JOCHA14B-D8P/S Series

Rev.A.1.0

DESCRIPTION:

The products are 10MBd high-speed opto-couplers in a plastic

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}	7	V
	Output Voltage	V_O	7	V
	Output Current	I_O	50	mA
	Output Power Dissipation	P_O	85	mW
Total Power Dissipation		P_{tot}	200	mW
Isolation Voltage		V_{iso}	5000	Vrms
Operating Temperature		T_{opr}	-40~110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~125	
Soldering Temperature		T_{sol}	260	

NOTE1: мллμă LJdzfăŜΣ мллｌÎ ₹₪ŜIjdzŜyǒè

NOTE2: ！/ ₹Ƶ₪ мY⅄yǥdzúŜΣ wΦｌΦΓплЧc₴ĵ̂ĵ̂

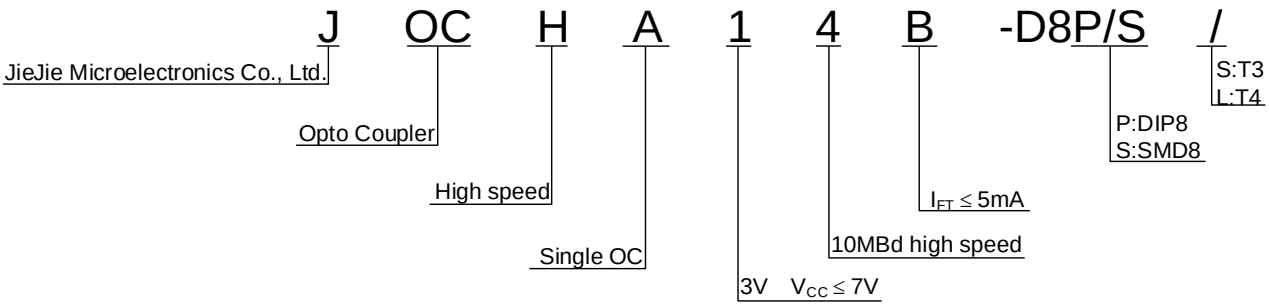
ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	I_F=10mA	-	1.35	1.6	V
	Reverse Current	I_R	V_R=6V	-	-	1	μA
	Input Capacitance	C_{in}	V=0, f=1MHz	-	34	-	pF
Output	High Level hdzúLJdzú Current	I_{OH}	I_F=250μA, V_{CC}=3.3V, V_O=3.3V, V_E=2V	-	5	100	μA
	High Level Supply Current	I_{CCH}	V_{CC}=3.3V, I_F=0mA, V_E=0.5V	-	-	10	mA
	Low Level Supply Current	I_{CCL}	V_{CC}=3.3V, I_F=10mA, V_E=0.5V	-	-	13	mA

	Logic Low Output Voltage	V_{OL}	I_F=5mA, I_O=13mA, V_{CC}=3.3V, V_E=2V	-	0.3	0.6	V
	Isolation Resistance	R_{ISO}	DC500V 40~60%R.H.	-	10^{12}	-	Ω
	Floating Capacitance	C_{IO}	V=0, f=1MHz	-	1	-	pF
Switching Characteristics	Trigger LED Current	I_{FT}	V_{CC}=5V, V_O=V_{OL}	-	-	5	mA
	Propagation Delay Time to Logic Low	t_{PHL}	C_L=15pF, R_L=350Ω, I_F=7.5mA	-	-	60	ns
	Propagation Delay Time to Logic High	t_{PLH}		-	-	60	ns
	Pulse width distortion	$\|t_{PHL}-t_{PLH}\|$		-	-	35	ns
	Common Mode Transient Immunity at Logic High	CM_H	V_{CC}=3.3V, I_F=10mA, V_{CM}=1000V, R_L=350Ω	10	15	-	kV/μs
	Common Mode Transient Immunity at Logic Low	CM_L	V_{CC}=3.3V, I_F=0mA, V_{CM}=1000V, R_L=350Ω	10	15	-	kV/μs

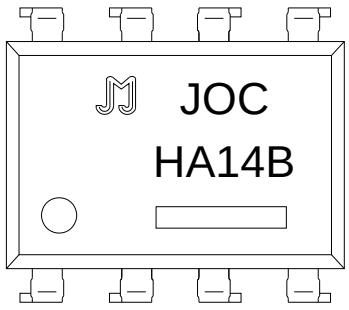
High Level Input Current	I_{FH}	7	-	15	mA
Output Pull-up Resistor	R_L	330	-	4k	Ω
Fan Out (at R_L=1kΩ per channel)	N	-	-	5	TTL Loads

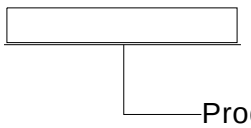
ORDERING INFORMATION



Packing Quantity			
Option	**Quantity**	**Quantity – Inner box**	**Quantity –Outer box**
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MARKING





Characteristics Curves

FIG.1: High Level Output Current vs. Ambient Temperature

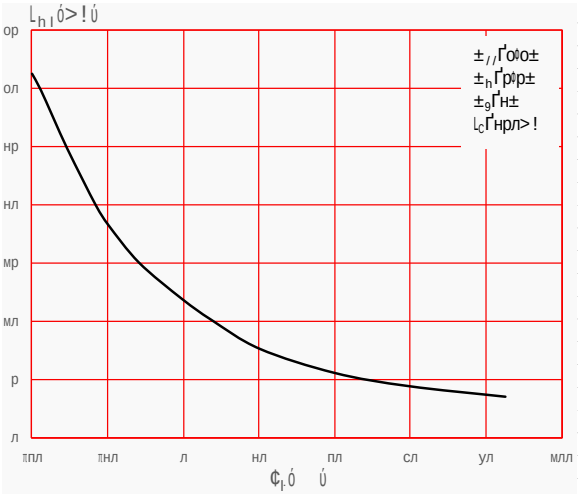


FIG.2: High Level Output Current vs. Ambient Temperature

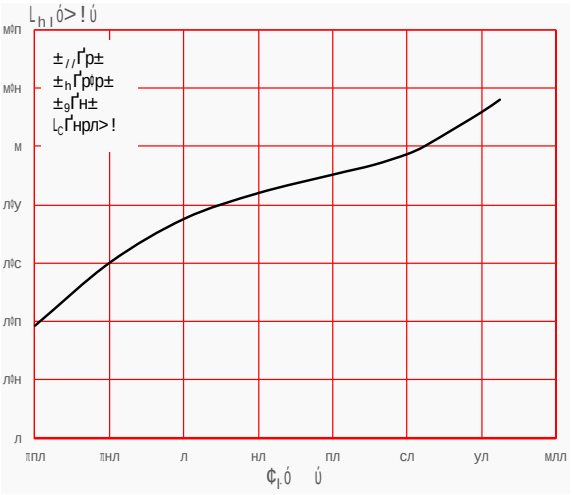


FIG.3: Input Threshold Current vs. Ambient Temperature

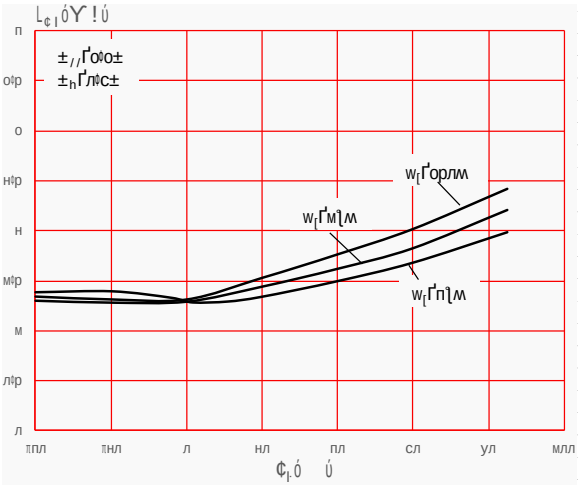


FIG.4: Input Threshold Current vs. Ambient Temperature

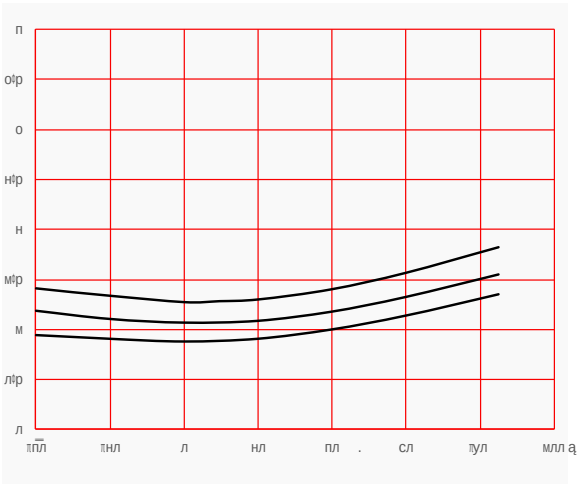


FIG.7: Low Level Output Current vs. Ambient Temperature

FIG.8 Low Level Output Current vs. = א ɔ l D ɒ m φ D e

FIG.13: Pulse Width Distortion vs. Ambient Temperature

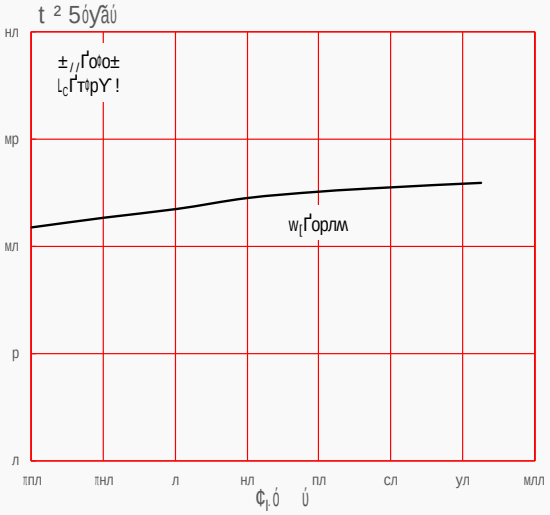
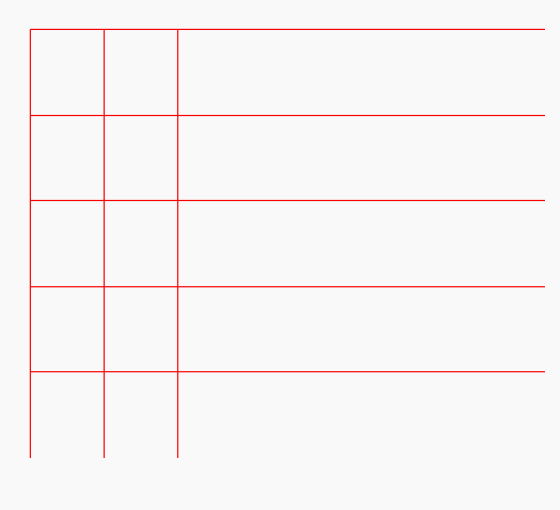
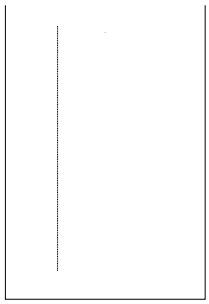


FIG.14: Pulse Width Distortion vs. Ambient Temperature



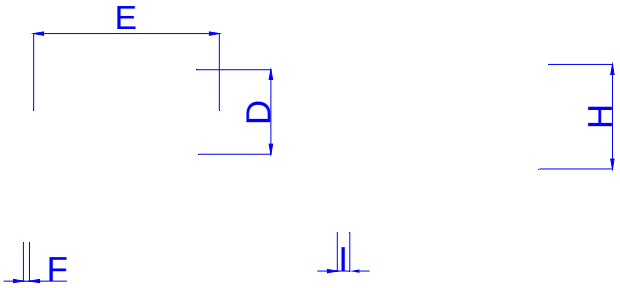
TEST CIRCUITS

Fig.15: Test Circuit for TPHL and TPLH



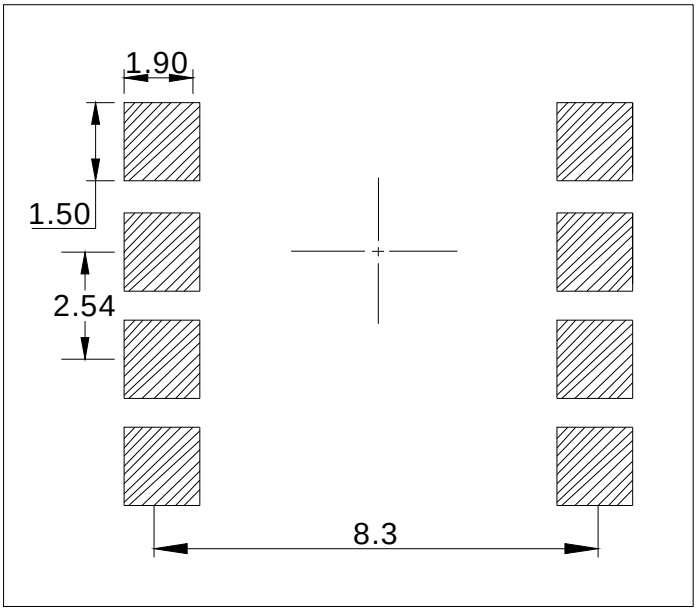
Package Dimension (Unit: mm)

Standard DIP Type:



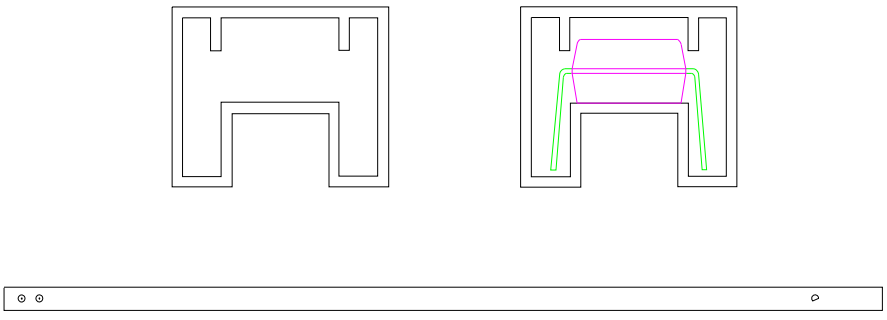
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.20		6.60	0.244		0.260
B	9.40		9.80	0.370		0.386
C	7.15		8.95	0.281		0.352
D	3.20		3.60	0.126		0.142
E	7.32		7.92	0.288		0.7.92
F	0.15		0.35			
G	0.90		1.50			
H	3.90		4.50			
I	0.40		0.60			
J						

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)

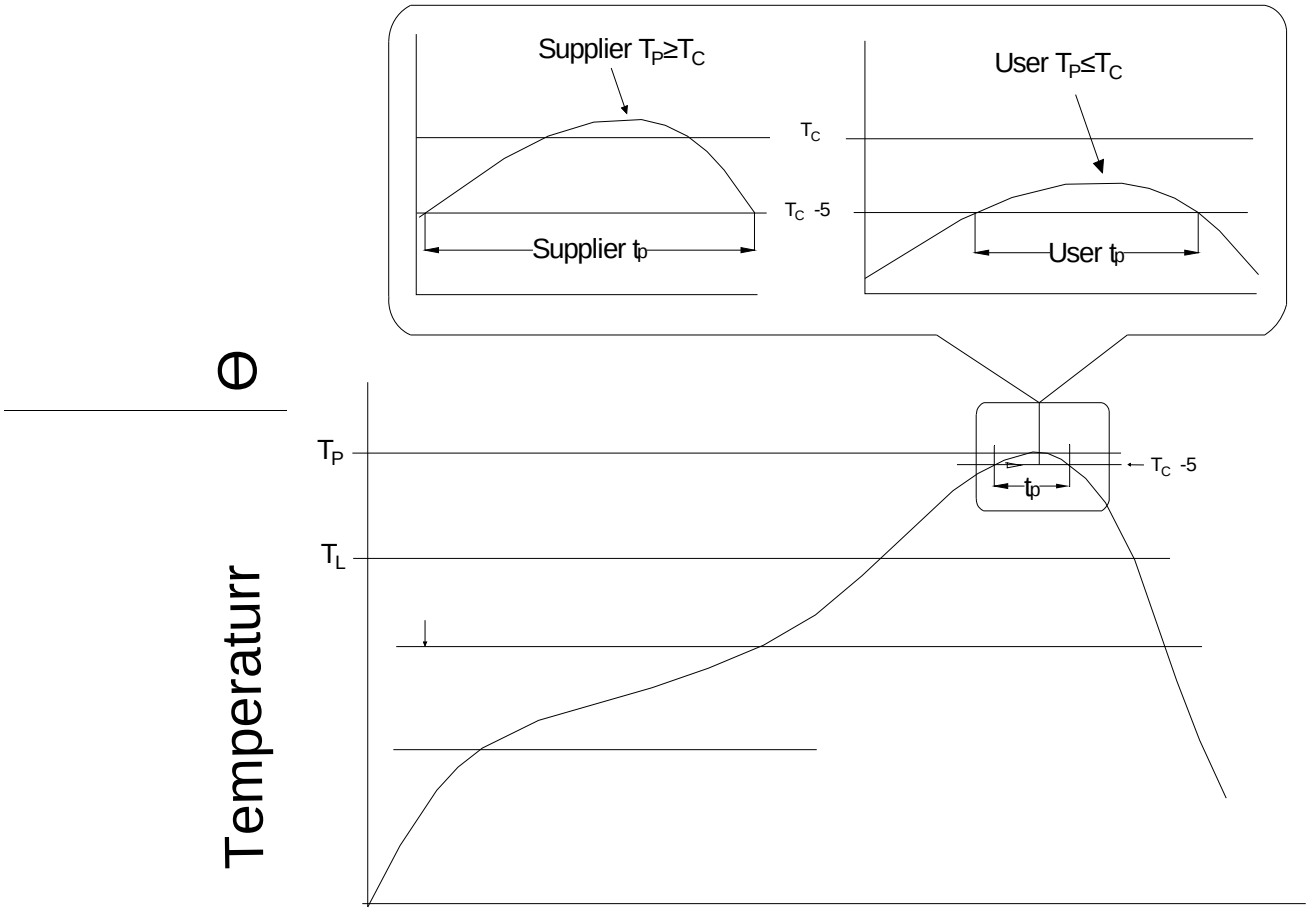


TUBE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

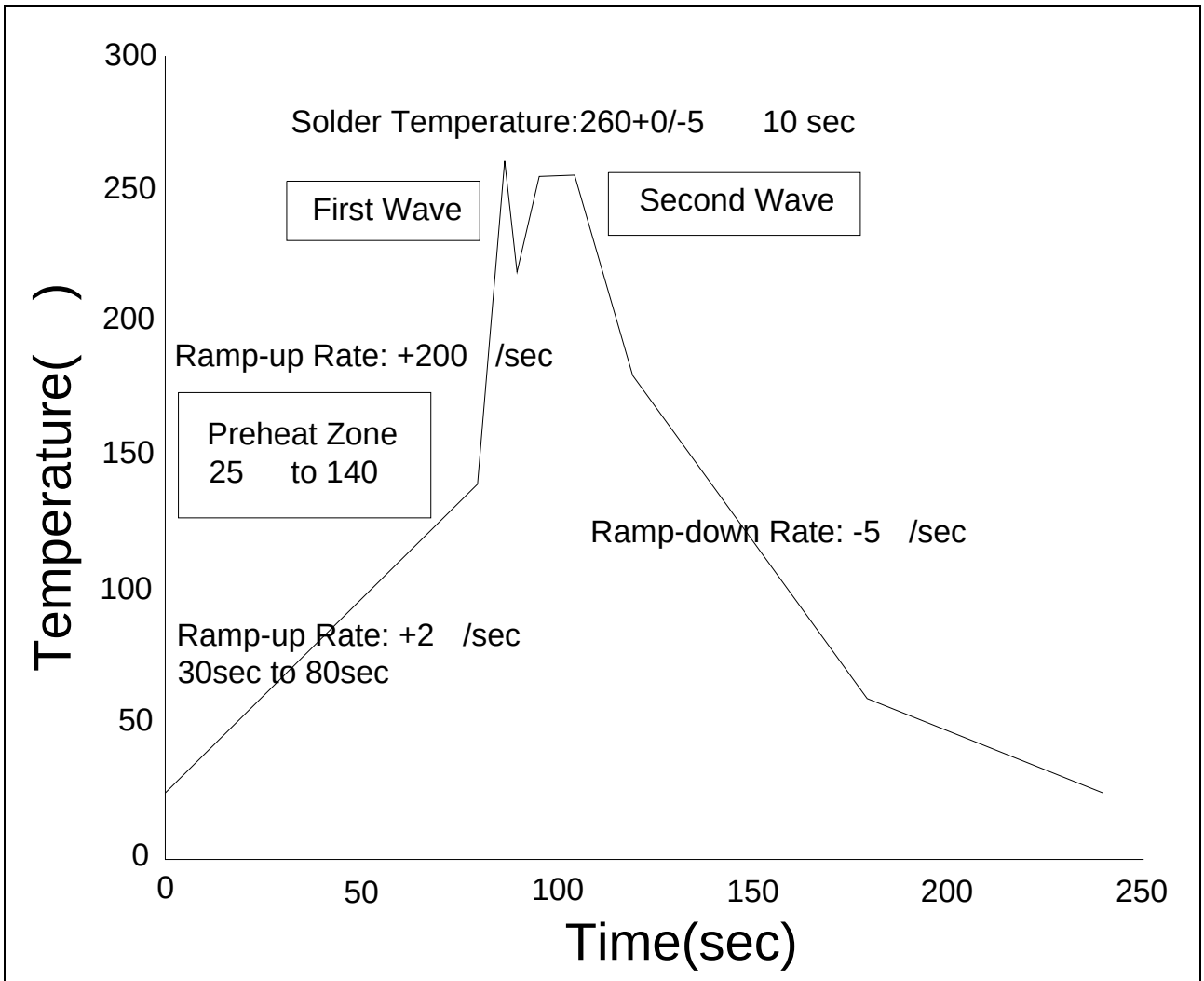
Standard DIP



REFLOW INFORMATION



WAVE SOLDERING



HAND SOLDERING BY SOLDERING IRON	
Soldering Temperature	360 ± 5
Soldering Time	3s 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.