JOCHA22B-M5 Series

The products are 2MBd 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 the SOP5 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.

High isolation 3750 VRMS
High speed – 2MBd typical
Operating temperature range -40°C to 110°C
REACH & RoHS compliance
HBM: H3A; MM: M4; CDM: C3

	Output Current	I_O	8	mA
	Output Power Dissipation	P_O	100	mW
Total Power Dissipation		P_{tot}	200	mW
Isolation Voltage		V_{iso}	3750 [8]	Vrms
Operating Temperature		T_{opr}	- ~110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~125	
Soldering Temperature		T_{sol}	260	

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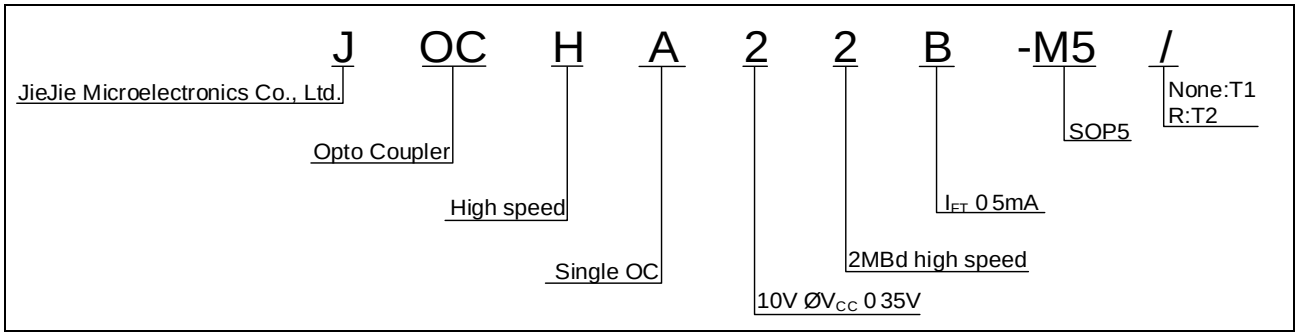
(Temperature=25°C)

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	-	60	-	pF
Output	High Level hdz ű LJdz ű 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}	I_F=10mA	-	-	1.3	mA
	High Level Supply Current	I_{CCH}	I_F=0mA	-	-	1.3	mA
	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	LED Trigger Current	I_{FT}	I_O=0.75mA, V_O Ø0.8V	-	-	5	mA
	Propagation Delay Time to Logic Low	TPHL	I_F=0 10mA, R_L=20kΩ, C_L=100pF	30	150	400	ns

			I_F=0 10mA, R_L=20kΩ, C_L=10pF	-	70	-	ns
	Propagation Delay Time to Logic High	TPLH	I_F=10 0mA, R_L=20kΩ, C_L=100pF	150	350	550	ns
			I_F=10 0mA, R_L=20kΩ, C_L=10pF	-	110	-	ns
	Common Mode Transient Immunity at Logic High	CM_H	I_F=0mA, V_{CM}=1500Vpp, R_L=20kΩ	±20	±25	-	kV/μs
	Common Mode Transient Immunity at Logic Low	CM_L	I_F=10mA, V_{CM}=1500Vpp, R_L=20kΩ	±20	±25	-	kV/μs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OC
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A
2
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-M5
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JieJie Microelectronics Co., Ltd.
Opto Coupler
High speed
Single OC
10V ØV$_{CC}$ 0 35V
2MBd high speed
I$_{FT}$ 0 5mA
SOP5
None:T1
R:T2

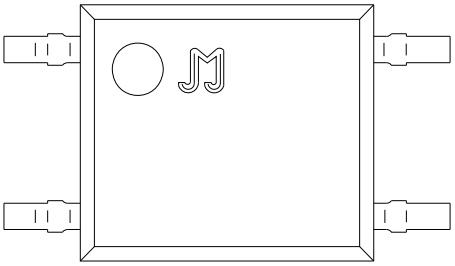


FIG.1: Forward Current vs. Forward Voltage

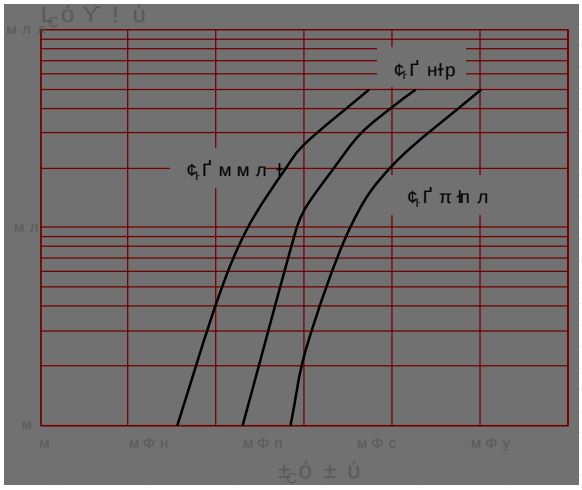


FIG.2: High Level Output Current vs. Ambient Temperature

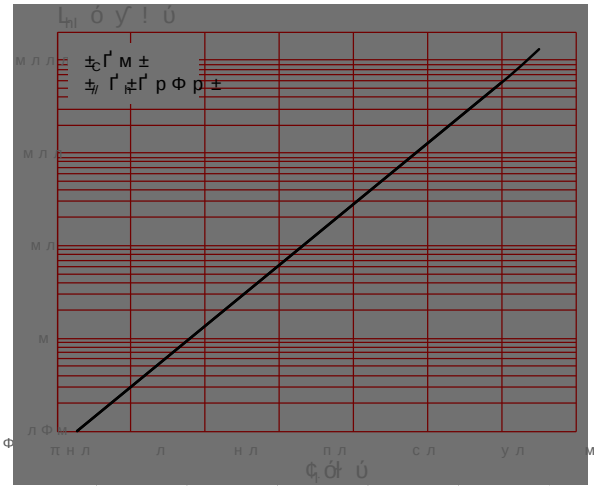


FIG.3: Output Current vs. Forward Current

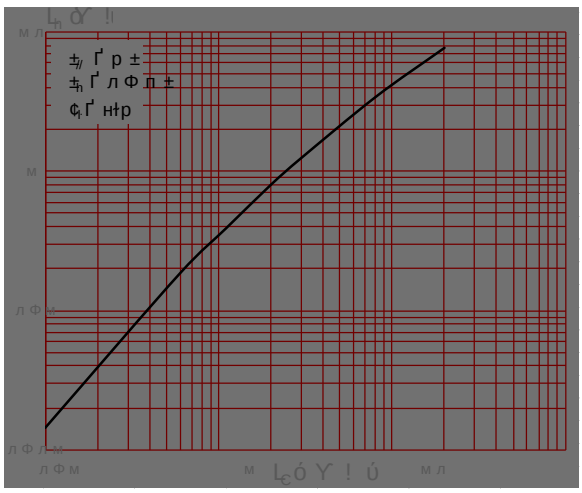


FIG.4: Threshold Input Current vs. Ambient Temperature

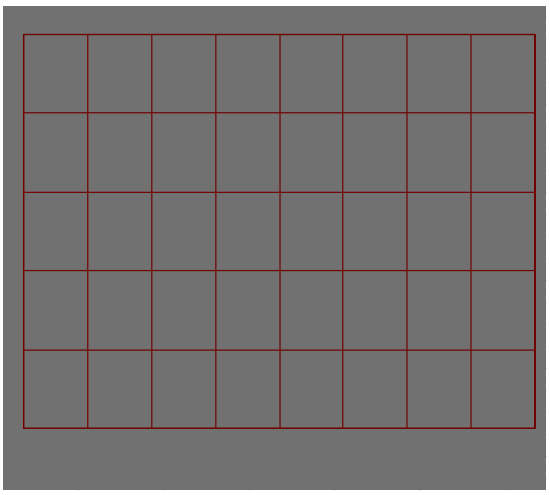


FIG.7: Propagation Delay vs. Load Resistance

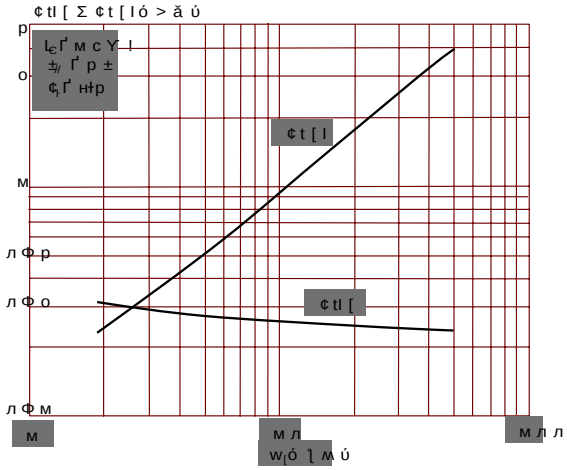


FIG.8: Propagation Delay vs. Ambient Temperature

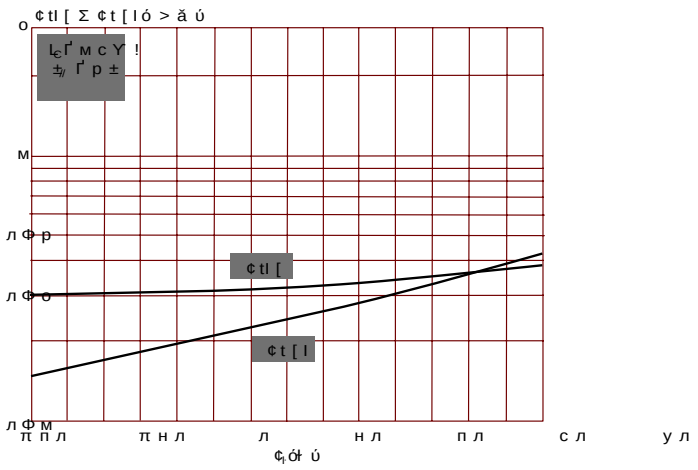
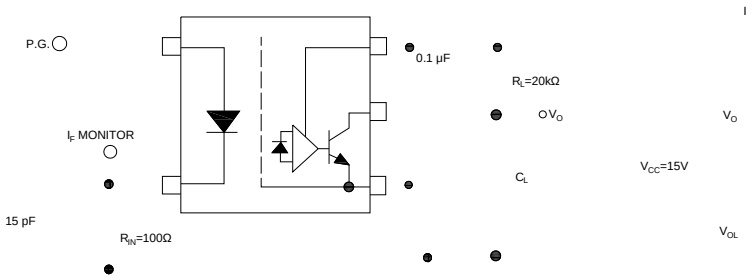
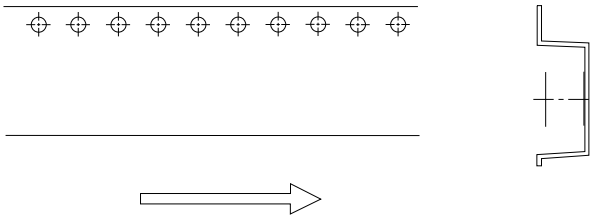


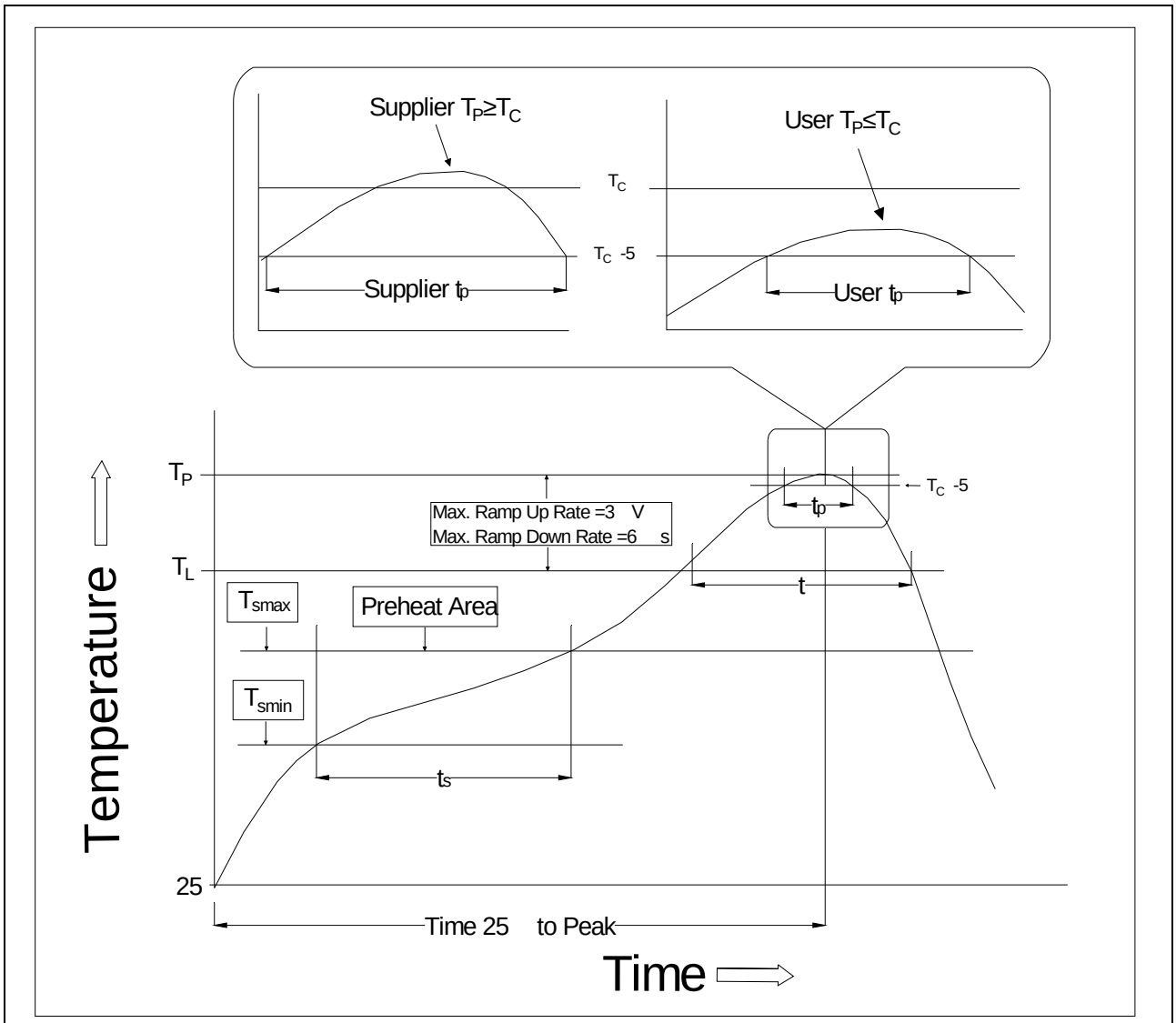
Fig.9: Switching Time Test Circuit and Waveform



JOCHA22B

Option None





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.

3150

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