



The products are transistor opto-couplers in a plastic SOP4 package. The device combines an AlGaAs infrared emitting diode as 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 -55°C to 110°C

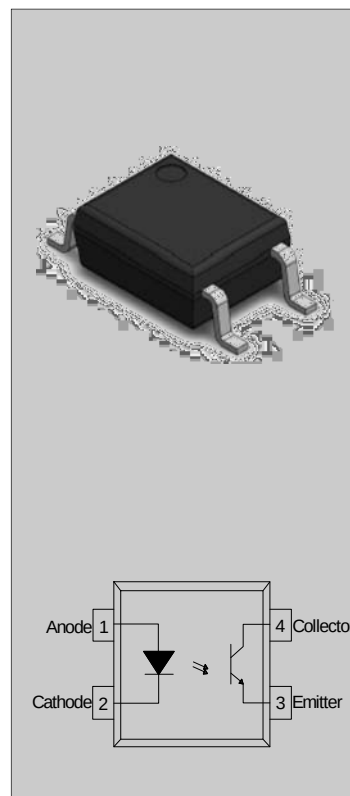
RoHS & REACH Compliance

HBM: H3A; MM: M4; CDM:C3

CQC approved

VDE approved

UL approved



(Temperature=25°C)

Input	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1 ^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
	Power Dissipation	P_C	150	mW
Total Power Dissipation		P_{tot}	225	mW
Isolation Voltage		V_{iso}	3750 ^②	Vrms
Operating Temperature		T_{opr}	-55~+110	°C
Junction Temperature		T_j	125	°C
Storage Temperature		T_{stg}	-55~+125	°C



Soldering Temperature	T_{sol}	260	°C
-----------------------	-----------	-----	----

: 100μs pulse, 100Hz frequency

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

(Temperature=25°C)

Input	Forward Voltage	V_F	$I_F=10mA$	-	1.2	1.5	V
	Reverse Current	I_R	$V_R=6V$	-	-	1	μA
	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}	-	Ω
	Floating Capacitance	C_{IO}	$V=0,$ $f=1MHz$	-	0.4	1	pF
	Cut-off Frequency	f_c	$V_{CE}=5V,$ $I_C=2mA$ $R_L=100Ω,$ -3dB	-	80	-	kHz
	Rise Time	t_r	$V_{CE}=2V,$ $I_C=2mA$ $R_L=100Ω$	-	3	18	μs
	Fall Time	t_f		-	4	18	μs
	Response Time	t_{on}		-	6	25	μs
		t_{off}		-	5	25	μs

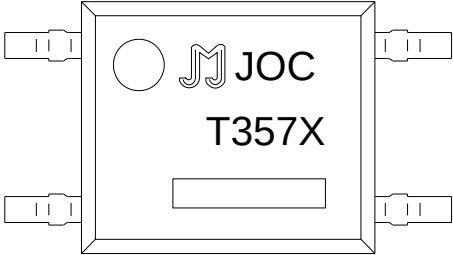
: Rank Table of Current Transfer Ratio (Temperature=25°C)

None	80	600
A	80	160
B	130	260
C	200	400
D	300	600
E	400	600
Q	100	200



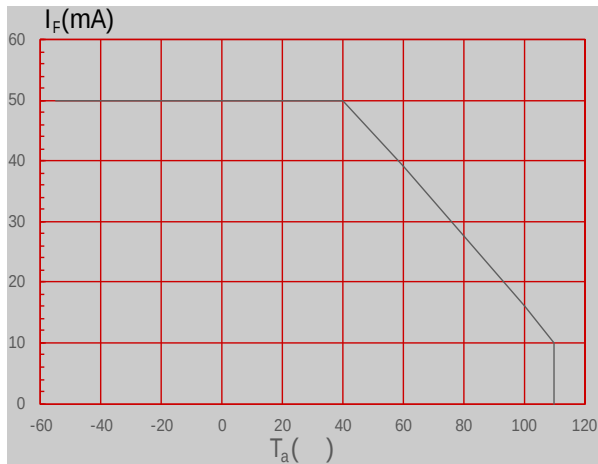
J	OC	T	357	B	-M4	/
JieJie Microelectronics Co., Ltd.	Opto Coupler	Transistor	Marketization Model	CTR Rank:A/B/C/D/E/Q/None	SOP4	None:T1 R:T2

SOP4	3000 Units/Reel	2 Reels/Inner box	5 Inner box/Outer box =30k Units

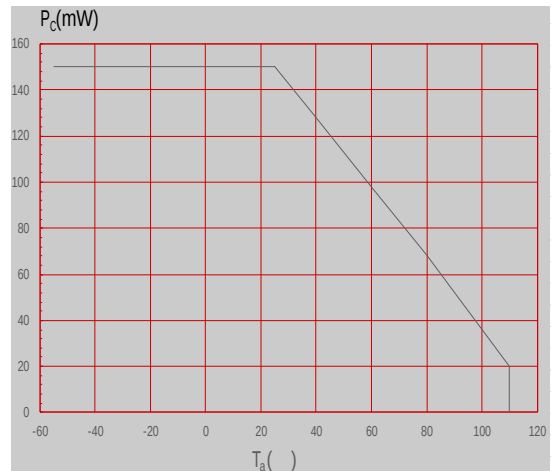
	 Production Information Code
---	---



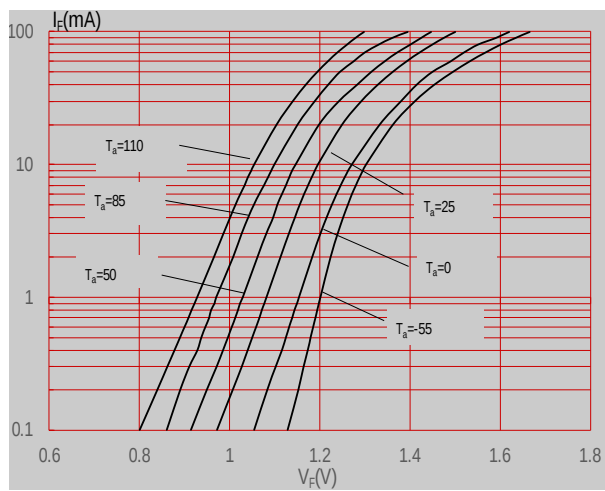
Max. Allowable LED Forward Current vs. Ambient Temperature



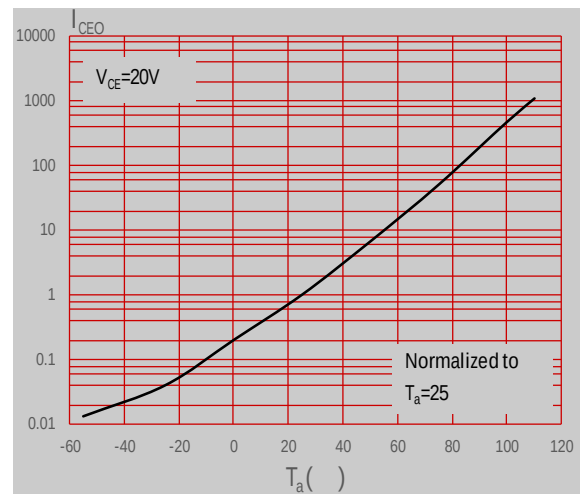
Collector Power Dissipation vs. Ambient Temperature



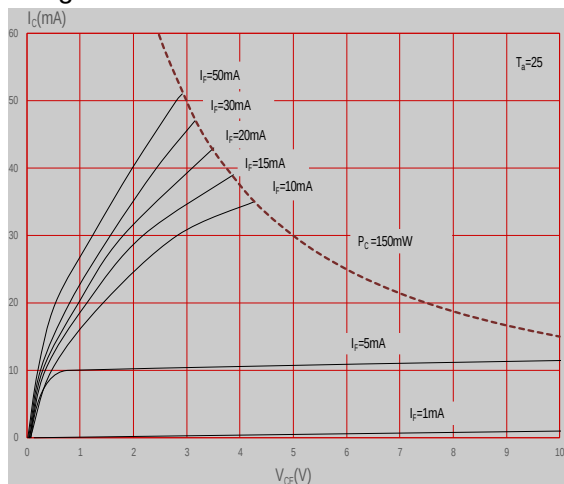
Forward Current vs. Forward Voltage



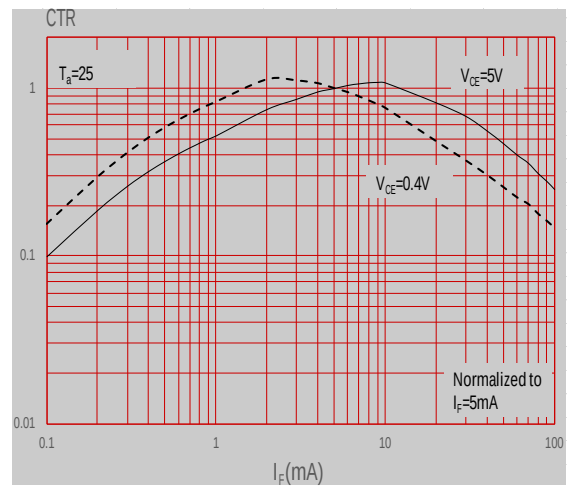
Normalized Collector Dark Current vs. Ambient Temperature



Collector Current vs. Collector-emitter Voltage

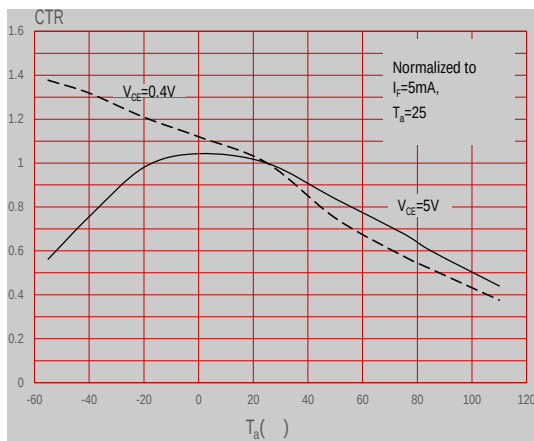


Normalized Current Transfer Ratio vs. Forward Current

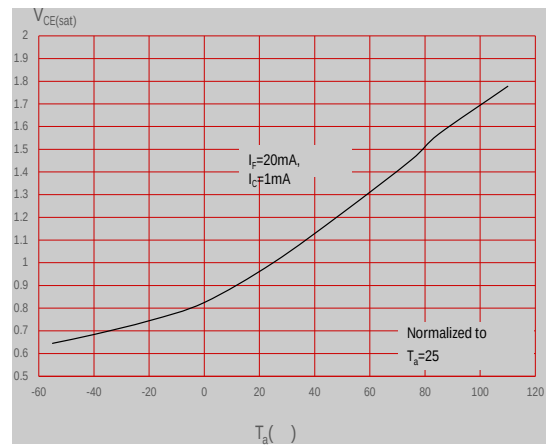




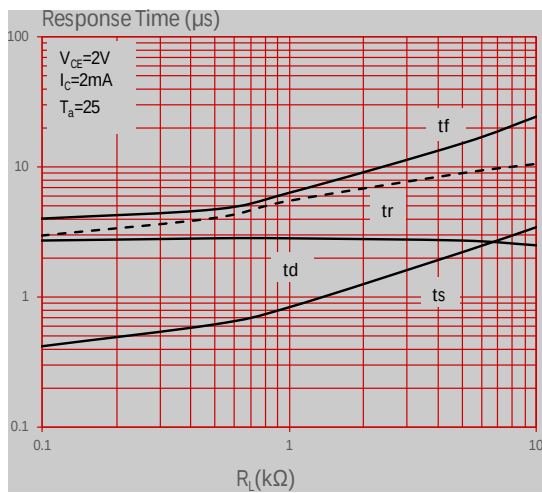
Normalized Current Transfer Ratio vs. Ambient Temperature



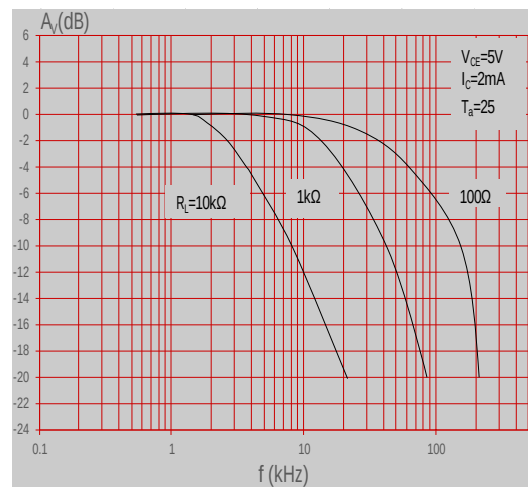
Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature



Response Time vs. Load Resistance

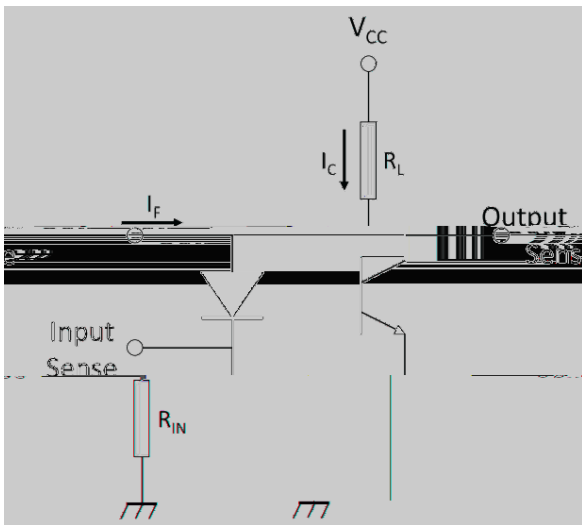


Frequency Response

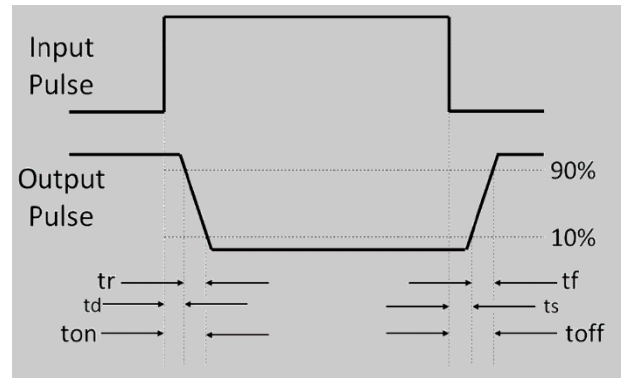




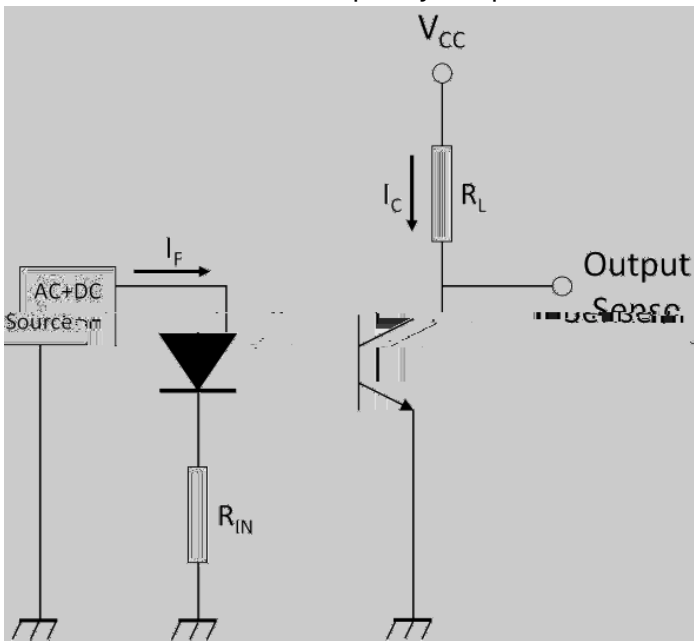
Test Circuits of Response Time

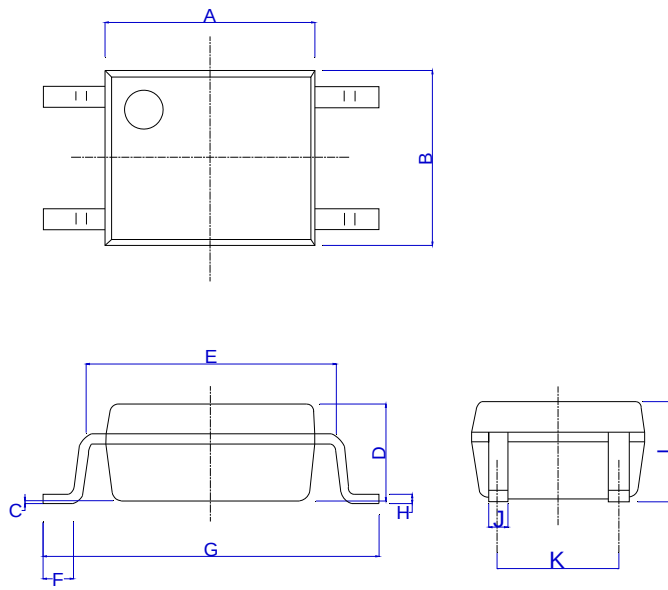


Curves of Response Time

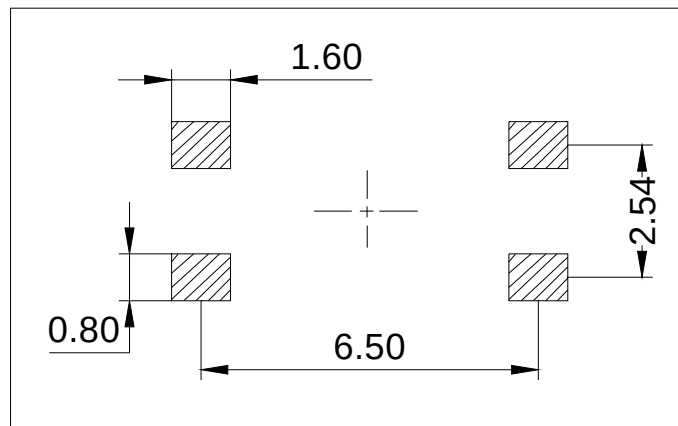


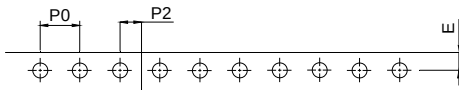
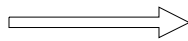
Test Circuits of Frequency Response

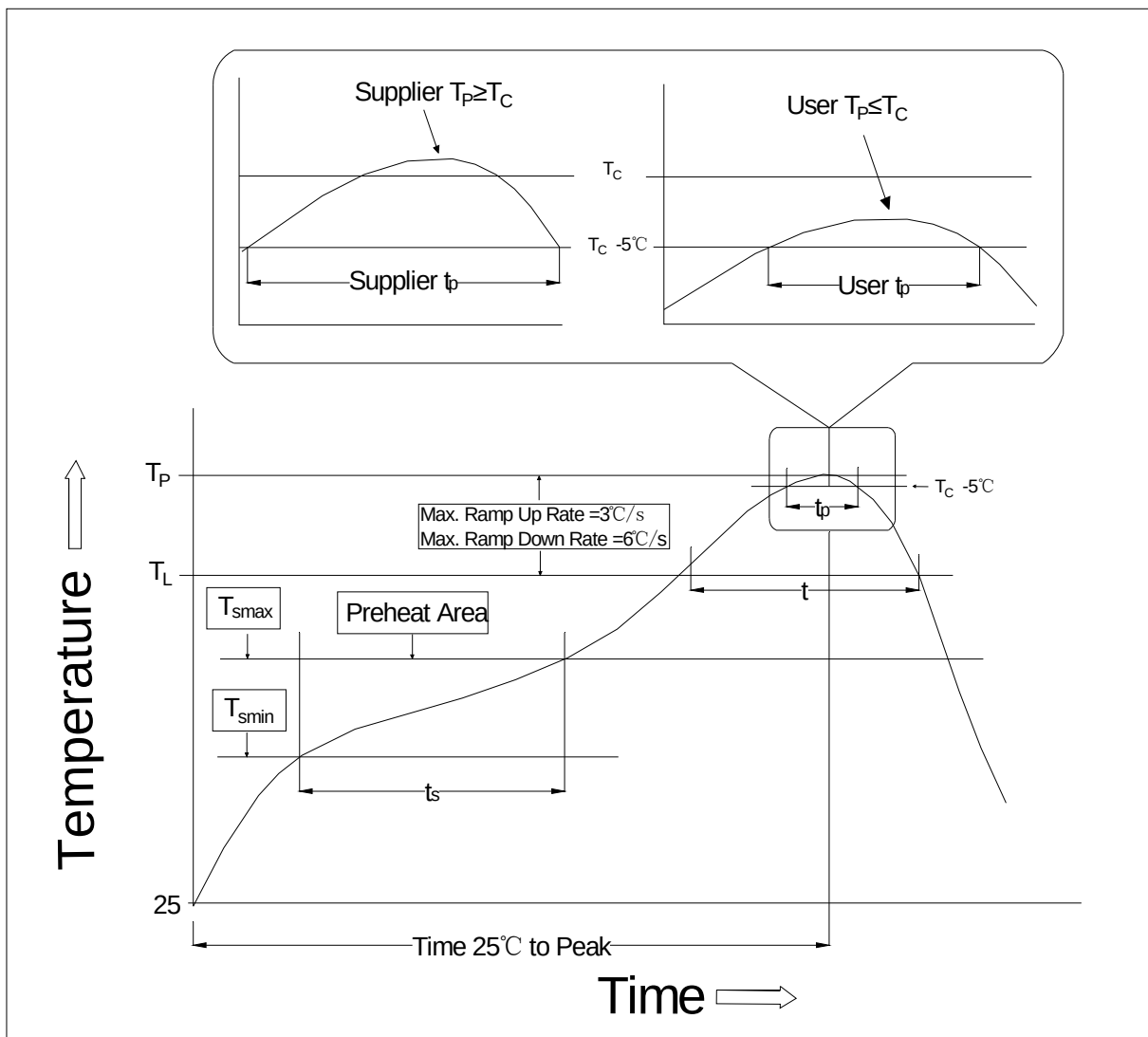




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	3.60		4.20	0.142		0.165
C	0.00		0.20	0.000		0.008
D	1.90		2.30	0.075		0.091
E	5.00		5.60	0.197		0.220
F	0.34		0.94	0.013		0.037
G	6.70		7.30	0.264		0.287
H	0.10		0.30	0.004		0.012
I	2.00		2.40	0.079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







Temperature Min. (T _{smin})	100°C	150°C
Temperature Max. (T _{smax})	150°C	200°C
Time (t _s) from (T _{smin} to T _{smax})	60-120 seconds	60-120 seconds
Ramp-up Rate (t _L to t _P)	3°C/second max.	3°C/second max.
Liquidus Temperature (T _L)	183°C	217°C
Time (t _L) Maintained Above (T _L)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235°C+0°C/-5°C	260°C+0°C/-5°C
Time (t _P) within 5°C of 260°C	10 seconds	10 seconds
Ramp-down Rate (T _P to T _L)	3-6°C/second	3-6°C/second
Time 25°C 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.
6. Recommend storage Temp.: 0~40°C;
Recommend storage humidity: <60%;
MSL level: MSL 1

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned

n e H r d m