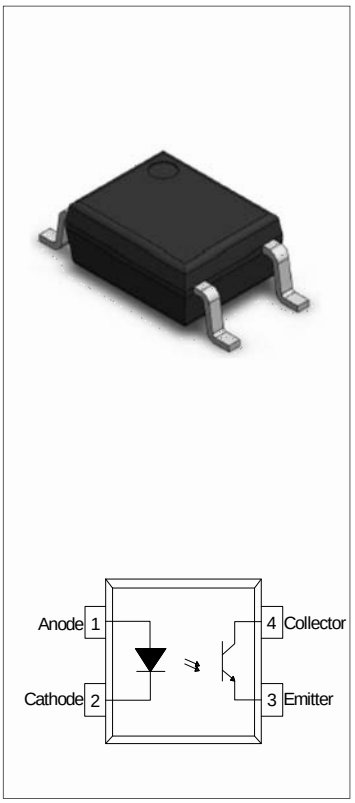
JOCT351X-M4 Series

Rev.A.1.0

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.

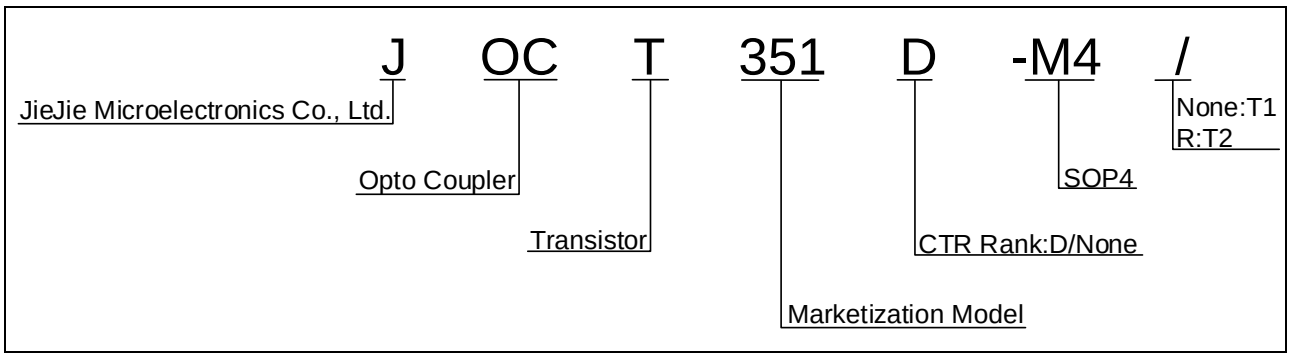


High isolation 3750 VRMS
Operating temperature range -40°C to 110°C
RoHS & REACH Compliance
HBM: H3A; MM: M4; CDM: C3
CQC approved
VDE approved
UL approved

(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}	300	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	Vrms
Operating Temperature		T_{opr}	-40~+110	
Junction Temperature		T_j	125	
Storage Temperature		T_{stg}	-55~+125	

JOCT351X



None/R	3000 Units/Reel

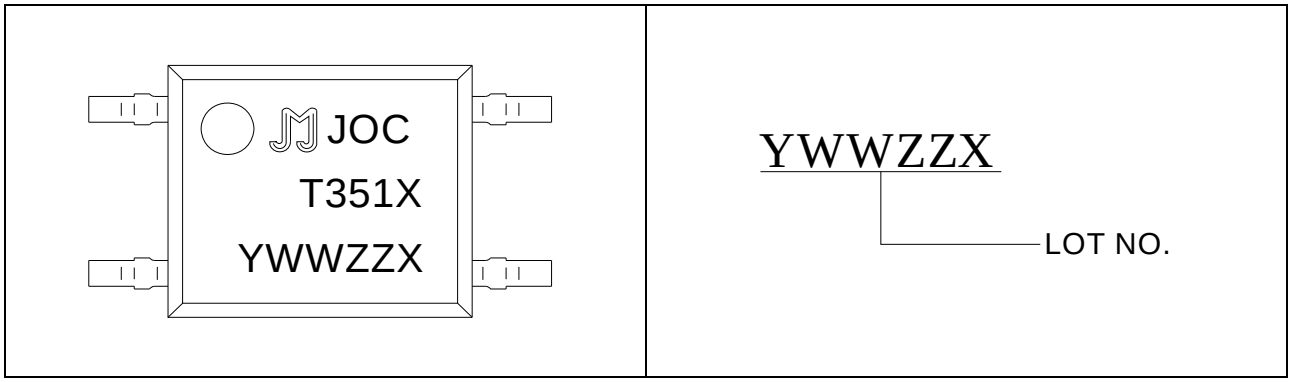


FIG.1: Max. Allowable LED Forward Current vs. Ambient Temperature

FIG.2: Collector Power Dissiption vs. Ambient Temperature

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

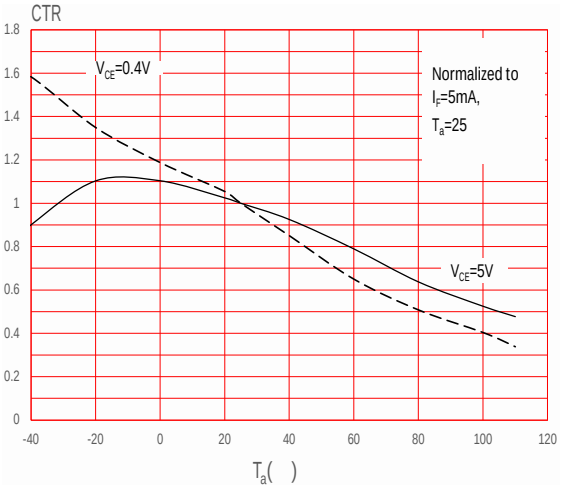


FIG.8: Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature

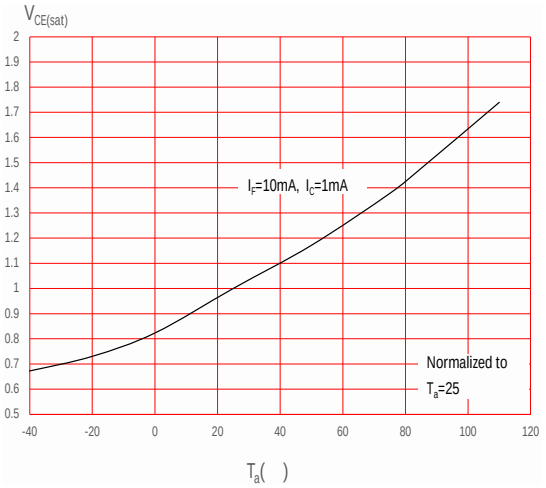


FIG.9: Response Time vs. Load Resistance

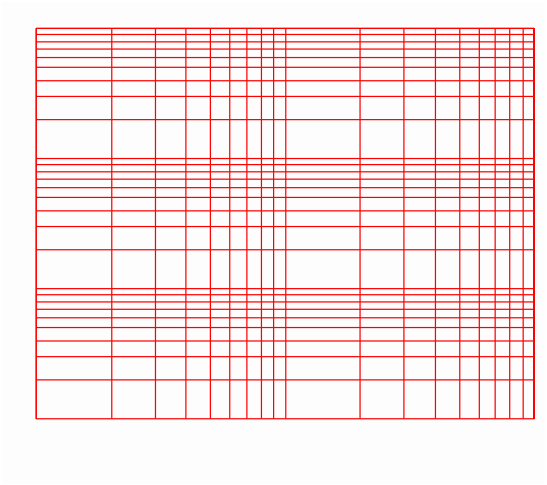


FIG.10: Frequency Response @ A î ñ] v • @] u

FIG.11: Test Circuits of Response Time

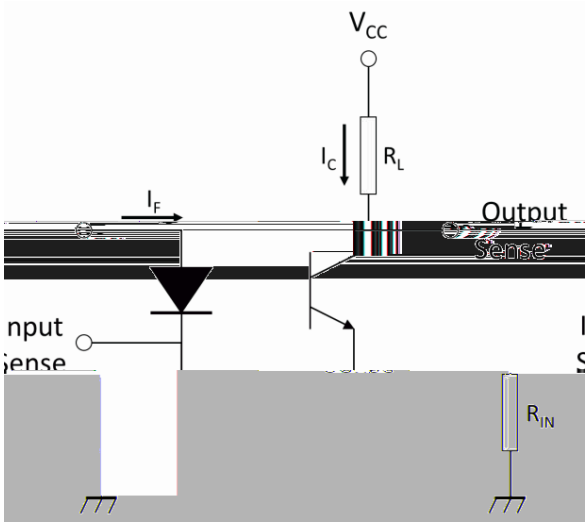


FIG.12: Curves of Response Time

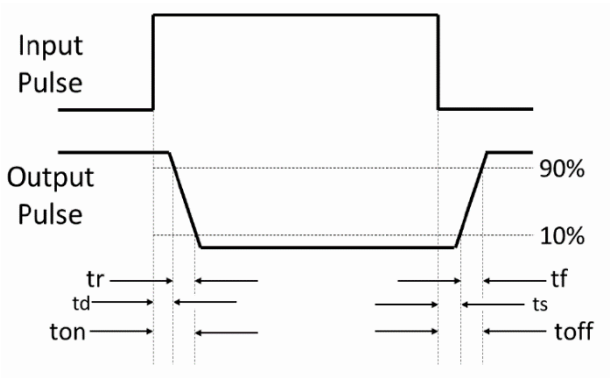
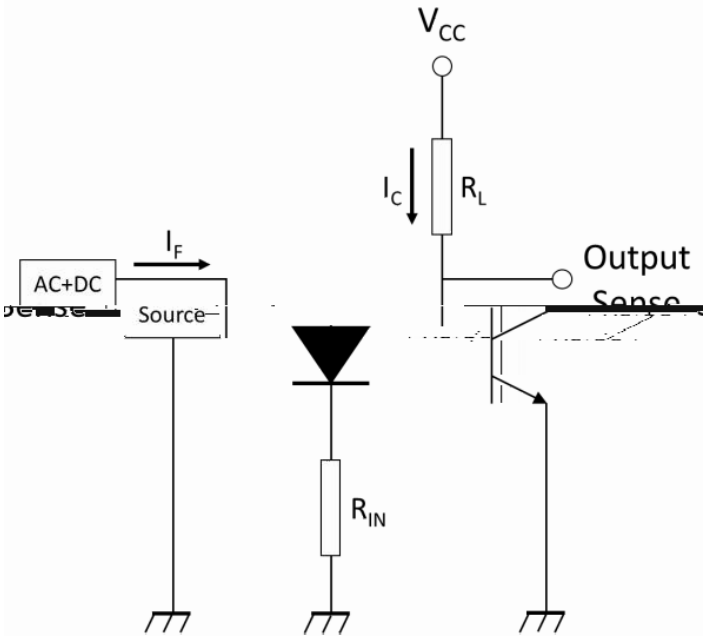
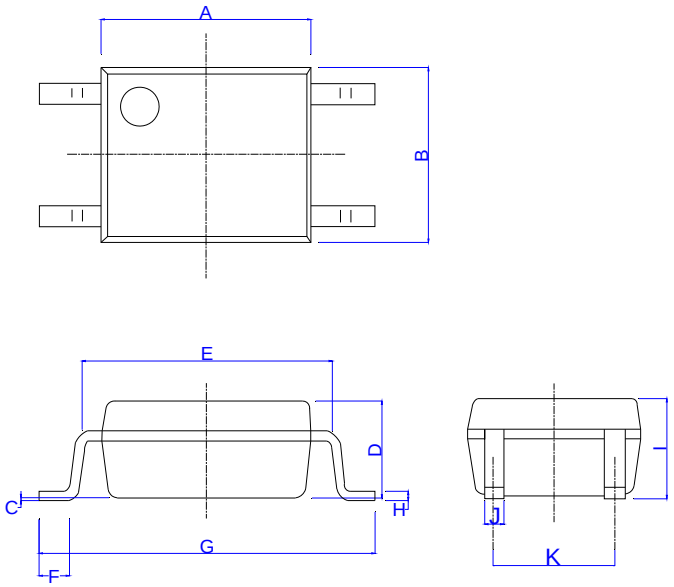
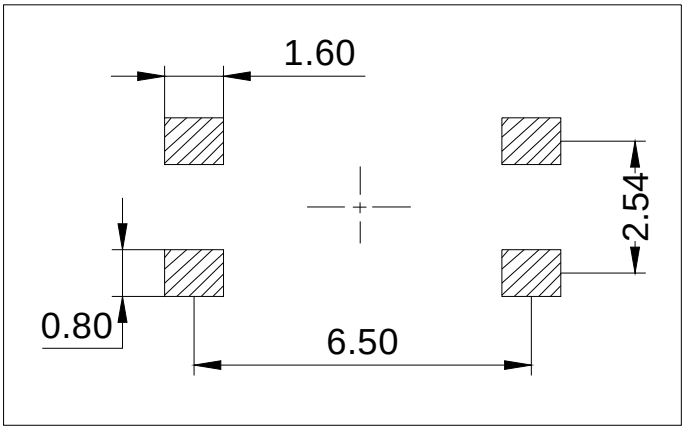


FIG.13: Test Circuits of Frequency Response

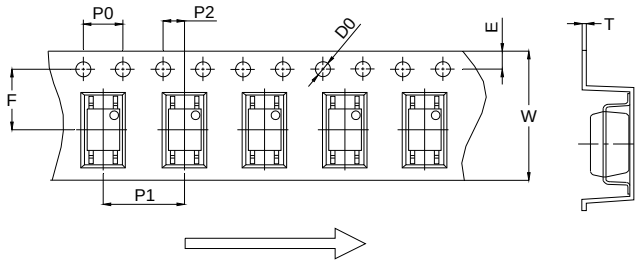




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	3.60		4.20	0.142		0.165
C	0.00		0.20	0.000		0.008
D	1.90		2.30	0.075		0.091
E	5.00		5.60	0.197		0.220
F	0.34		0.94	0.013		0.037
G	6.70		7.30	0.264		0.287
H	0.10		0.30	0.004		0.012
I	2.00		2.40	0.079		0.094
J	0.25		0.55	0.010		0.022
K	2.29		2.79	0.090		0.110

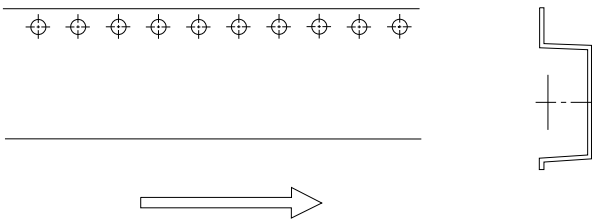


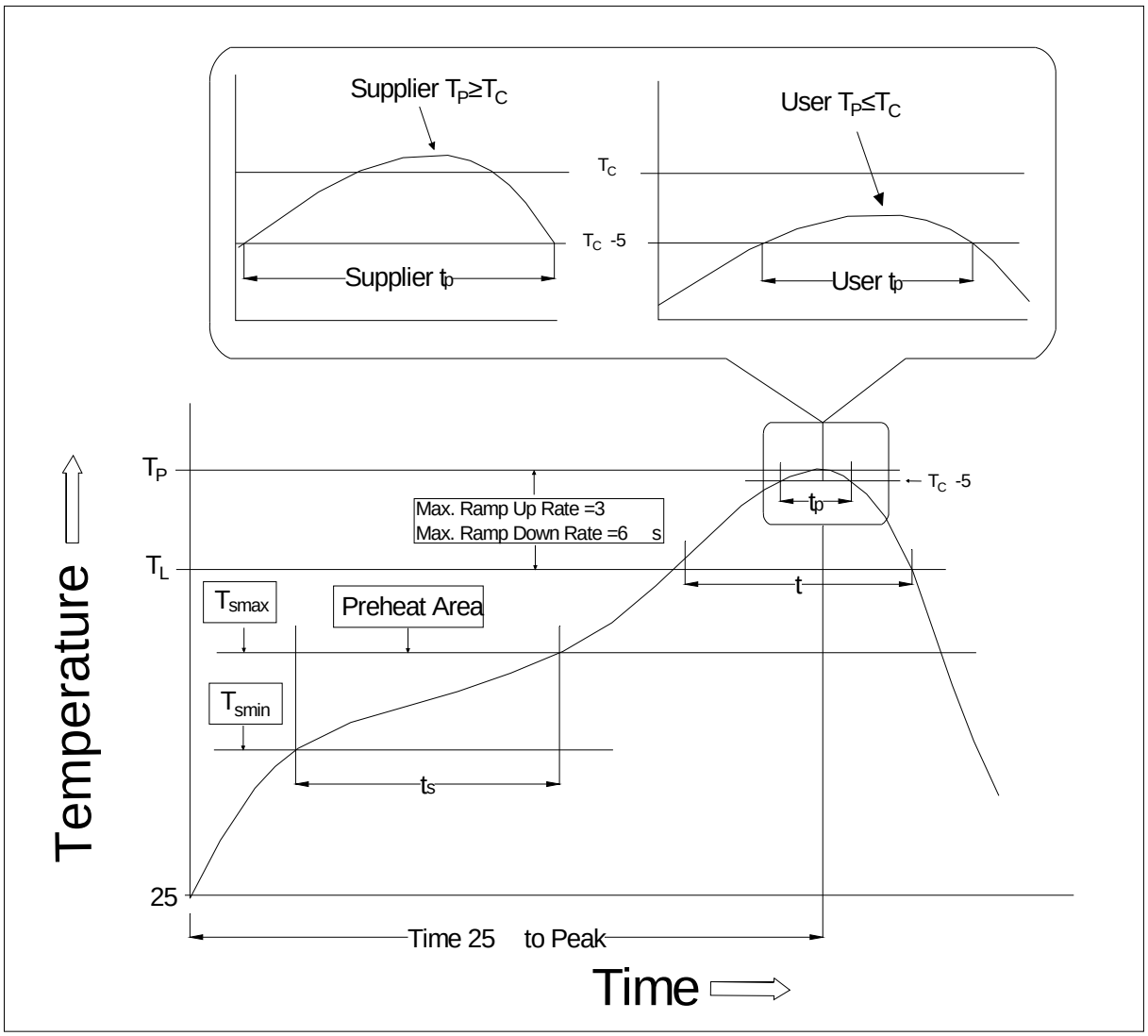
Option None



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

Option R





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.
Liquidus Temperature (TL)	183	217
Time (tL) Maintained Above (TL)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235 +0 /-5	260 +0 /-5
Time (tP) within 5 of 260	20 seconds	30 seconds
Ramp-down Rate (TP to TL)	6 /second max.	6 /second max.
Time 25 to Peak Temperature	6 minutes max.	8 minutes 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.

5. The component has a shelf life of one year when stored under standard conditions.