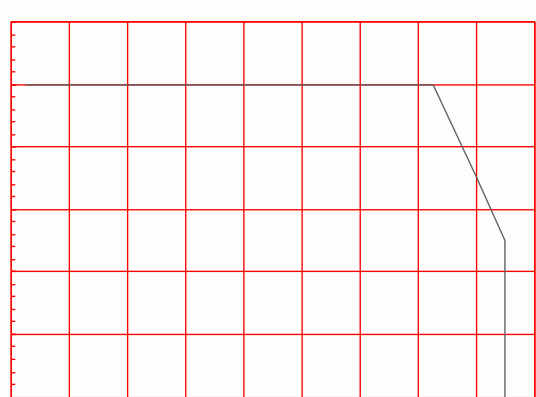


FIG.7: Low-level Output Voltage vs. Ambient Temperature

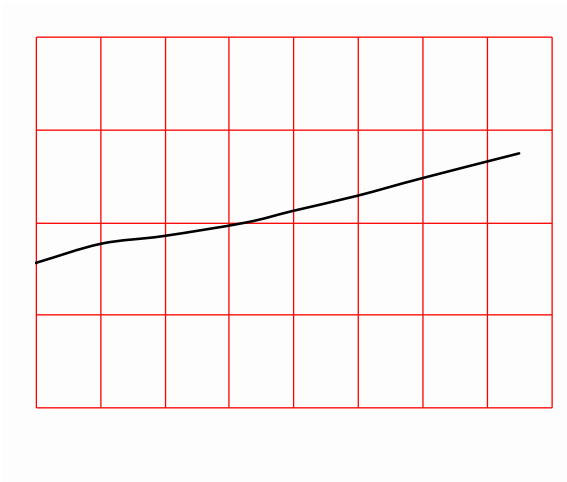
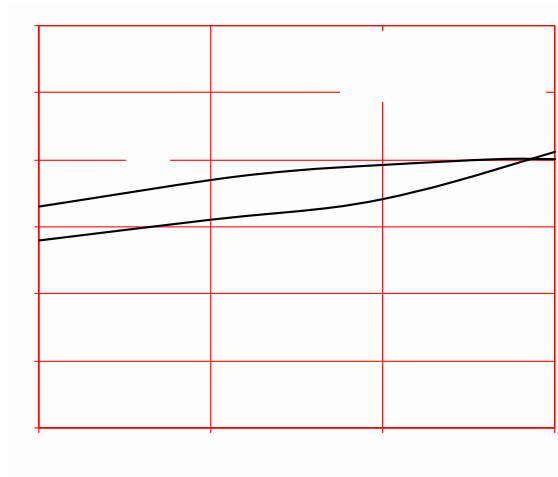


FIG.8: High-level Output Voltage vs. Ambient Temperature

FIG.13: Propagation Delay Time vs. Supply Voltage



Test Circuits

FIG.14: Switching Time Test Circuit and Waveform

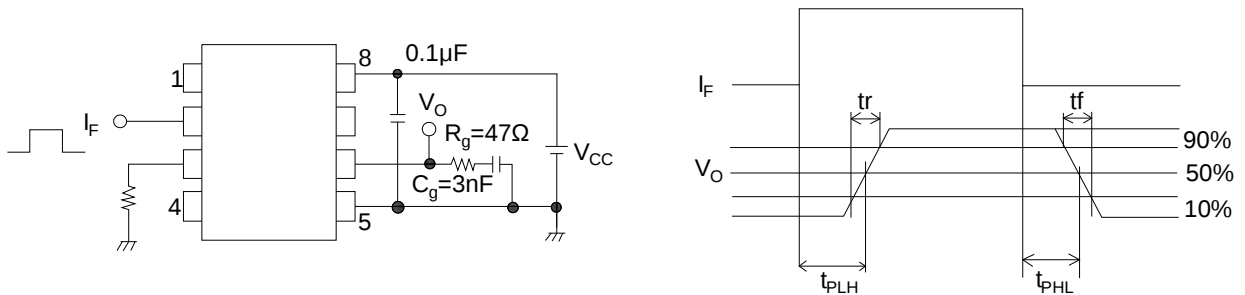
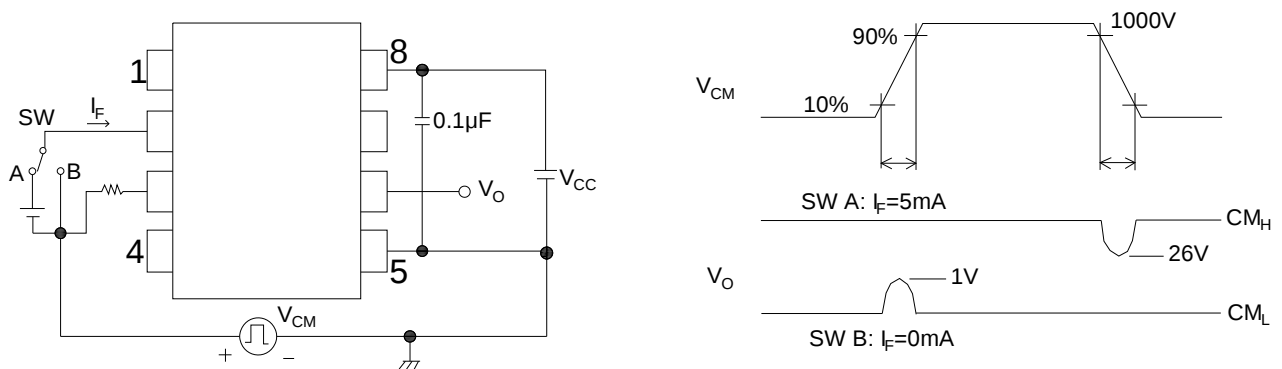
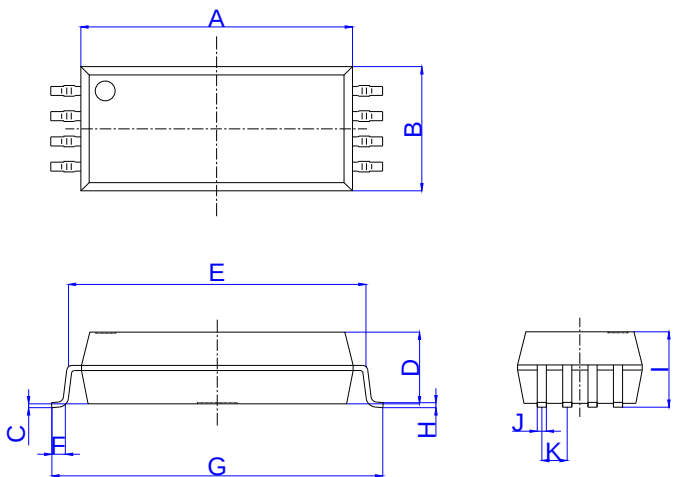


FIG.15: Common-Mode Transient Immunity Test Circuit and Waveform

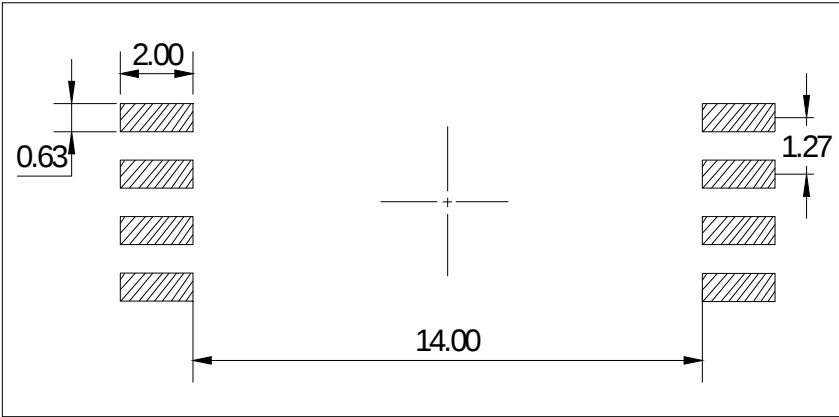


Package Dimension (Unit: mm)



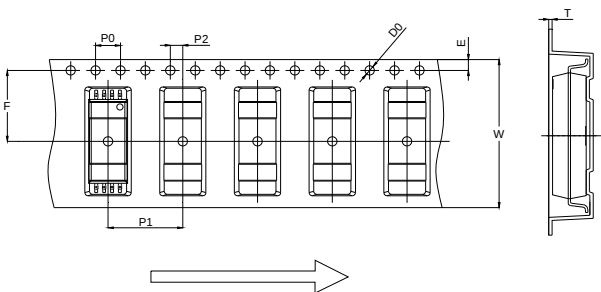
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	13.50		13.70	0.531		0.539
B	6.15		6.35	0.242		0.250
C	0.10		0.30	0.004		0.012
D	3.50		3.70	0.138		0.146
E	14.71		15.31	0.579		0.603
F	0.52		1.02	0.020		0.040
G	16.36		16.86	0.644		0.664
H	0.10		0.40	0.004		0.016
I	3.65		3.95	0.144		0.156
J	0.307		0.607	0.012		0.024
K	1.02		1.52	0.040		0.060

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)



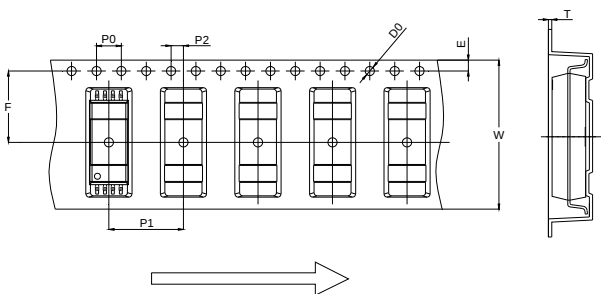
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option None



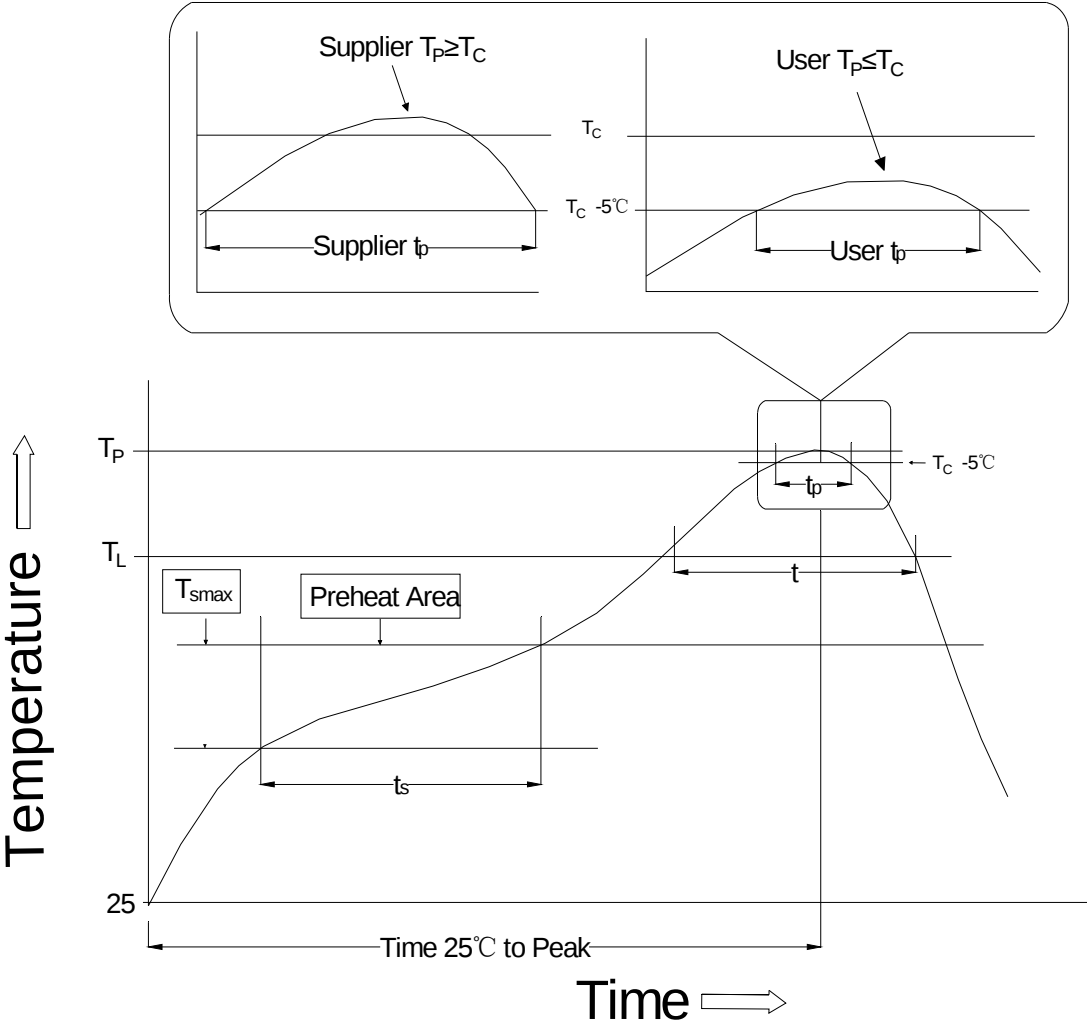
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0	1.40	1.50	1.60	0.055	0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	11.90	12.00	12.10	0.469	0.472	0.476
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	11.40	11.50	11.60	0.449	0.453	0.457
T	0.35	0.40	0.45	0.014	0.016	0.018
W	23.70	24.00	24.30	0.933	0.945	0.957

Option R



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

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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