



DESCRIPTION:

The products are transistor opto-couplers in a plastic DIP4 package with different lead forming options, that infrared LED chip and photo-transistor chip are assembled on lead frame, in order to change the electricity-light-electricity. The products are widely used in transmission and conversion of digital logic, power control and switch, electric insulation and impedance conversion between circuits systems, etc.

MAIN FEATURES

High isolation 5000 VRMS

Phototransistor output

Operating temperature range -55°C to 125°C

RoHS & REACH Compliance

HBM: H3A; MM: M4; CDM:C3

CQC approved

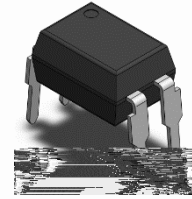
VDE approved

UL approved

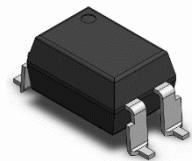
AECQ101 approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

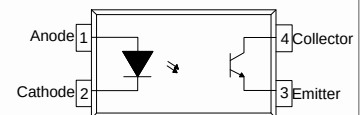
Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1	A
	Reverse Voltage	V_R	6	V
	Power Dissipation	P_D	75	mW
Output	Collector-emitter Voltage	V_{CEO}	80	V
	Emitter-collector Voltage	V_{ECO}	7	V
	Collector Current	I_C	50	mA
	Power Dissipation	P_C	150	mW
Total Power Dissipation		P_{tot}	225	mW
Isolation Voltage		V_{iso}	5000	Vrms
Operating Temperature		T_{opr}	-55~+125	
Junction Temperature		T_j	135	
Storage Temperature		T_{stg}	-55~+125	



JOCT817Xh-D4P



JOCT817Xh-D4S



Soldering Temperature	T_{sol}	260	
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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	μA
	Terminal Capacitance	C_t	$V=0, f=1MHz$	-	30	250	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	$V_{CE(sat)}$	$I_F=20mA, I_C=2mA$	-	0.06	0.4	V
	Isolation resistance	R_{IO}	DC500V 40~60%R.H.	10^{12}	-	-	Ω
	Floating Capacitance	C_{IO}	$V=0, f=1MHz$	-	10	-	pF
	Cut-off Frequency	f_c	$V_{CE}=5V, I_C=2mA, R_L=100\Omega, -3dB$	-	80	-	kHz
	Rise Time	t_r	$V_{CC}=5V, I_C=2mA, R_L=100\Omega$	-	3	18	μs
	Fall Time	t_f		-	4	18	μs
	Turn On Time	t_{on}	$V_{CC}=5V, I_F=16mA, R_L=1.9k\Omega$	-	5	-	μs
Turn Off Time		t					

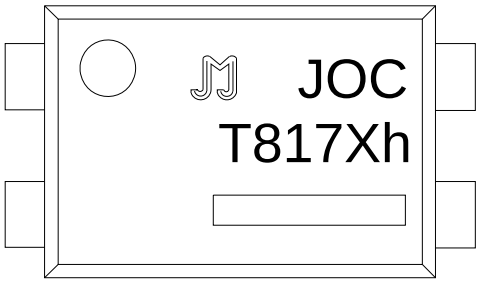
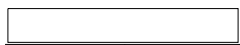
ORDERING INFORMATION

J	OC	T	817	A	h	-D4P/S	/
JieJie Microelectronics Co., Ltd.	Opto Coupler	Transistor		CTR Rank: A/B/C/D/E/Q/None	h: Automotive grade	P: DIP4 S: SMD4	None: T1 R: T2 S: T3 L: T4
				Marketization Model			

Packing Quantity

Option	Quantity	Quantity – Inner box	Quantity –Outer box
DIP	100 Units/Tube	32 Tubes/Inner box	10 Inner box/Outer box =32k Units
SMD(T1/T2)	1500 Units/Reel	3 Reels/Inner box	5 Inner box/Outer box =22.5k Units
SMD(T3/T4)	1000 Units/Reel	3 Reels/Inner box	5 Inner box/Outer box =15k Units

MARKING

	 Production Information Code
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Characteristics Curves

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

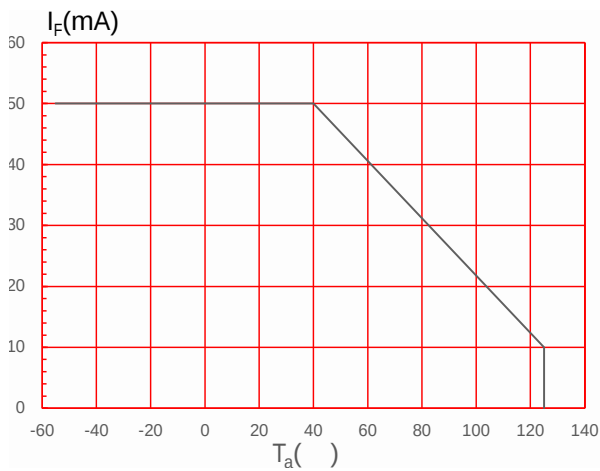


FIG.3: Forward Current vs. Forward Voltage

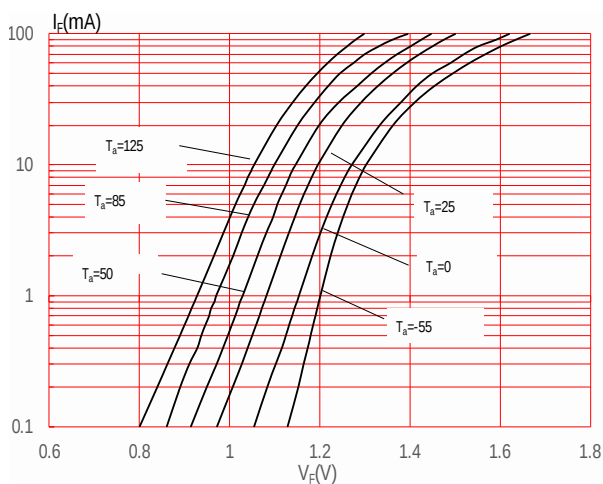


FIG.5: Collector Current vs. Collector-emitter Voltage

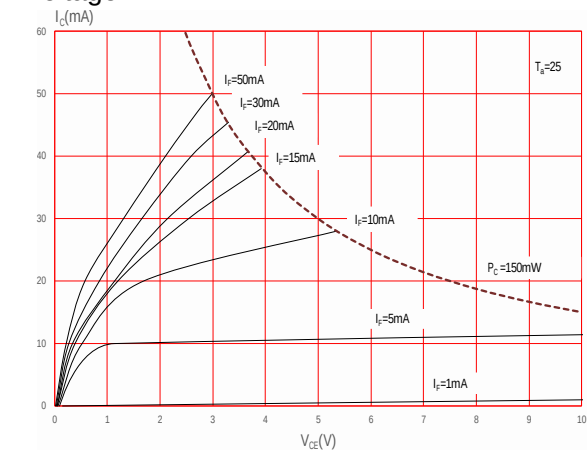


FIG.2: Collector Power Dissipation vs. Ambient Temperature

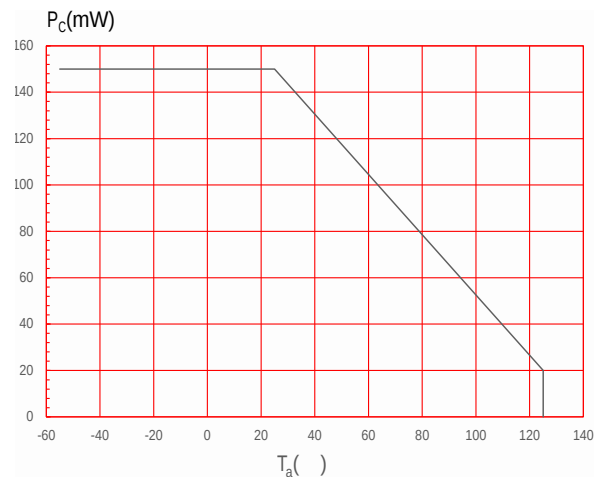


FIG.4: Normalized Collector Dark Current vs. Ambient Temperature

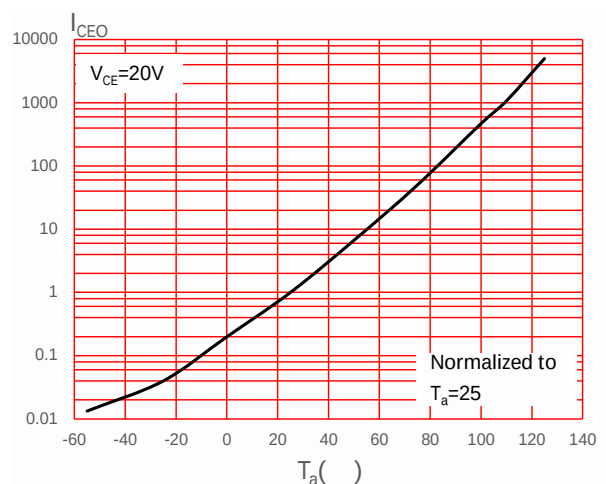


FIG.6: Normalized Current Transfer Ratio vs. Forward Current

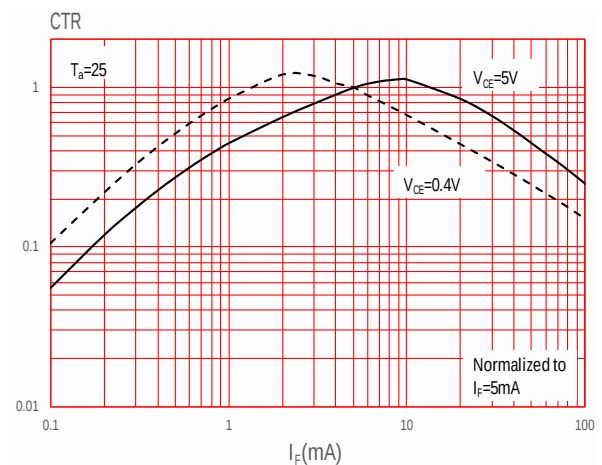


FIG.7: Normalized Current Transfer Ratio vs. Ambient Temperature

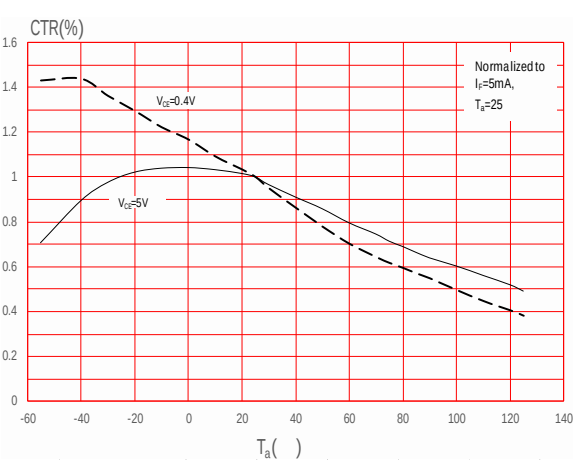


FIG.9: Response Time vs. Load Resistance

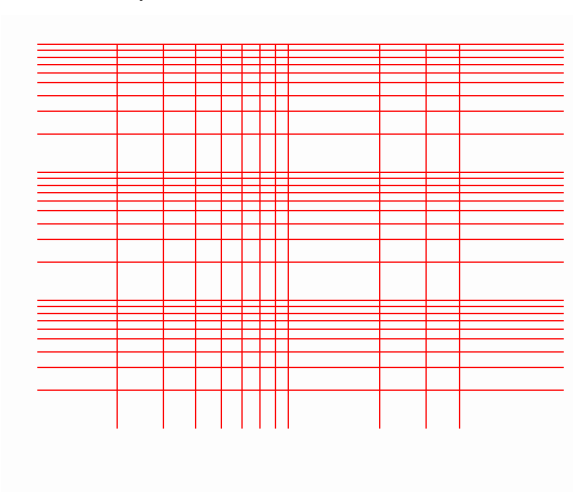


FIG.8: Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature

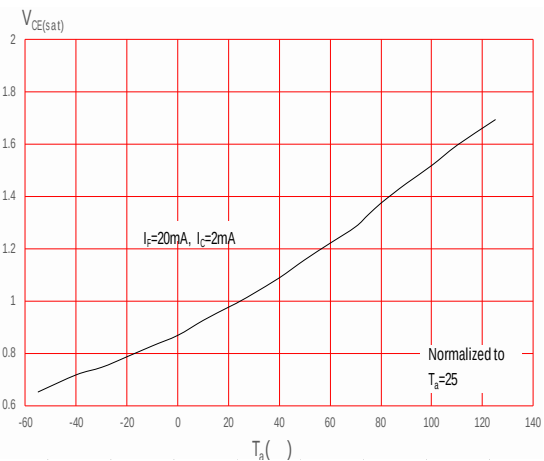
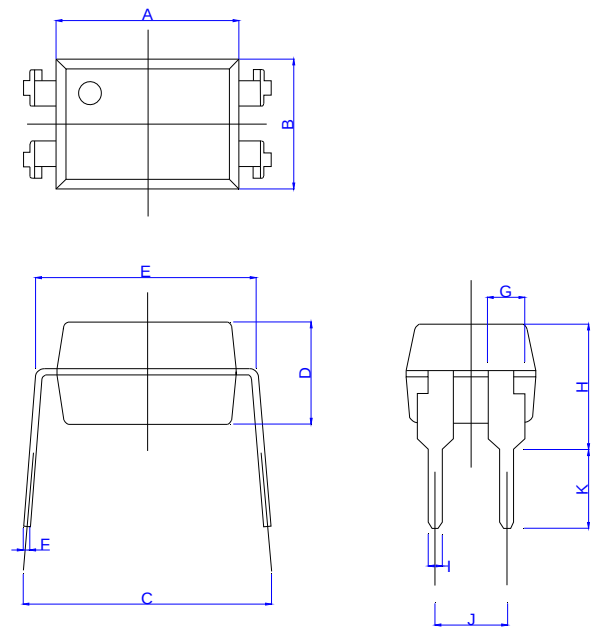


FIG.10: Frequency Response

JOCT817Xh

Package Dimension (Unit: mm)

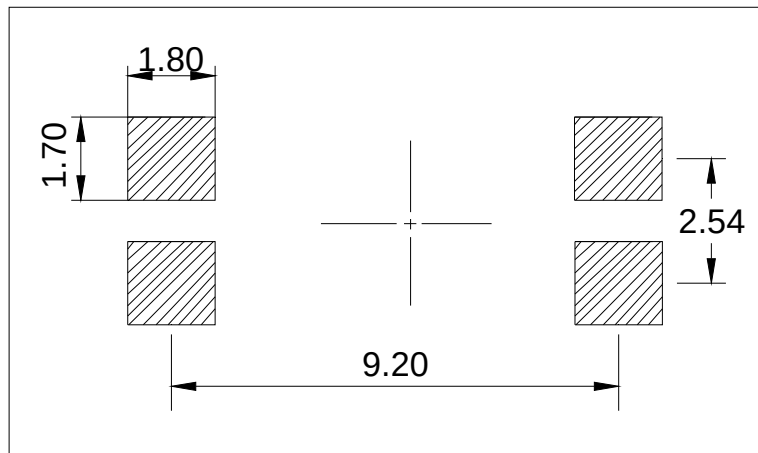
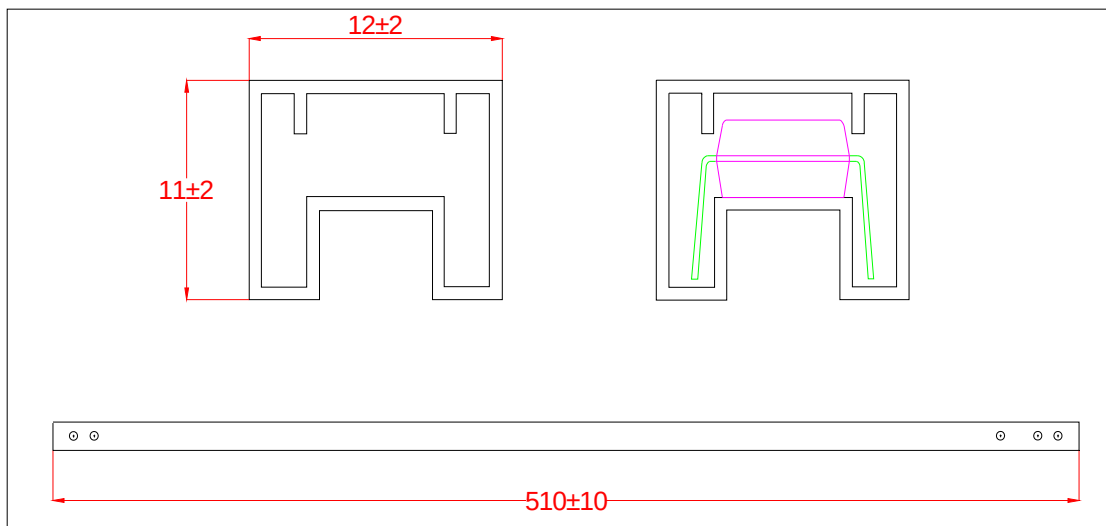
Standard DIP Type:



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.00		7.00	0.236		0.276
B	4.08		5.08	0.161		0.200
C	7.62		10.16	0.300		0.400
D	3.00		4.00	0.118		0.157
E	7.32		7.92	0.288		0.312
F	0.15		0.36	0.006		0.014
G	0.90		1.50	0.035		0.059
H	3.50		4.80	0.138		0.189
I	0.40		0.60	0.016		0.024
J	2.29		2.79	0.090		0.110
K	2.45		3.50	0.096		0.138

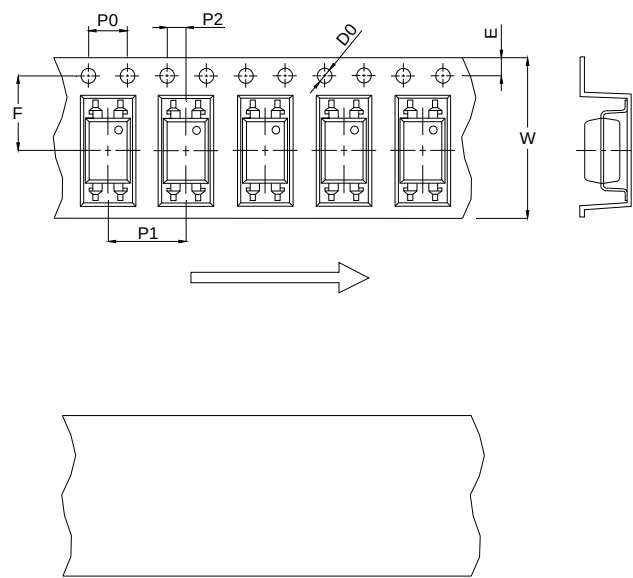
t¼ 0l# 'l 7l 1' xb \$

Option SMD Type:

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)**TUBE SPECIFICATIONS (Dimensions in mm unless otherwise stated)****Standard DIP**

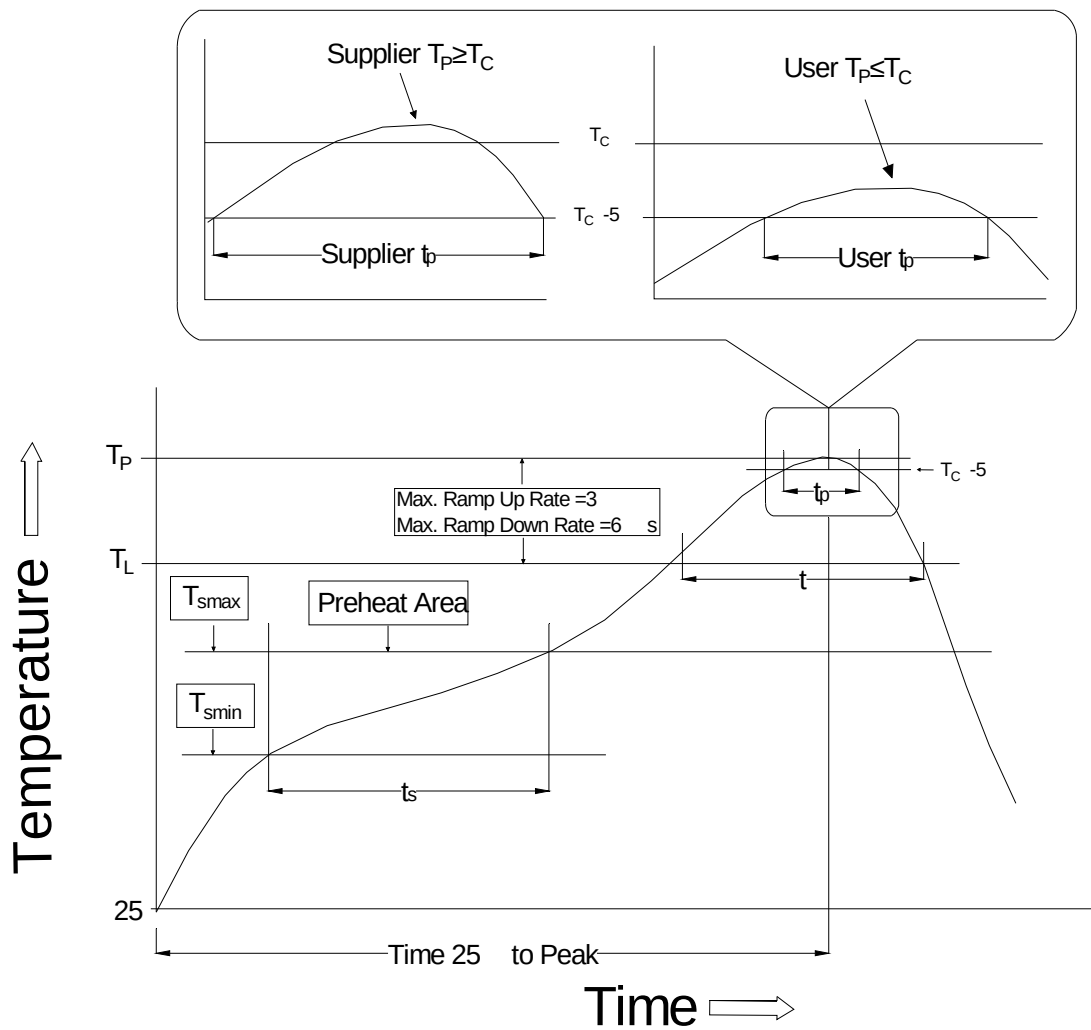
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

T1



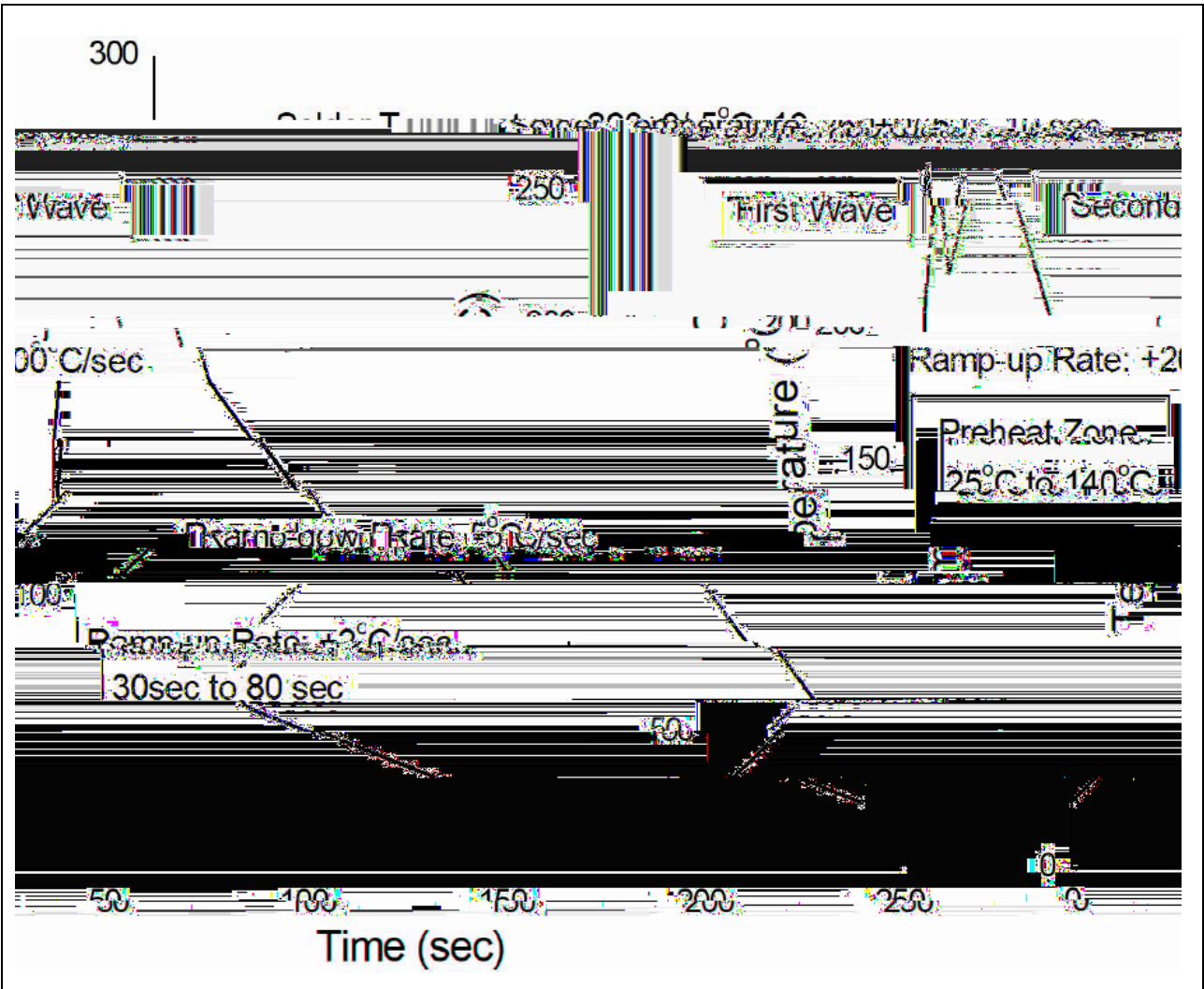
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50			0.059	
P0		4.00			0.157	
P1		8.00			0.315	
P2		2.00			0.079	
E		1.75			0.069	
F		7.50			0.295	
		0.40			0.016	
W		16.00			0.630	

REFLOW INFORMATION



Profile Feature	Sn-Pb Assembly Profile	Pb-Free Assembly Profile
Temperature Min. (T _{smin})	100	150
Temperature Max. (T _{smax})	150	200
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	217
Time (t _L) Maintained Above (T _L)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235 +0 /-5	260 +0 /-5
Time (t _P) within 5 °C of 260	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.

WAVE SOLDERING



HAND SOLDERING BY SOLDERING IRON

Soldering Temperature	360 ± 5
Soldering Time	3s 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

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