JOCMB83Ch-D8P/S Series

A.1.0

DESCRIPTION:

The products are 8-pin optical relays. The device consists h AlGaAs infrared emitting diode input stage optically couple a high-voltage output detector circuit in a plastic DIP8 packa with different lead forming options. The detector consists o high-speed photovoltaic diode array and driver circuitry. Th products are widely used in isolation in high-speed inspect machines, telephones equipment and computers.

MAIN FEATURES

High isolation 5000 Vrms
Operating temperature range -40°C to 125°C
REACH & RoHS compliance
HBM: H3A; MM: M4; CDM: C3
CQC approved
VDE approved
UL approved
AECQ101 approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Parameter		Symbol	Value	nit
Input	Forward Current	I_F	50	A
	Peak Forward Current	I_{FP}	1①	A
	Reverse Voltage	V_R	6	V
	Input Power Dissipation	P_D	75	W
Output	Load Voltage	V_O	600	V
	Continuous load current	I_O	0.05	A
	Output Power Dissipation	P_O	600	W
Total Power Dissipation		P_{tot}	675	W
Isolation Voltage		V_{iso}	5000②	ms

Soldering Temperature	T_{sol}	260	℃

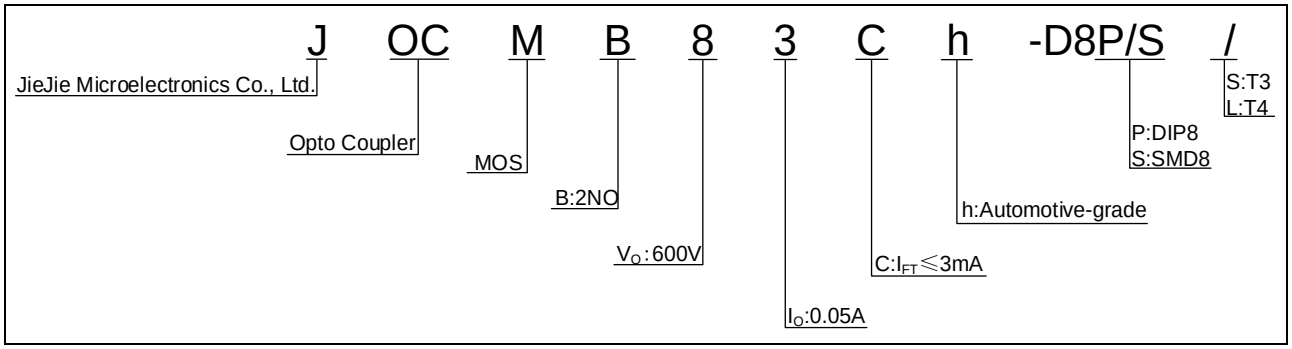
NOTE1:

NOTE2:

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

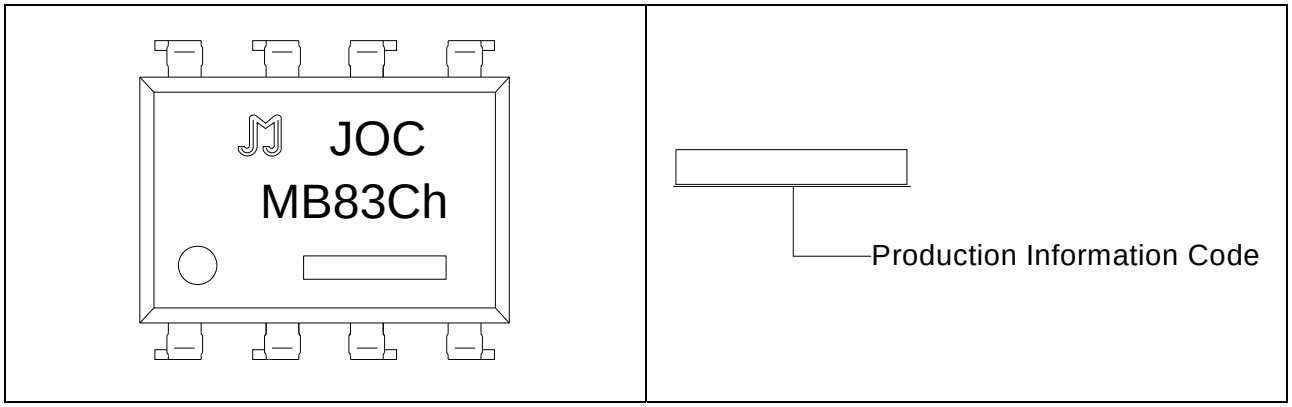
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	I_F=10mA	-	1.3	1.5	V
	Reverse Current	I_R	V_R=6V	-	-	1	μA
	Action Current	$I_{F(ON)}$	I_O=$I_{O(MAX)}$	-	1.5	3	mA
	Reset Current	$I_{F(OFF)}$	I_O=$I_{O(MAX)}$	0.4	0.8	-	mA
Output	On Resistance	R_{on}	I_F=5mA I_O=Max. Within 1s on time	-	30	40	Ω
	Off State Leakage Current	I_{Leak}	I_F=0mA, V_O=Max.	-	-	1	μA
	Output Capacitance	C_{OFF}	V_{OFF}=0V, f_o=1MHz	10	-	1000	pF
Switching Characteristics	Isolation Resistance	R_{ISO}	DC500V 40~60%R.H.	10^{12}	-	-	Ω
	Floating Capacitance	C_{IO}	V=0, f=1MHz	-	1.5	-	pF
	Turn On Time	t_{on}	I_F=5mA, I_O=Max.	-	0.18	0.5	ms
	Turn Off Time	t_{off}	I_F=5mA, I_O=Max.	-	0.2	1	ms

ORDERING INFORMATION



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

MARKING



Characteristics Curves

FIG.1: LED Dropout Voltage vs. Ambient Temperature

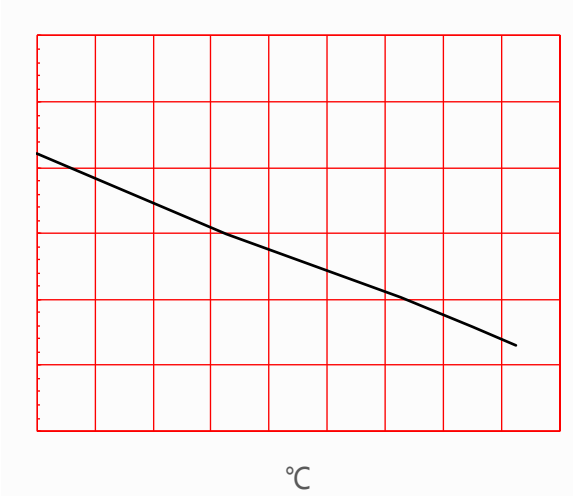


FIG.2: Output Current vs. Output Voltage

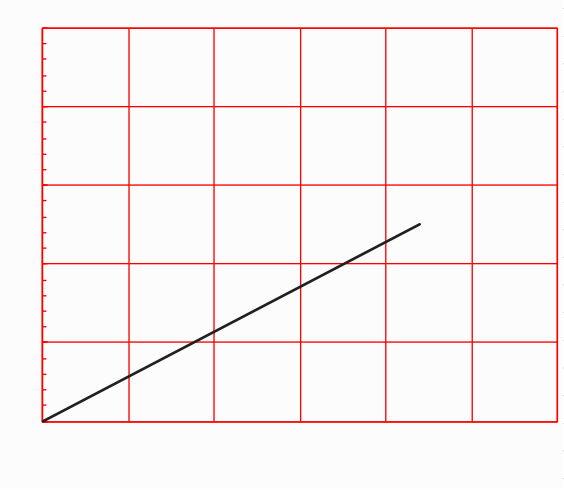


FIG.3: On Resistance vs. Ambient Temperature

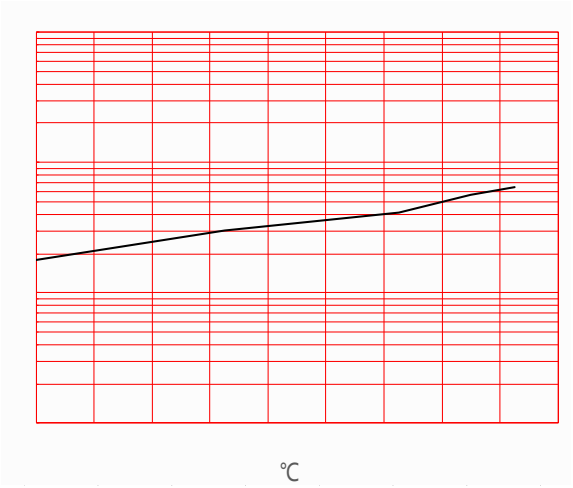


FIG.4: Load Current vs. Ambient Temperature

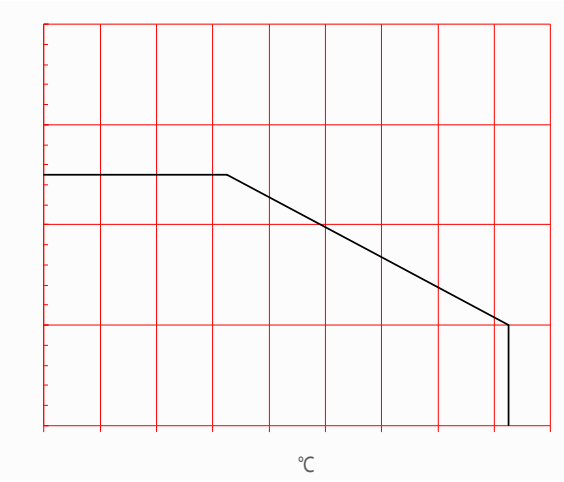


FIG.5: LED Operate Current vs. Ambient Temperature

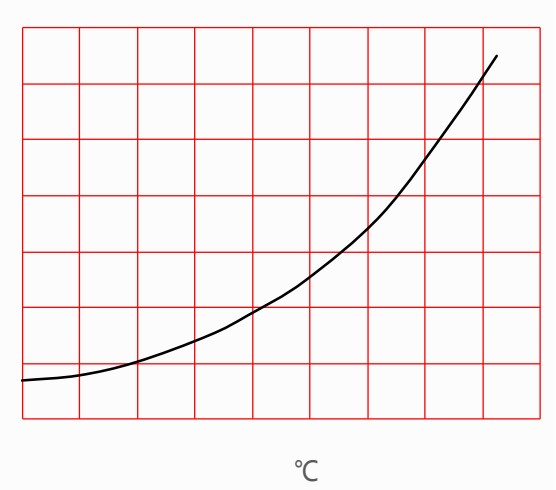


FIG.6: LED Turn Off Current vs. Ambient Temperature

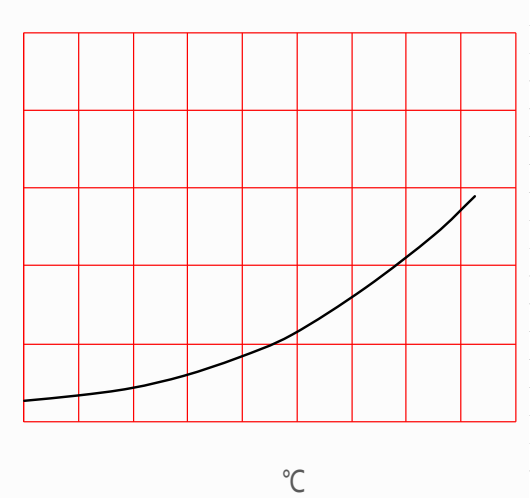


FIG.7: Turn On Time vs. Ambient Temperature

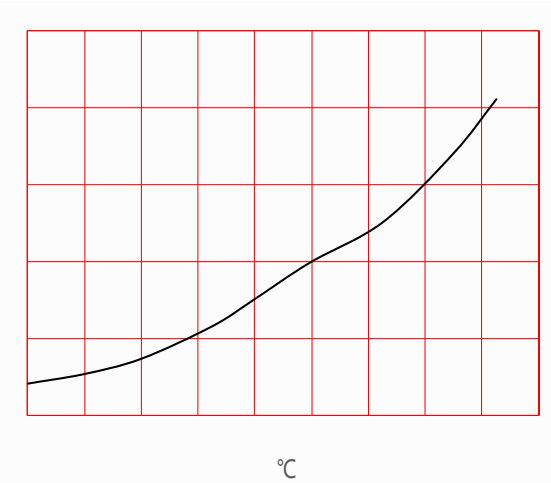


FIG.8: Turn Off Time vs. Ambient Temperature

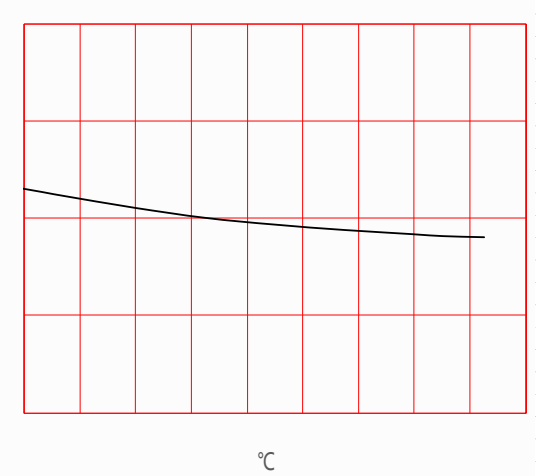


FIG.9: Turn On Time vs. LED Forward Current

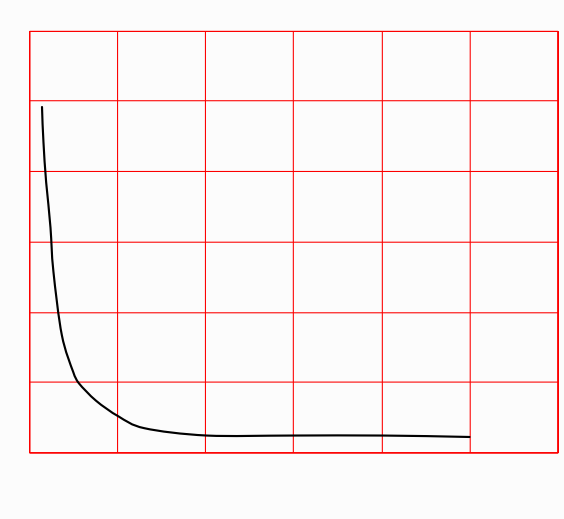
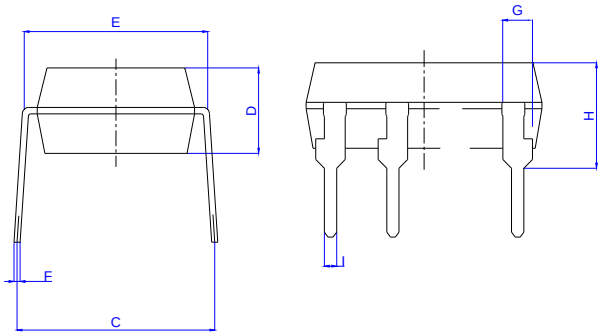


FIG.10: Turn Off Time vs. LED Forward Current

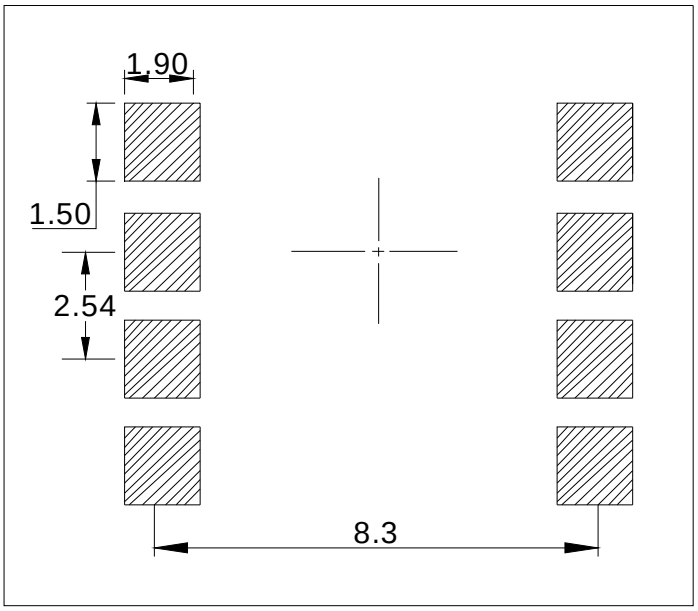
Package Dimension (Unit: mm)

Standard DIP Type:



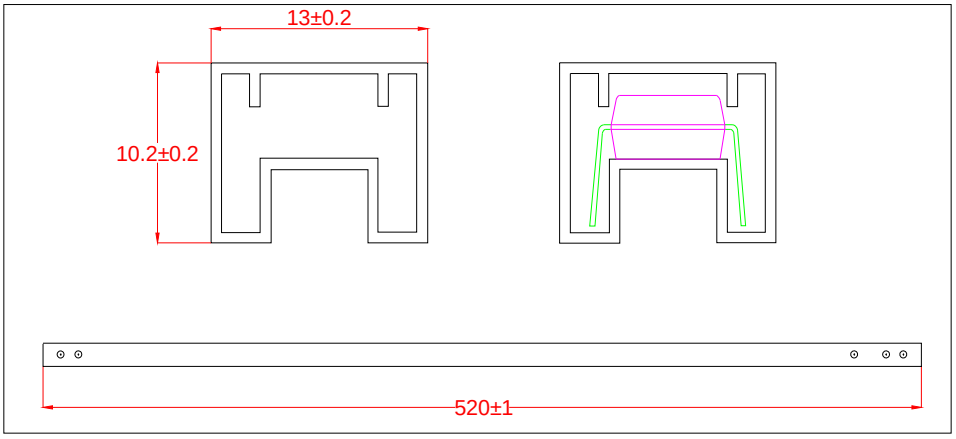
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.20		6.60	0.244		0.260
B	9.40		9.80	0.370		0.386
C	7.15		8.95	0.281		0.352
D	3.20		3.60	0.126		0.142
E	7.32		7.92	0.288		0.312
F	0.15		0.35	0.006		0.014
G	0.90		1.50	0.035		0.059
H	3.90		4.50	0.154		0.177
I	0.40		0.60	0.016		0.024
J						

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)



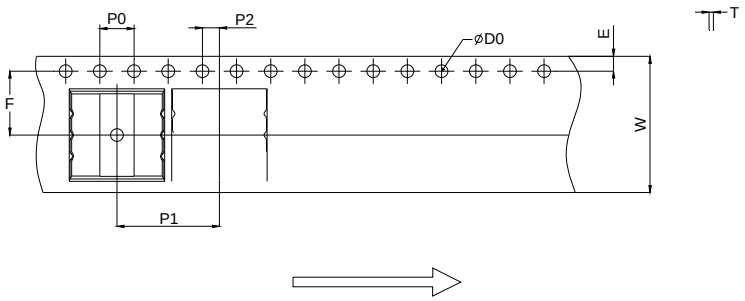
TUBE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Standard DIP



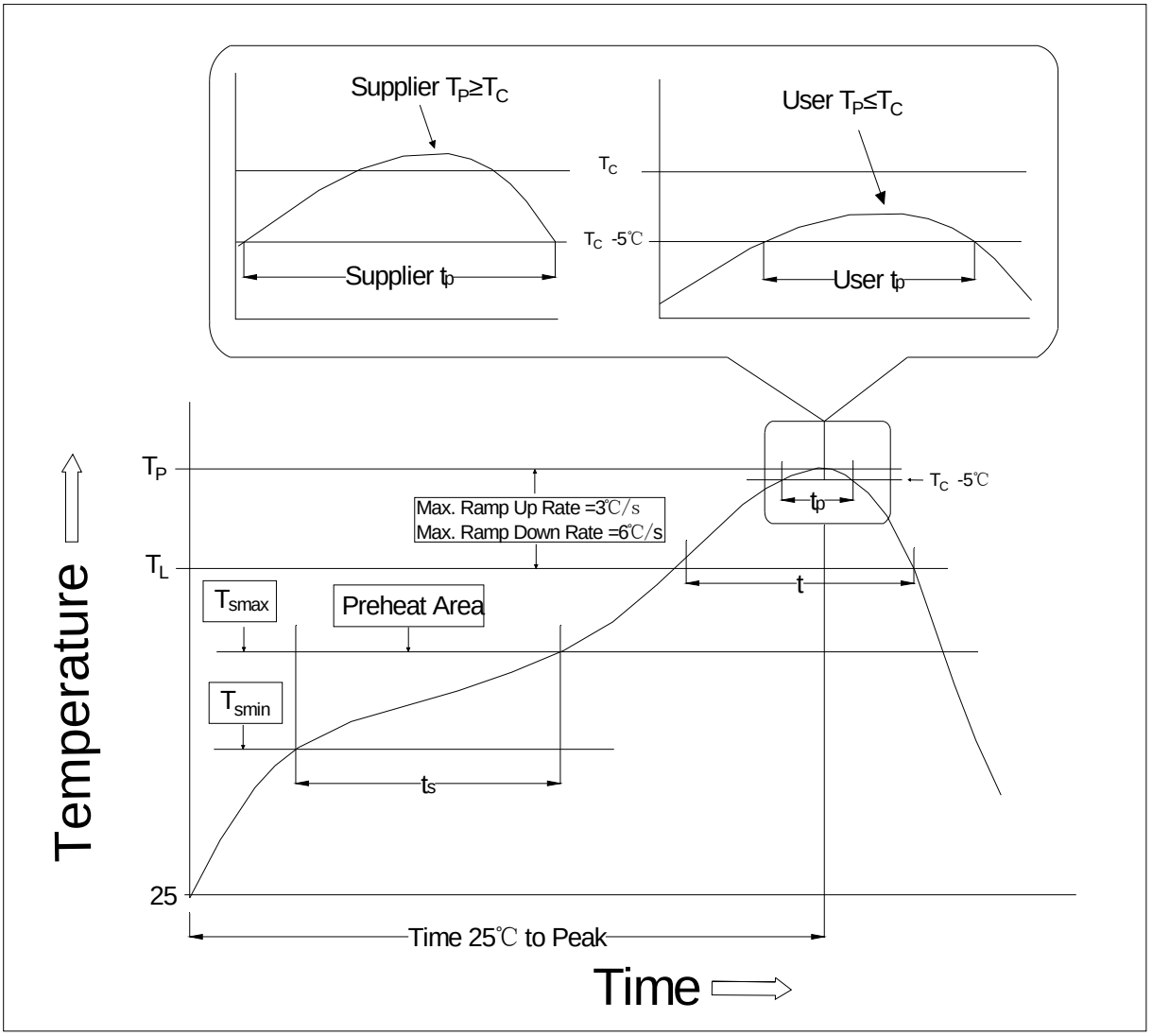
CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

Option S



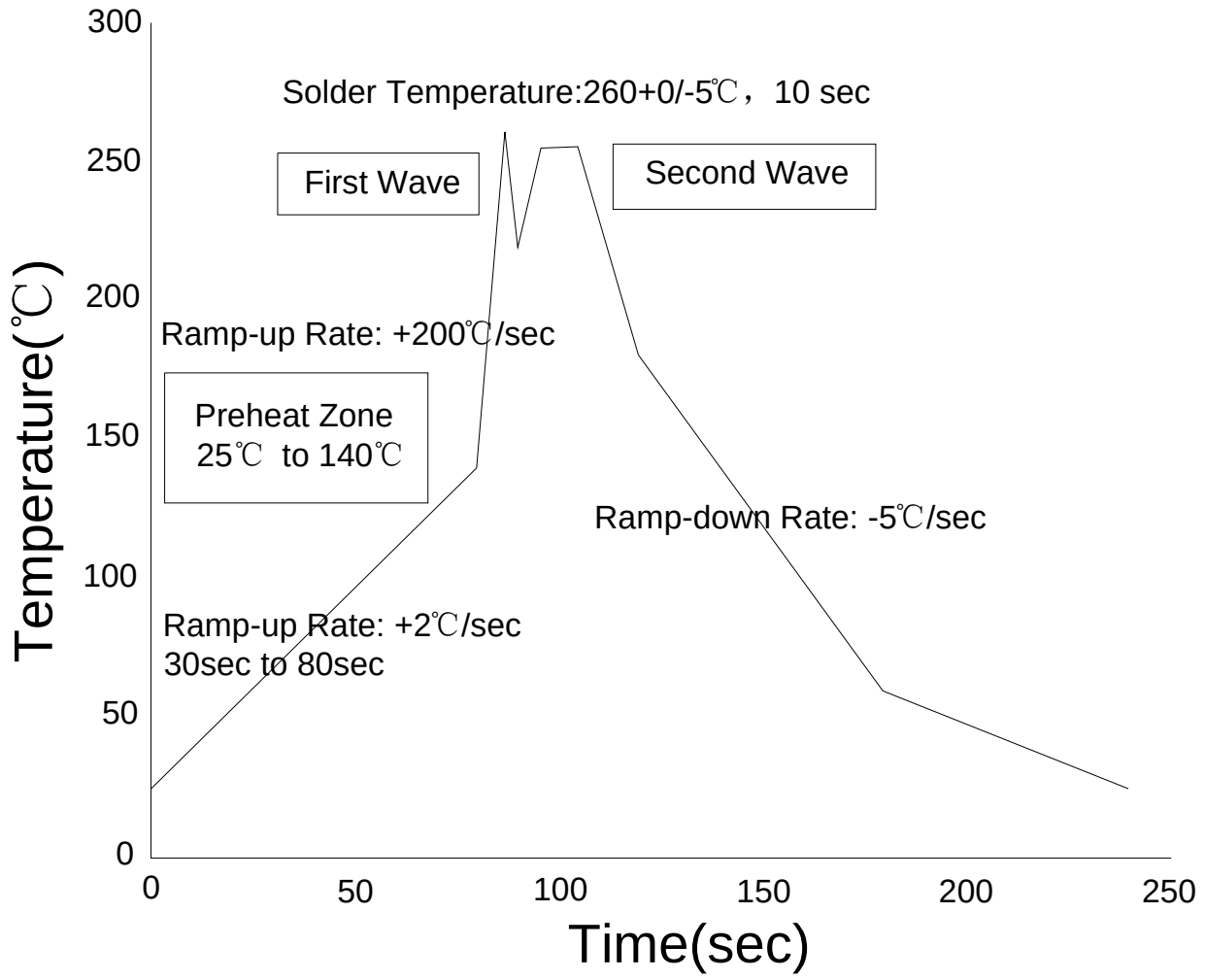
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
D0		1.50	1.60		0.059	0.063
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	11.90	12.00	12.10	0.469	0.472	0.476
P2	1.90	2.00	2.10	0.075	0.079	0.083
E	1.65	1.75	1.85	0.065	0.069	0.073
F	7.40	7.50	7.60	0.291	0.295	0.299
T	0.35	0.40	0.45	0.014	0.016	0.018
W	15.90	16.00	16.20	0.626	0.630	0.638

REFLOW INFORMATION



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℃	10 seconds	10 seconds
Ramp-down Rate (TP to TL)	3-6℃/second	3-6℃/second
Time 25℃ 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