JOCT357Xt-M4 Series

Rev.A.1.0

DESCRIPTION:

The products are transistor opto-couplers in a plastic SOP4 package. The device combines an AlGaAs infrared emitting diodeas the emitter which is optically coupled to a silicon planar phototransistor detector. With the robust coplanar double mold structure, the device provides the most stable isolation feature. The products are widely used in switch mode power supplies, programmable controllers, household appliances and office equipment.



MAIN FEATURES

High isolation 3750 VRMS
Operating temperature range -55°C to 125°C
RoHS & REACH Compliance
HBM: H3A; MM: M4; CDM:C3
CQC approved
VDE approved
UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1[7]	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
	Power Dissipation	P_C	150	mW
Total Power Dissipation		P_{tot}	225	mW
Isolation Voltage		V_{iso}	3750[8]	Vrms
Operating Temperature		T_{opr}	-55~+125	
Junction Temperature		T_j	135	
Storage Temperature		T_{stg}	-55~+125	

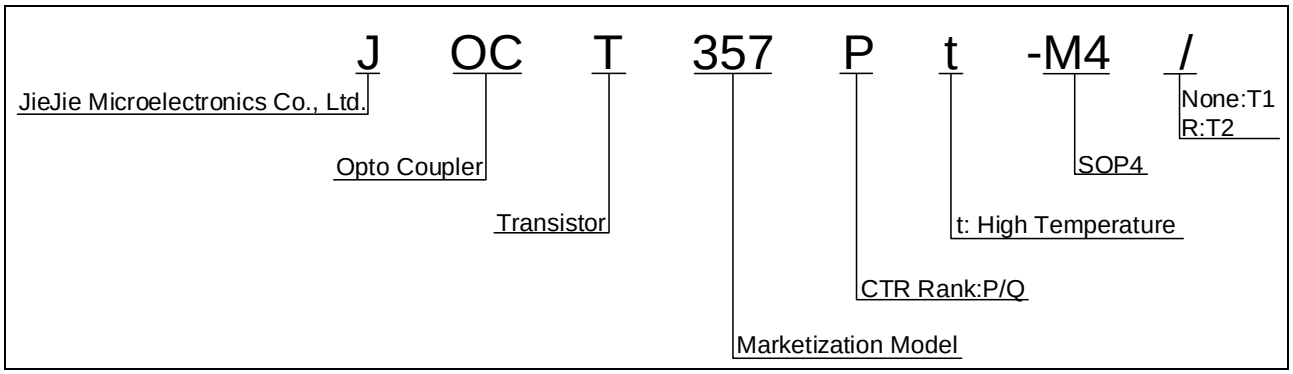
Soldering Temperature	T_{sol}	260	

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ORDERING INFORMATION



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

Characteristics Curves

FIG.1: Max. Allowable LED Forward Current vs. Ambient Temperature

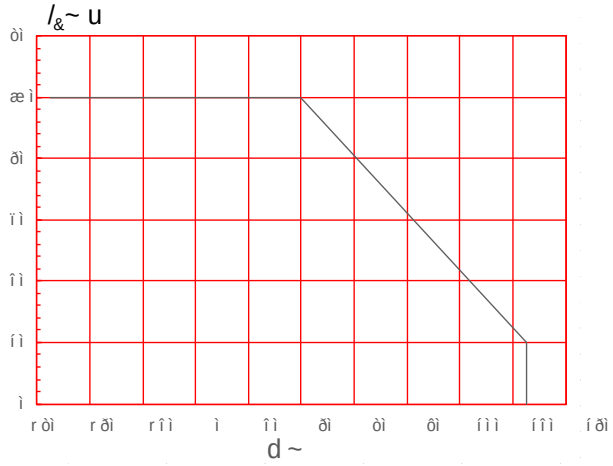


FIG.2: Collector Power Dissiption vs. Ambient Temperature

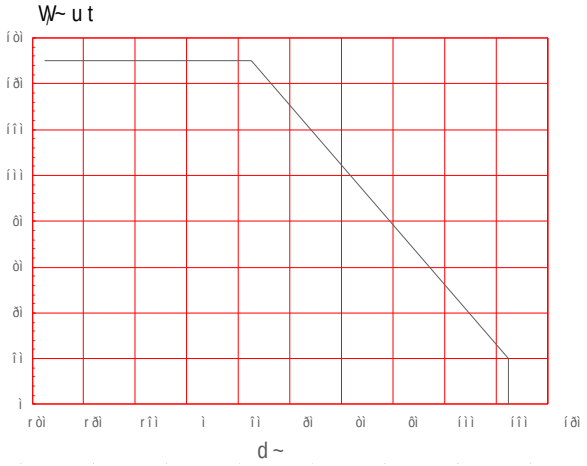


FIG.3: Forward Current vs. Forward Voltage

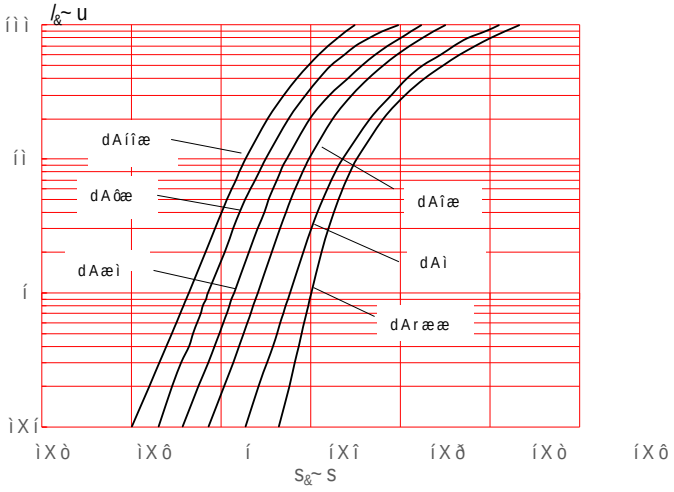
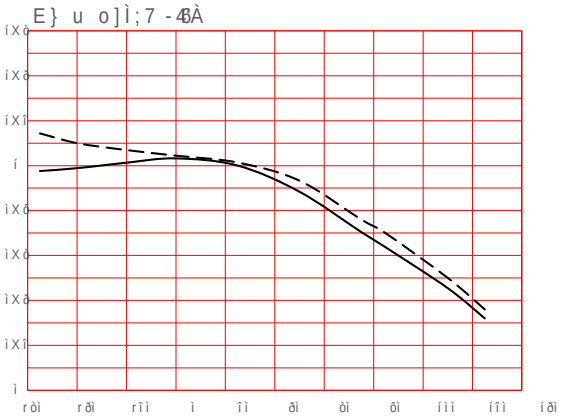


FIG.4: Normalized Collector Dark Current vs. Ambient Temperature

FIG.7: Normalized Current Transfer Ratio vs. Ambient Temperature



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FIG.8: Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature

Test Circuits

FIG.11: Test Circuits of Response Time

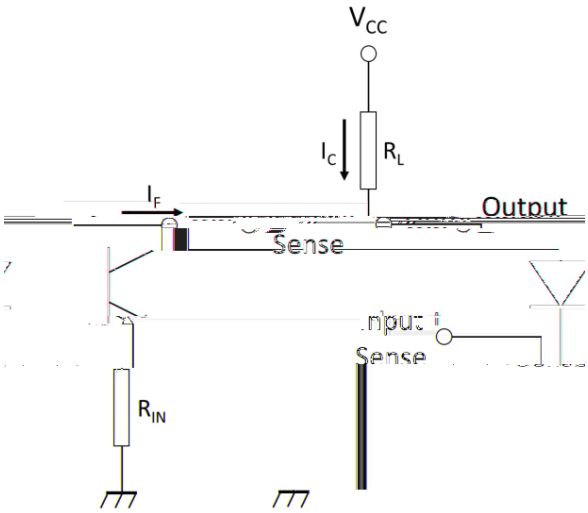


FIG.12: Curves of Response Time

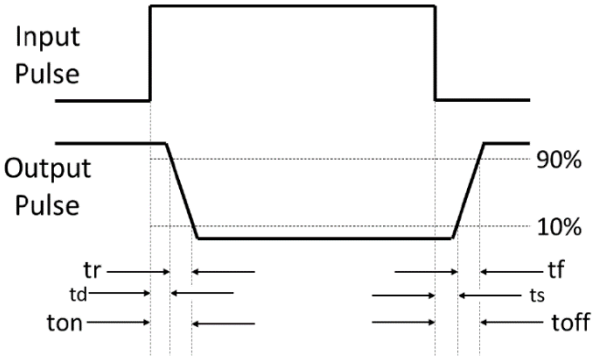
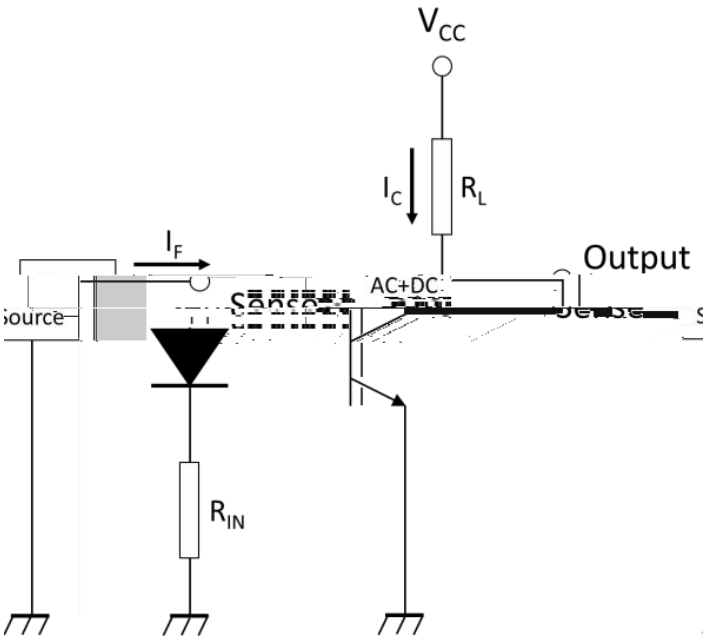
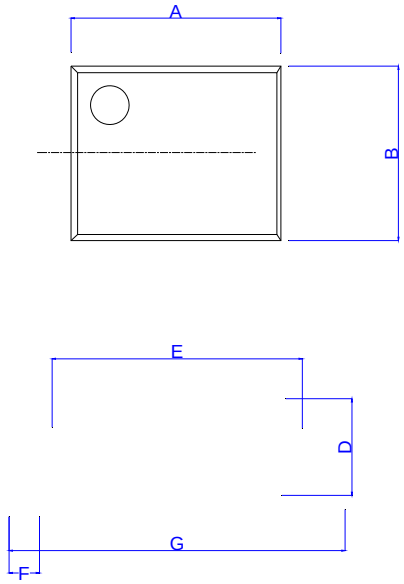


FIG.13: Test Circuits of Frequency Response



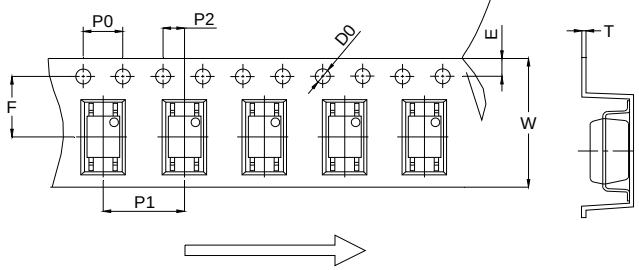
Package Dimension (Unit: mm)



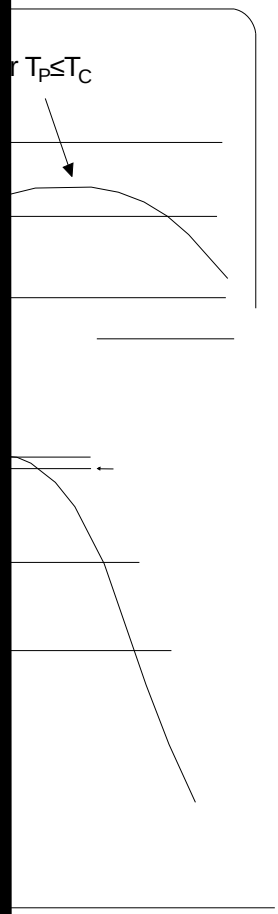
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	3.60		4.20	0.142		0.165
C						
D	1.90		2.30	0.075		0.091
E	5.00		5.60	0.197		0.220
F						
G	6.70			0.264		
H						
I						
J						

CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option None



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	7.90	8.00	8.10	0.311	0.315	0.319
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	4.40	4.50	4.60	0.173	0.177	0.181
T	0.25	0.30	0.35	0.010	0.012	0.014
W	11.90	12.00	12.30	0.469	0.472	0.484


r $T_P \leq T_C$

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 o ` i τ γ þ ϖ ' '

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