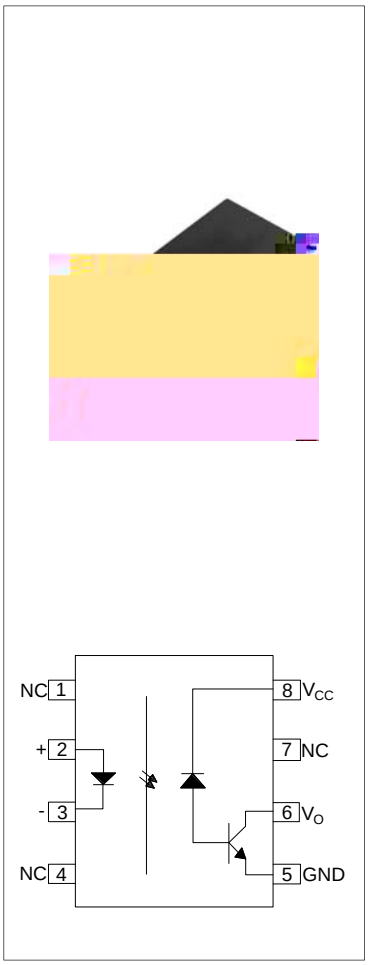
JOCHA21B-W8

Rev.A.1.0

DESCRIPTION:

The products are 1MBd high-speed opto-couplers. The device is a small-outline coupler suitable for surface-mount assembly. It consists of a high-output-power infrared LED optically coupled to a high-speed photodiode-transistor chip. It is housed in a plastic WSOP8 and guarantees a creepage distance of ≥5 mm, a clearance of ≥5 mm and an insulation thickness of ≥0.4 mm. Therefore, it meets the reinforced insulation class requirements of international safety standards. The products are widely used in programmable controllers, industrial inverters and switching power supplies.



MAIN FEATURES

High isolation 7500 VRMS
CTI>175V
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	Output
ON	L
OFF	H

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

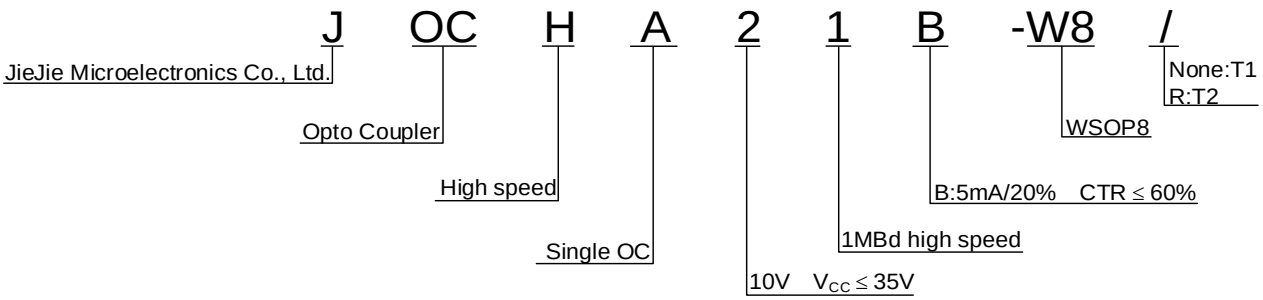
Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1	A
	Reverse Voltage	V_R	6	V
	Input Power Dissipation	P_D	100	mW
Output	Supply Voltage	V_{CC}	35	V
	Output Voltage	V_O	20	V

	Output Current	I_O	8	mA
	Output Power Dissipation	P_O	100	mW
Total Power Dissipation		P_{tot}	200	mW
Isolation Voltage		V_{iso}	7500	Vrms
Operating Temperature		T_{opr}	-40~110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~125	
Soldering Temperature		T_{sol}	260	

NOTE1:100

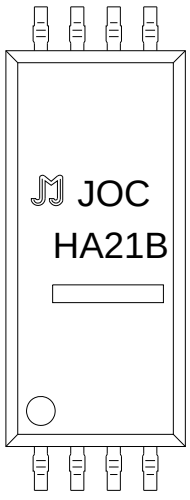
	Common Mode Transient Immunity at Logic High	CM_H	I_F=0mA, V_{CM}=400Vpp, R_L=4.1kΩ	15	20	-	kV/μs
	Common Mode Transient Immunity at Logic Low	CM_L	I_F=16mA, V_{CM}=400Vpp, R_L=4.1kΩ	-15	-20	-	kV/μs

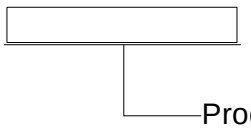
ORDERING INFORMATION



Packing Quantity			
Option	**Quantity**	**Quantity – Inner box**	**Quantity –Outer box**
WSOP8	1200 Units/Reel	1 Reel/Inner box	5 Inner box/Outer box =6k Units

MARKING





Characteristics Curve

FIG.1: Forward Current vs. Forward Voltage

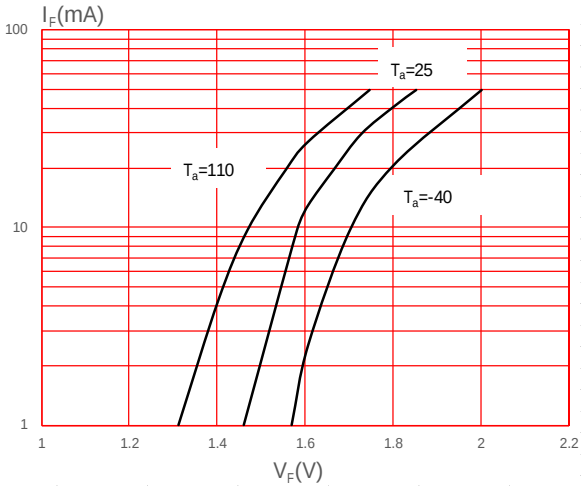


FIG.2: High Level Output Current vs. Ambient Temperature

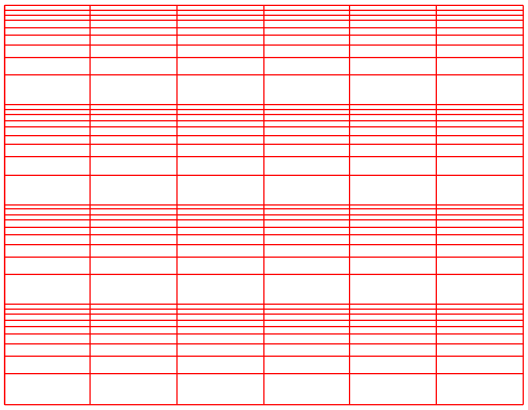


FIG.7: Low Level Output Voltage vs. Ambient Temperature

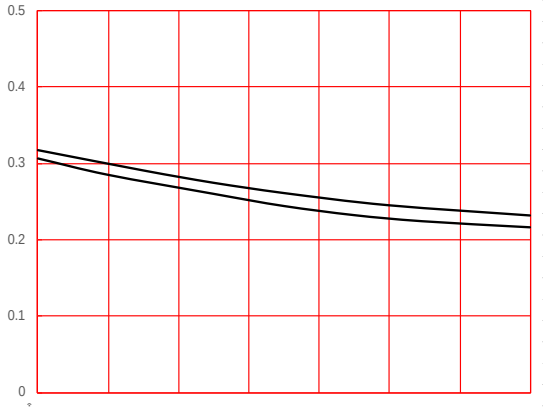


FIG.8: Propagation Delay vs. Load Resistance

TEST CIRCUITS

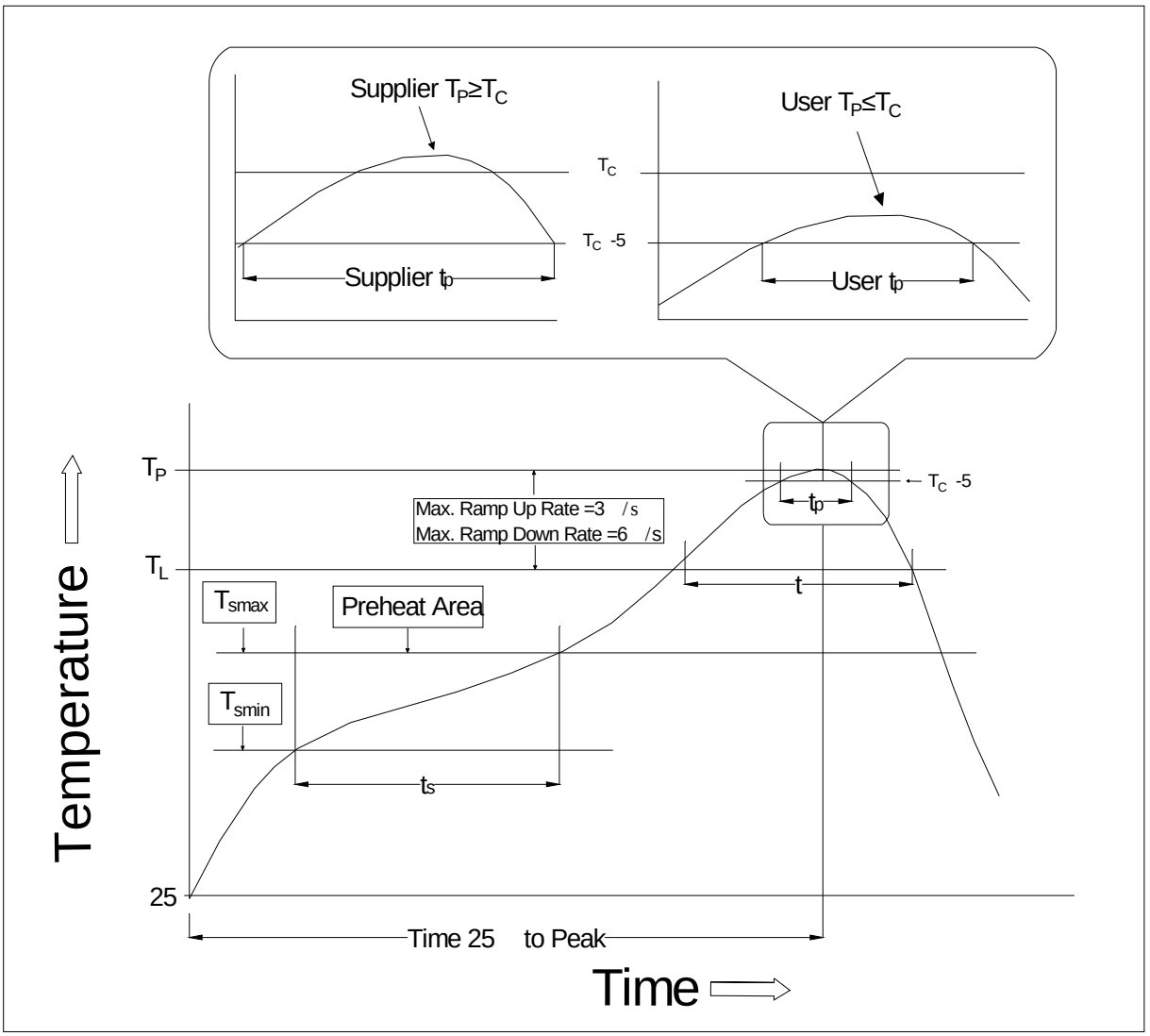
Fig.10: Test Circuit of tPHL, tPLH



Package Dimension (Unit: mm)

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	13.50		13.70			
B	6.15		6.35			
C						
D	3.50		3.70			
E	14.71		15.31			
F	0.52			0.020		
G	16.36		16.86			
H	0.10		0.4 Å Ů			
I	3.65			0.144		12
J			0.607	0.012		
K						

REFLOW INFORMATION



Profile Feature	Sn-Pb Assembly Profile	Pb-Free Assembly Profile
Temperature Min. (Tsmin)	100	150
Temperature Max. (Tsmax)	150	200
Time (ts) from (Tsmin to Tsmax)	60-120 seconds	60-120 seconds
Ramp-up Rate (tL to tP)	3 /second max.	3 /second max.
Liquidus Temperature (TL)	183	217
Time (tL) Maintained Above (TL)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235 +0 /-5	260 +0 /-5
Time (tP) within 5 of 260	10 seconds	10 seconds
Ramp-down Rate (TP to TL)	3-6 /second	3-6 /second
Time 25 to Peak Temperature	6 minutes max.	8 minutes max.

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

M ʻ e ﻋﻰ ˆ