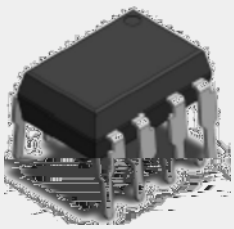
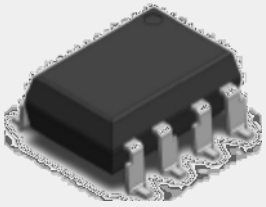
The products are 1MBd high-speed opto-couplers. The device is a small-outline coupler suitable for surface-mount assembly. It consists of a high-output-power infrared LED optically coupled to a high-speed photodiode-transistor chip. It is housed in a plastic DIP8 package with different lead forming options package 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.

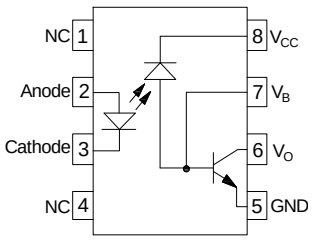


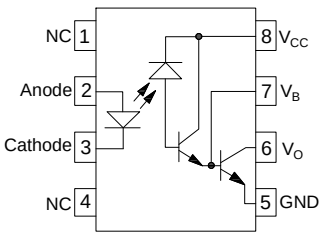
JOCHA21X-D8P



JOCHA21X-D8S

High isolation 5000 VRMS
High speed – 1MBd typical
Operating temperature range -55°C to 110°C
REACH & RoHS compliance
HBM: H3A; MM: M4; CDM: C3
CQC approved
VDE approved
UL approved





Note: VB Default NC

LED	Output
ON	L
OFF	H

(Temperature=25°C)

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}	5000	Vrms
Operating Temperature		T_{opr}	-55~110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~125	
Soldering Temperature		T_{sol}	260	

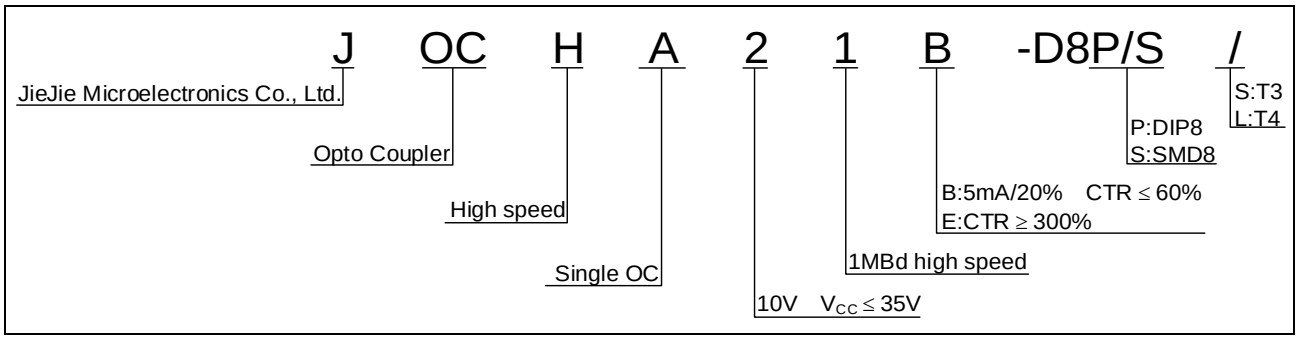
: 100μs pulse, 100Hz frequency

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

(Temperature=25°C)

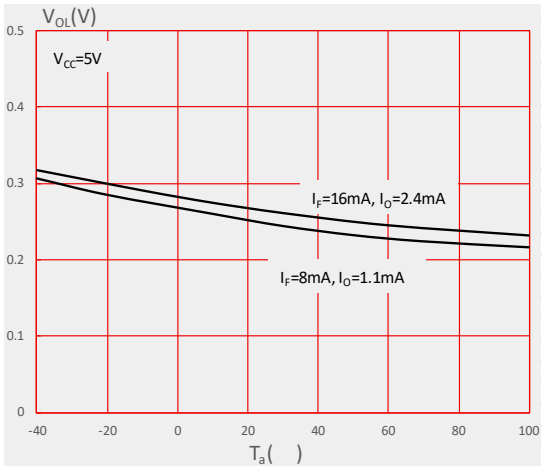
Input	Forward Voltage	V_F		I_F=10mA	-	1.35	1.6	V
	Reverse Current	I_R		V_R=6V	-	-	1	μA
	Input Capacitance	C_{in}		V=0, f=1MHz	-	60	-	pF
Output	Current transfer ratio	CTR	B	I_F=16mA, V_{CC}=4.5V, V_O=0.4V	20	-	60	%
			E		300	-	-	
	High Level Output Current	I_{OH}		I_F=0mA, V_{CC}=5.5V, V_O=5.5V	-	3	500	nA
				I_F=0mA, V_{CC}=15V, V_O=15V	-	-	50	μA
	Low Level Supply Current	I_{CCL}		V_O=Open, V_{CC}=15V, I_F=16mA	-	0.5	0.8	mA
	High Level Supply Current	I_{CCH}		V_O=Open, V_{CC}=15V, I_F=0mA	-	0.01	2	μA

	Logic Low Output Voltage	V_{OL}	I_F=16mA, I_O=2.4mA, V_{CC}=4.5V	-	-	0.4	V
	Isolation Resistance	R_{ISO}	DC500V 40~60%R.H.	10^{12}	10^{14}	-	Ω
	Floating Capacitance	C_{IO}	V=0, f=1MHz	-	0.8	-	pF
Switching Characteristics	Propagation Delay Time to Logic Low	TPHL	I_F=0→16mA, R_L=1.9kΩ, V_{CC}=5V	-	-	0.8	μs
	Propagation Delay Time to Logic High	TPLH	I_F=16→0mA, R_L=1.9kΩ, V_{CC}=5V	-	-	0.8	μs
	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

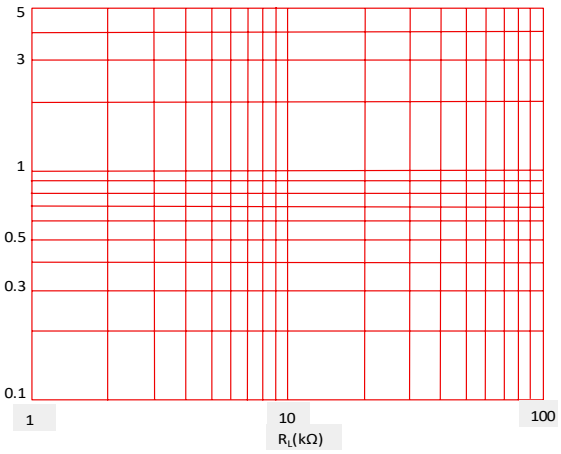


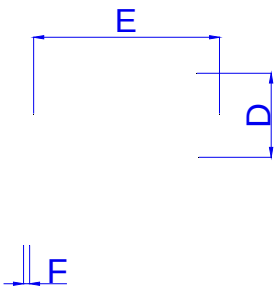
DIP	50 Units/Tube
SMD	1200 Units/Reel

Low Level Output Voltage vs. Ambient Temperature

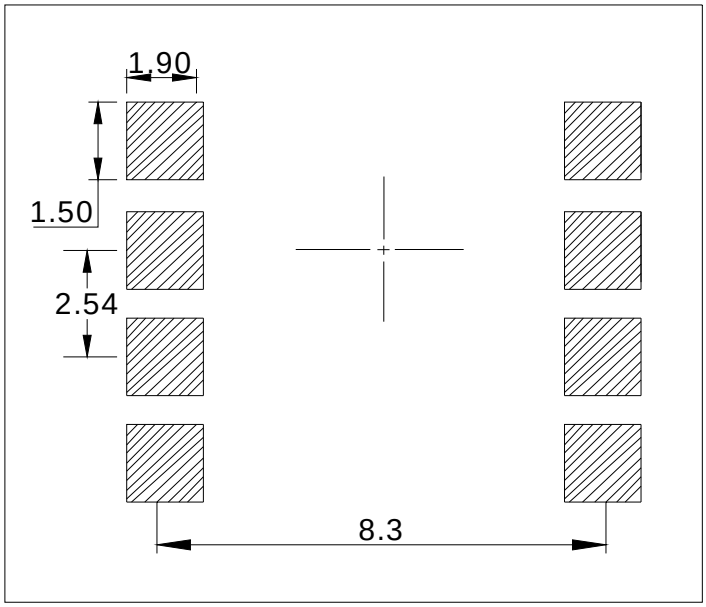


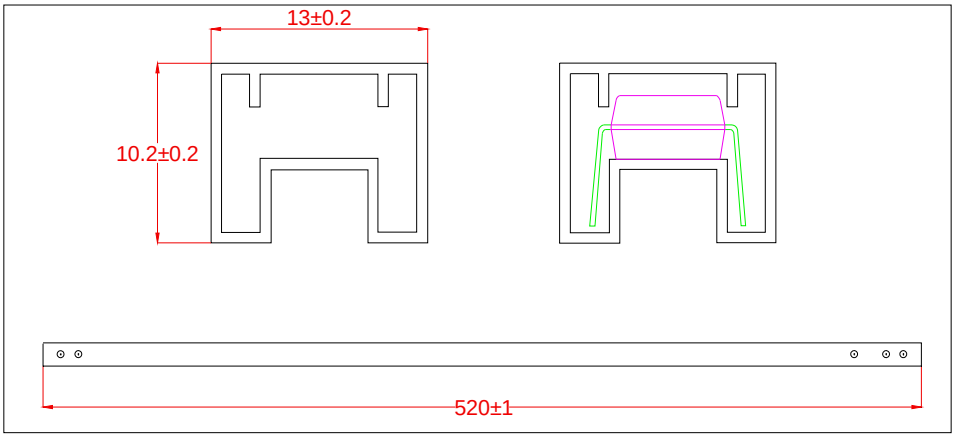
Propagation Delay vs. Load Resistance

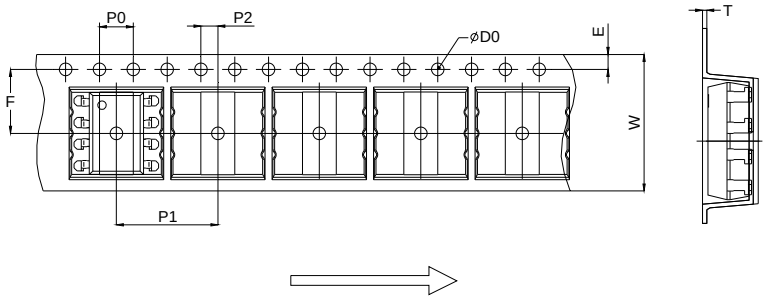




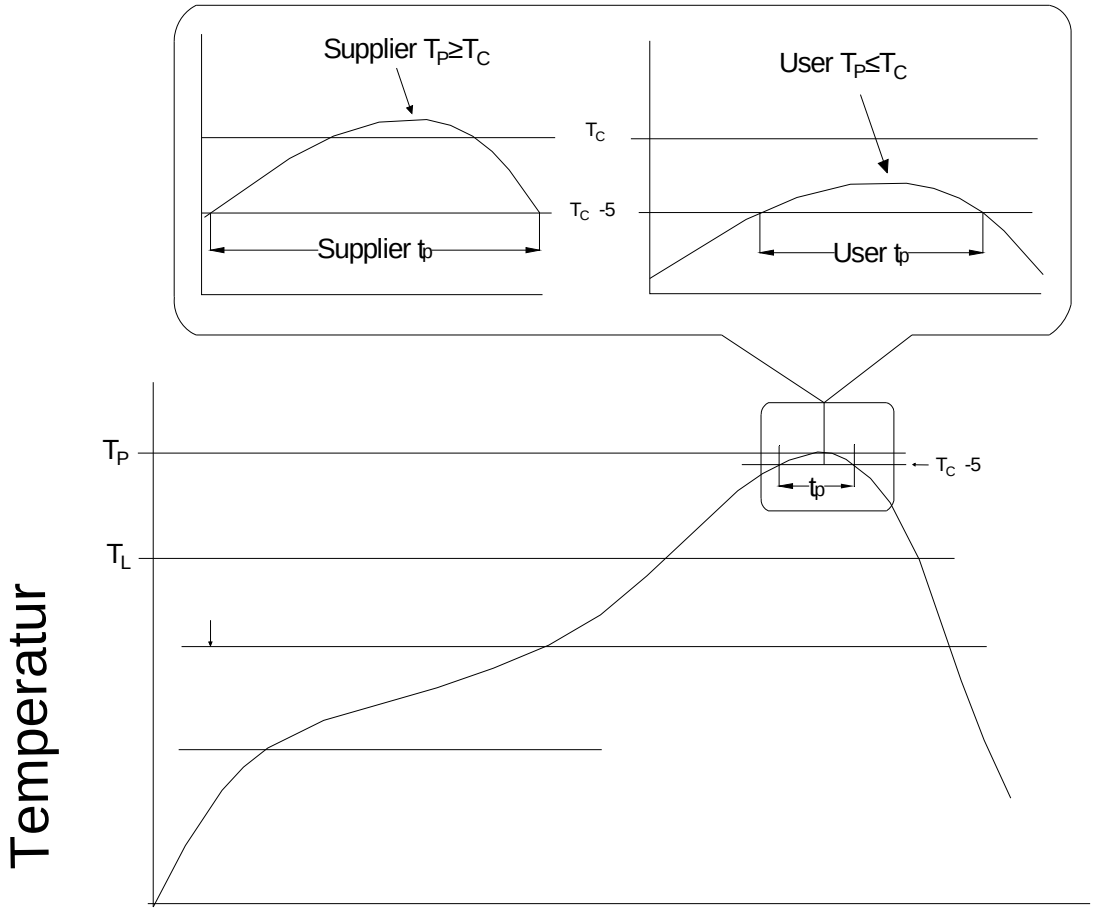
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A						
B						
C	7.15		8.95	0.281		0.352
D						
E						
F						
G						
H						
I						
J						

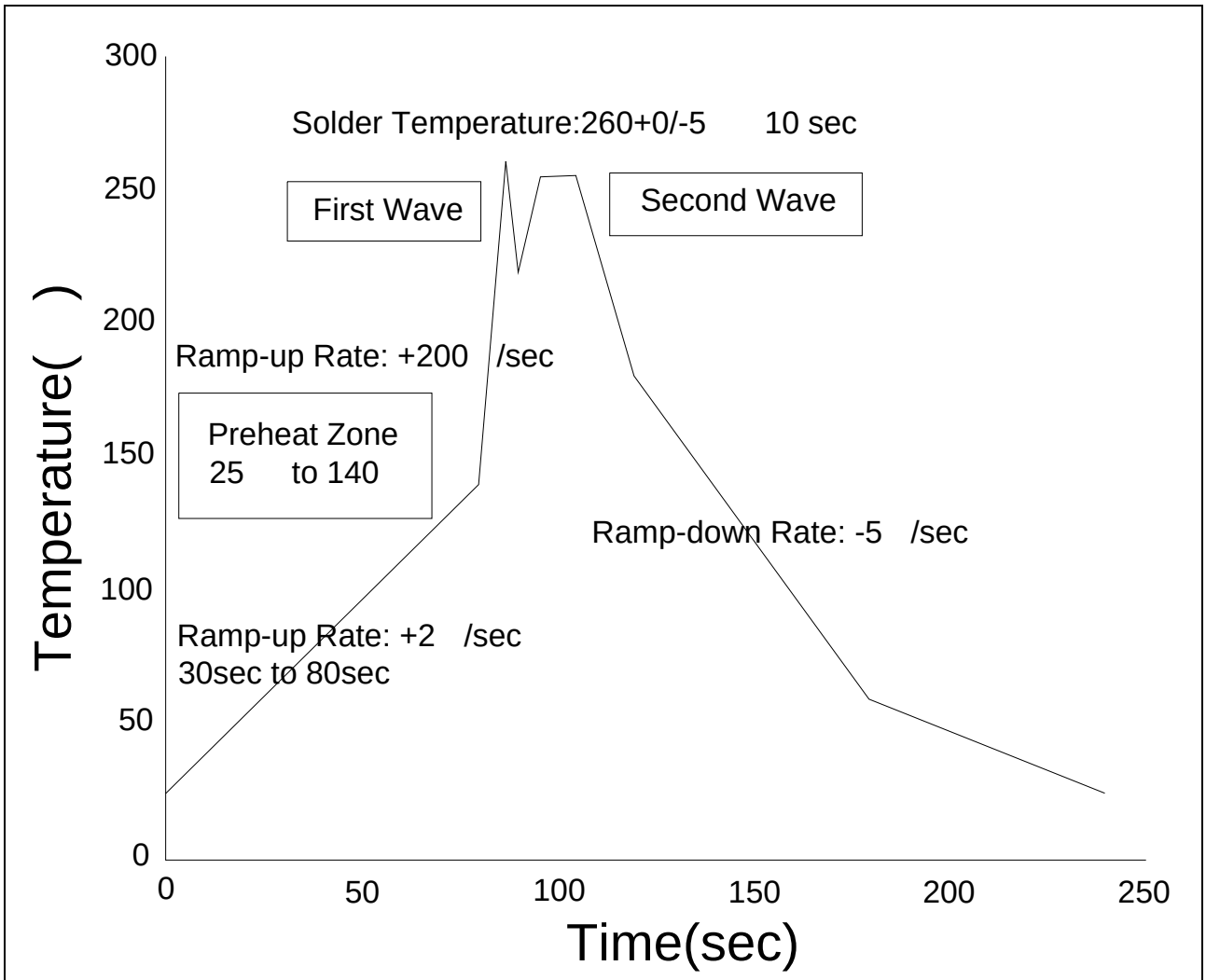

1.90
1.50
2.54
8.3


13±0.2
10.2±0.2
520±1



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		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	7.40	7.50	7.60	0.291	0.295	0.299
T	0.35	0.40	0.45	0.014	0.016	0.018
W	15.90	16.00	16.20	0.626	0.630	0.638


Supplier $T_P \geq T_C$
User $T_P \leq T_C$
T_C
T_C -5
Supplier t_p
User t_p
Temperatur
T_P
T_L
T_C -5
t_p



Soldering Temperature	360 ± 5
Soldering Time	3s max.