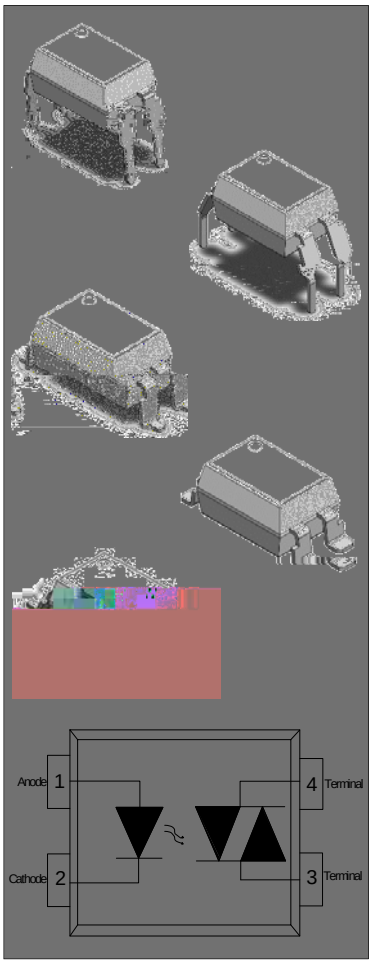
JOC307XD4 Series

Rev.A.1.1

DESCRIPTION:

The JOC307XD4 series combine an AIGaAs infrared emitting diode as the emitter which is optically coupled to a monolithic silicon random-phase photo triac in a plastic DIP4 package with different lead forming options. With the robust coplanar double mold structure, JOC307XD4 series provide the most stable isolation feature. The products are widely used in solenoid/valve controls, lighting controls, motor controls, temperature controls, static AC power switches, solid state relays, interfacing microprocessors up to 265 V_{AC} peripherals.



MAIN FEATURES

High isolation 5000 VRMS
DC input with random-phase photo triac output
Operating temperature range -55 to 100
REACH compliance
Halogen free
HBM: H3A ; MM: M4
CQC approved
VDE approved
UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	60	mA
	Reverse Voltage	V_R	6	V
	Junction Temperature	T_j	125	
	Input Power Dissipation	P_I	100	mW
	Power Dissipation Derating ($T_a \geq 25$)	ΔP_D/	-1.33	mW/
Output	Off-state Output Terminal Voltage	V_{OFF}	800	V
	Peak On−state Current (100μs pulse, 120 pps)	I_{TP}	2	A
	On-state RMS Current	$I_{T(RMS)}$	100	mA
	Peak Repetitive Surge Current (P_W=10 ms)	I_{TSM}	1	A

	Junction Temperature	T_j	125	
	Output Power Dissipation	P_O	250	mW
	Power Dissipation Derating ($T_a \geq 25$)	ΔP_D/	-3.33	mW/
Total Power Dissipation		P_{tot}	350	mW
Isolation Voltage		V_{iso}	5000	Vrms
Operating Temperature		T_{opr}	-55~100	
Storage Temperature		T_{stg}	-55~125	
Soldering Temperature		T_{sol}	260	

NOTE1:

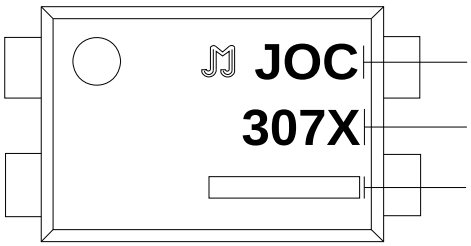
NOTE2:

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typm	Max	Unit
Input	Forward Voltage	V_F	I_F=10mA	-	1.24	1m	
	Reverse Current	I_R	V_R=6V	-	-	1	>

ORDERING AND MARKING INFORMATION

MARKING INFORMATION



: Company Abbr.
: Part Number & Rank
Production Information Code

Packing Quantity

Option	Quantity	Quantity – Inner box	Quantity –Outer box

Characteristics Curves

FIG.1: Forward Current vs. Ambient Temperature

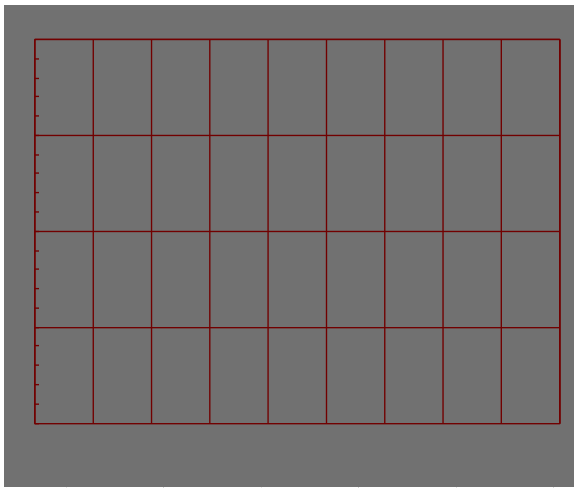


FIG.2: On-state Terminal Current vs. Ambient Temperature

FIG.7: Normalized On-state Terminal Voltage vs. Ambient Temperature

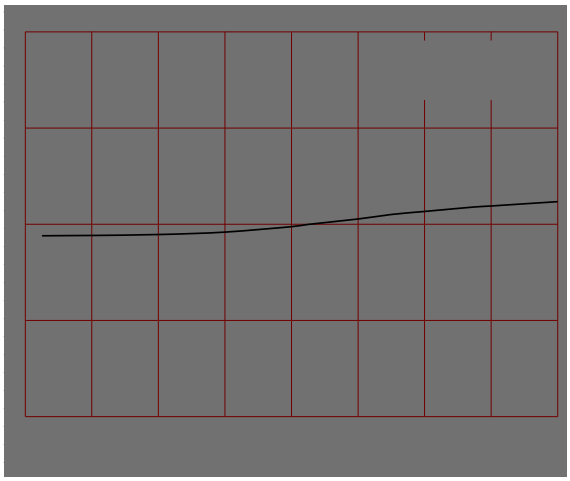


FIG.8: On-state Terminal Voltage vs. On-state Terminal Current

TEST CIRCUITS

FIG.12: Test Circuits of Turn On Time

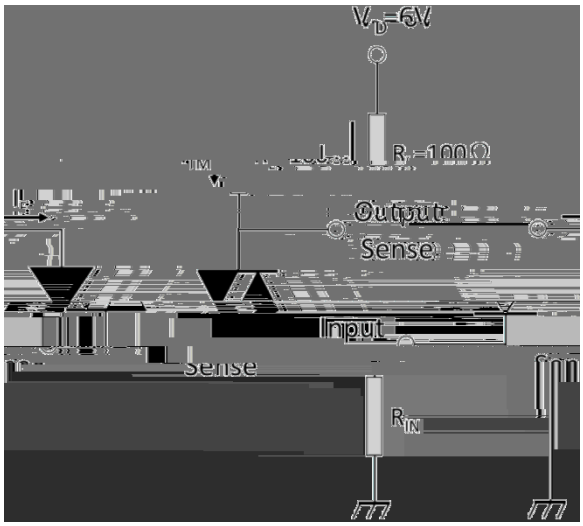


FIG.13: Waveforms of Turn On Time

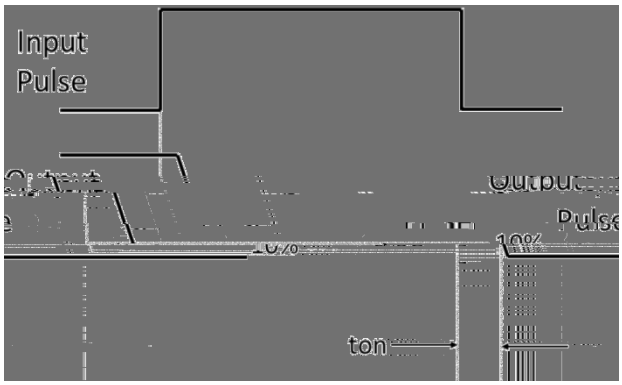


Fig.14: Test Circuits of dV/dt

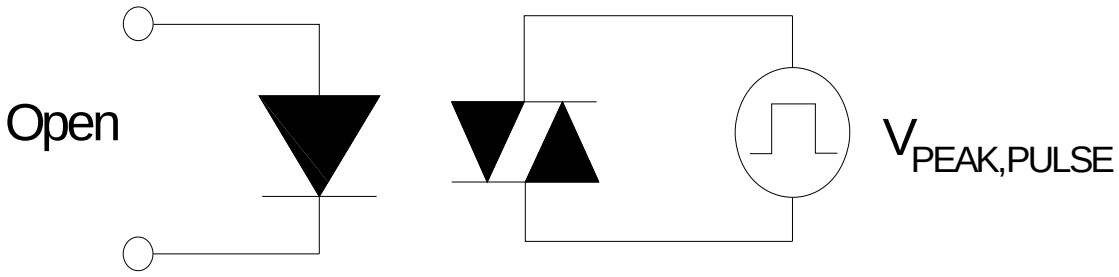
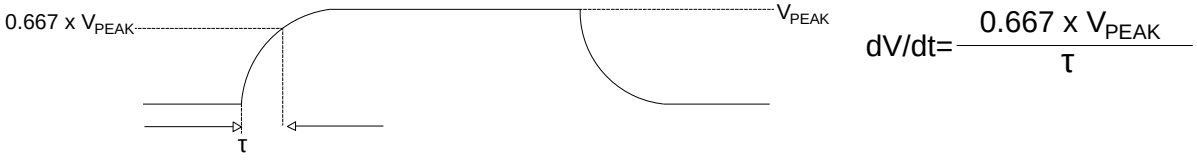
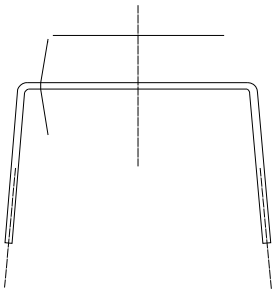


Fig.15: Waveforms of dV/dt



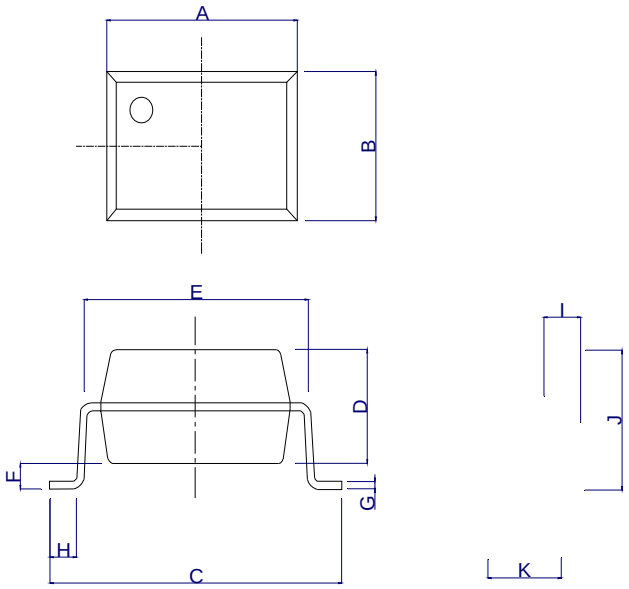
Package Dimension (Unit: mm

Standard DIP Type:



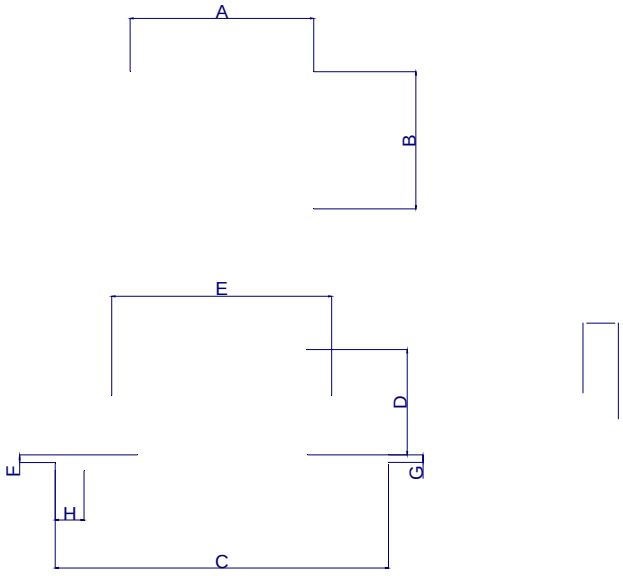
2.80

Option S Type:



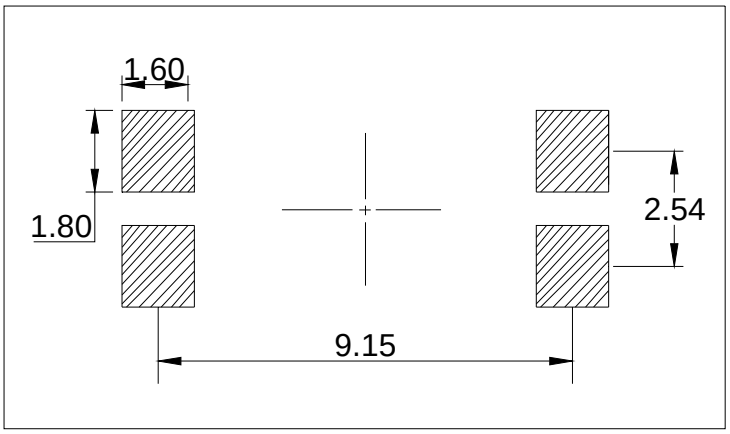
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.30		6.70	0.249		0.265
B	4.38		4.78	0.173		0.189
C	9.85		10.45	0.389		0.413
D	3.30		3.70	0.130		0.146
E	7.32		7.92	0.289		0.313
F		0.80			0.032	
G		0.25			0.010	
H		0.80			0.032	
I	1.20		1.40	0.047		0.055
J	4.00		4.60	0.158		0.182
K		2.54			0.100	

Option SLM Type:

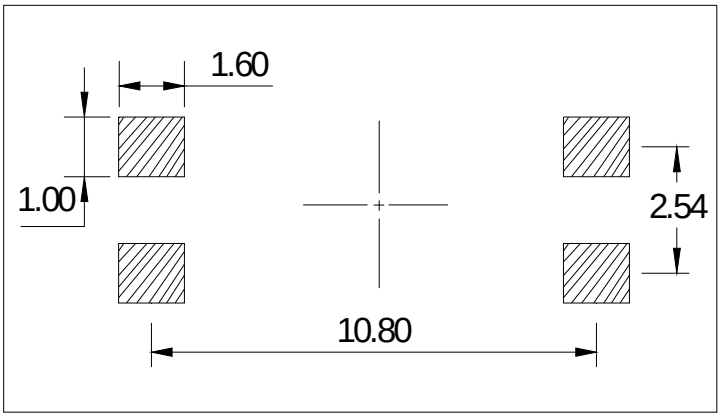


RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)

Option S/SL

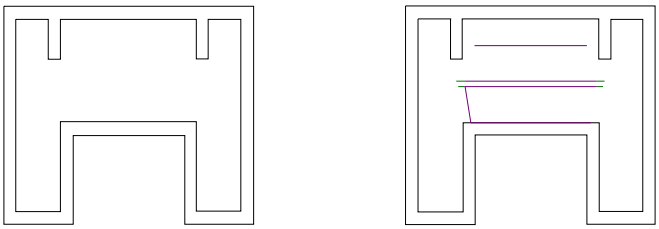


Option SLM



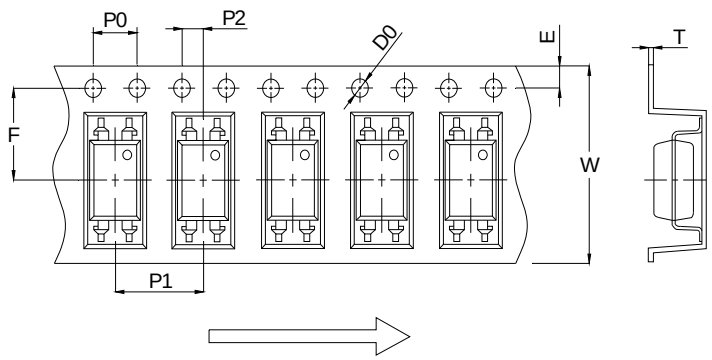
TUBE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Standard DIP



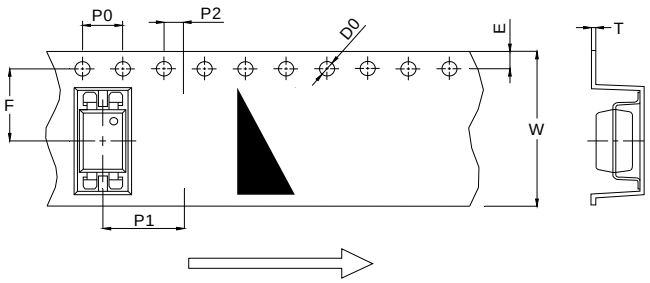
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option S



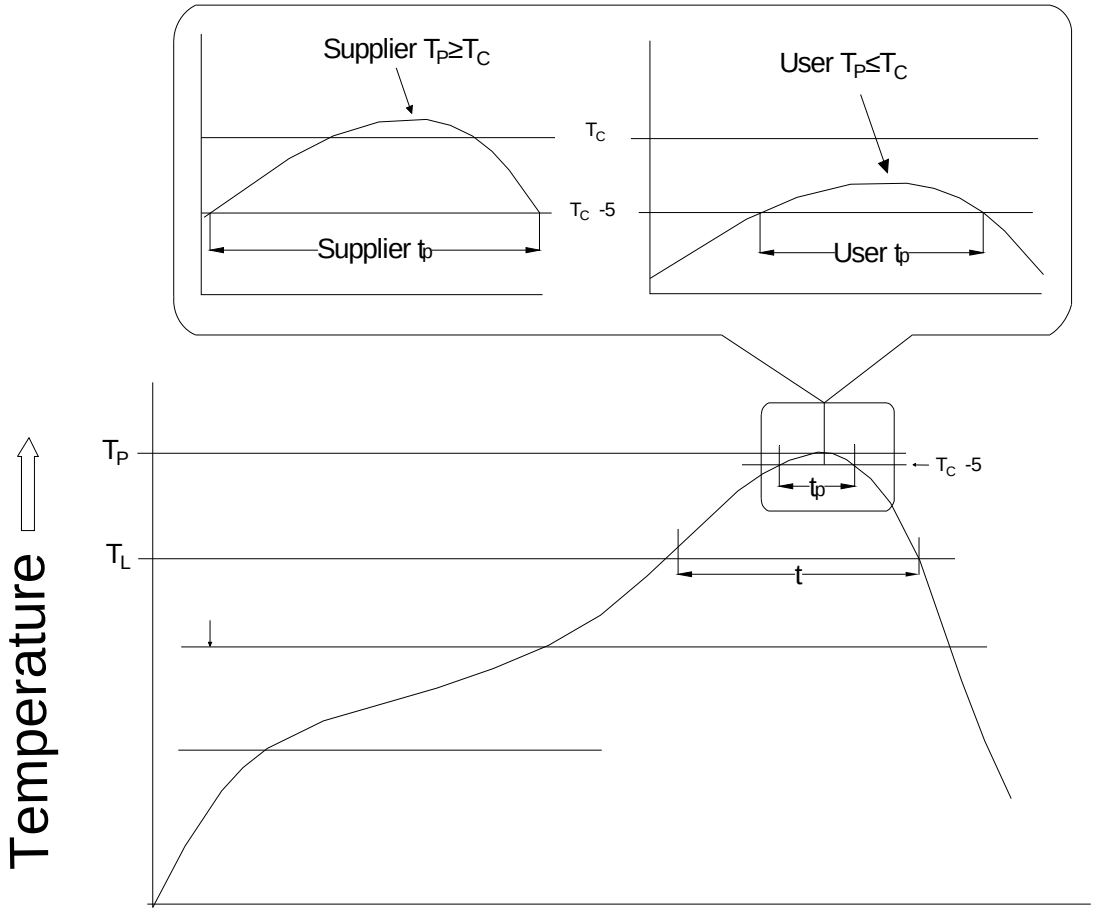
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50			0.059	
P0		4.00			0.157	
P1		8.00			0.315	
P2		2.00			0.079	
E		1.75			0.069	
F		7.50			0.295	
T		0.40			0.016	
W		16.00			0.630	

Option SL

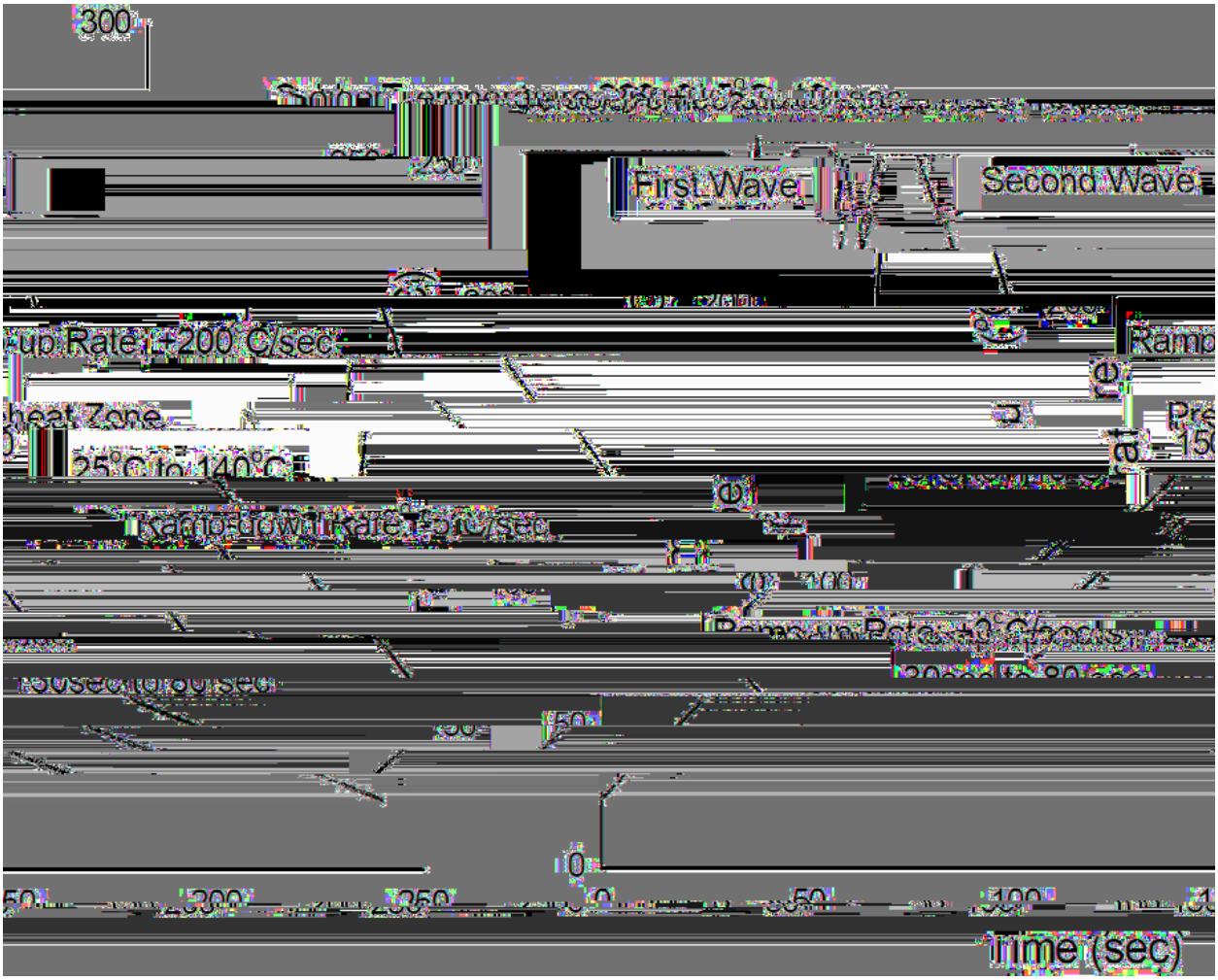


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50			0.059	
P0		4.00			0.157	
P1		8.00			0.315	
P2		2.00			0.079	
E		1.75			0.069	
F		7.50			0.295	
T		0.40			0.016	
W		16.00			0.630	

REFLOW INFORMATION



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

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