



JOCT357Xh-M4 Series

Rev.A.1.0

DESCRIPTION:

The products are transistor opto-couplers in a plastic SOP4 package. The device combines an AlGaAs infrared diode as the Transmitter which is optically coupled to a phototransistor detector. With the robust coplanar double metal structure, the device provides the most stable isolation feature. The products are widely used in switch mode power supplies, programmable controllers, household equipment.

MAIN FEATURES

High isolation 3750 VRMS

Operating temperature range: -40°C ~ 100°C

RoHS & REACH Compliance

HBM: H3A; MM: M4; CDM: C3

CQC Approved

VDE Approved

UL Approved

AECQ101 Approved

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
	Power Dissipation	P_D	75	mW
Output	Collector-Emitter Voltage	V_{CEO}	80	V
	Emitter-Collector Voltage	V_{ECO}	7	V
	Collector Current	I_C	50	mA

Storage Temperature	T _{stg}	-55~+125	
Soldering Temperature	T _{sol}	260	

NOTE1: 100 μ s pulse, 100Hz frequency NOTE2 AC for 1minute, R.H.=40-60%

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V _F	I _F =10mA	-	1.2	1.5	V
	Reverse Current	I _R	V _R =6V	-	-	1	μ A
	Terminal Capacitance	C _t	V=0, f=1MHz	-	10	-	pF
Output	Collector-Emitter dark current	I _{CEO}	V _{CE} =20V, I _F =0	-	-	100	nA
	Collector-Emitter breakdown voltage	BV _{CEO}	I _C =0.1mA I _F =0	80	-	-	V
	Emitter-Collector breakdown voltage	BV _{ECO}	I _E =0.1mA I _F =0	7	-	-	V
Transfer Characteristics	Current transfer ratio	CTR	I _F =5mA V _{CE} =5V	80	-	600	%
	Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _F =20mA I _C =1mA	-	0.06	0.2	V
	Isolation resistance	R _{IO}	DC500V 40~60%R.H.	10 ¹²	10 ¹⁴	-	
	Floating Capacitance	C _{IO}	V=0, f=1MHz	-	0.4	1	pF
	Cut-off Frequency	f _c	V _{CE} =5V, I _C =2mA R _L =100 Ω , -3dB	-	80	-	kHz
	Rise Time	t _r	V _{CE} =2V, I _C =2mA R _L =100 Ω	-	3	18	μ s
	Fall Time	t _f		-	4	18	μ s
	Response Time	t _{on}		-	6	25	μ s
t _{off}		-		5	25	μ s	

NOTE1: Rank Table of Current Transfer Ratio (Temperature=25°C)

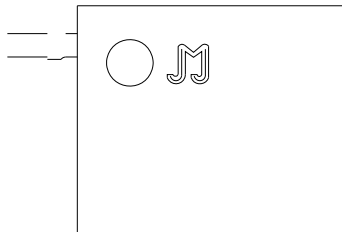
Grade Sign	Min. (%)	Max. (%)
None	80	600
A	80	160
B	130	260
C	200	400
D	300	600
E	400	600
Q	100	200

ORDERING INFORMATION

J	OC	T	357	B	h	-M4	/
JieJie Microelectronics Co., Ltd.	Opto Coupler	Transistor	Marketization Model	CTR Rank:A/B/C/D/None	h: Automotive grade	SOP4	None:T1 R:T2

Packing Quantity	
Option	Quantity
None/R	3000 Units/Reel

MARKING



JOCT357Xh

Test Circuits

FIG.11: Test Circuits of Response Time

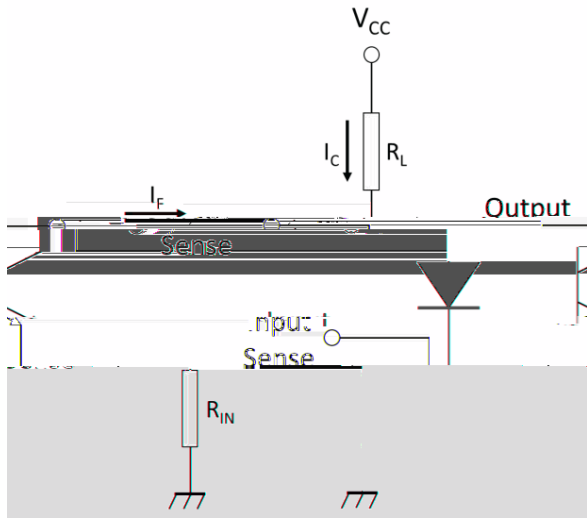


FIG.12: Curves of Response Time

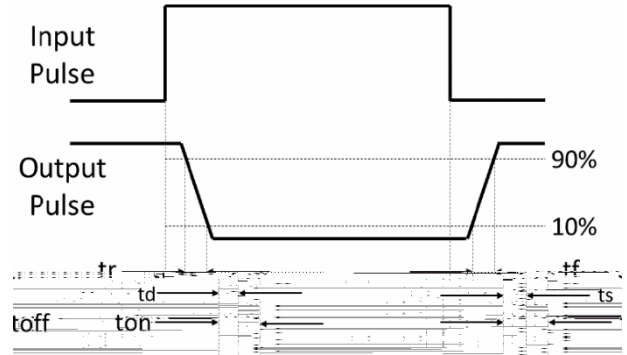
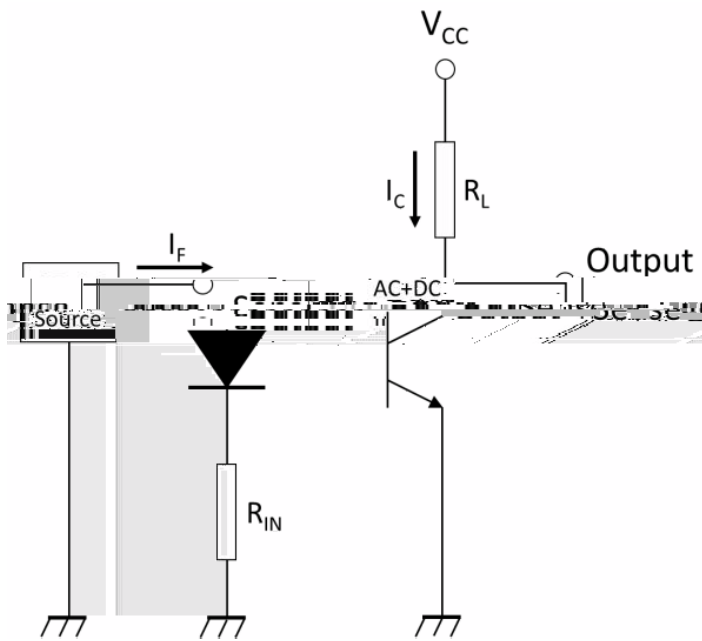
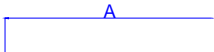


FIG.13: Test Circuits of Frequency Response

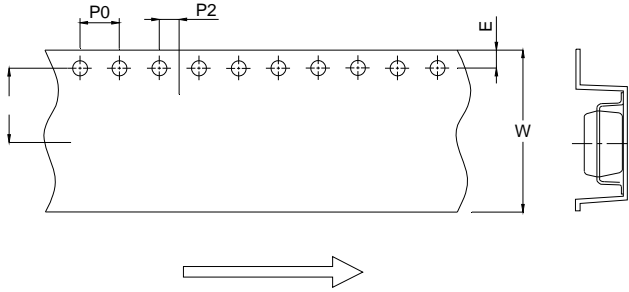


Package Dimension (Unit: mm)

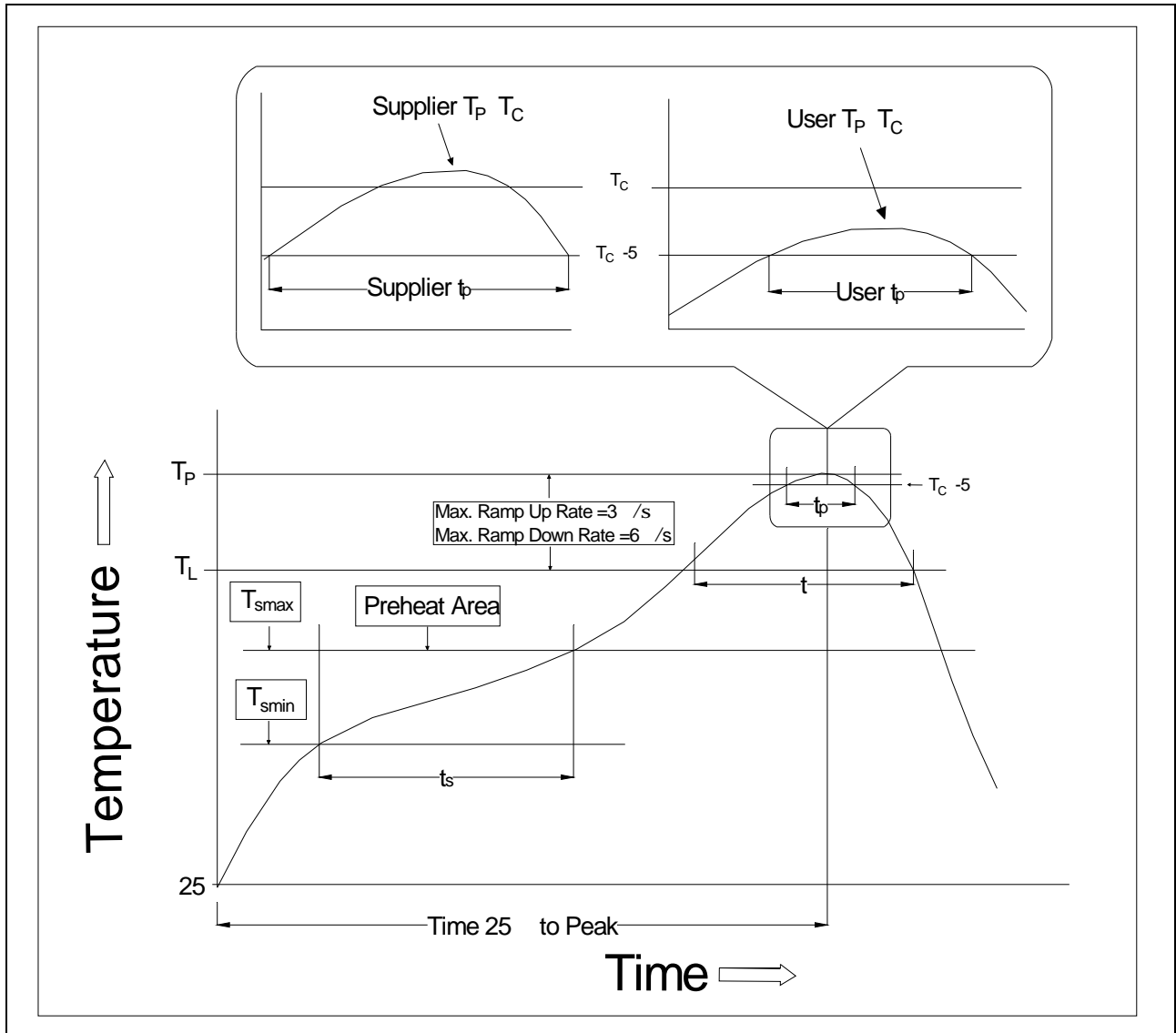


CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option None



REFLOW INFORMATION




Profile Feature

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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