

Hirose Korea Micro USB Connector

KQ20-Series

목 차

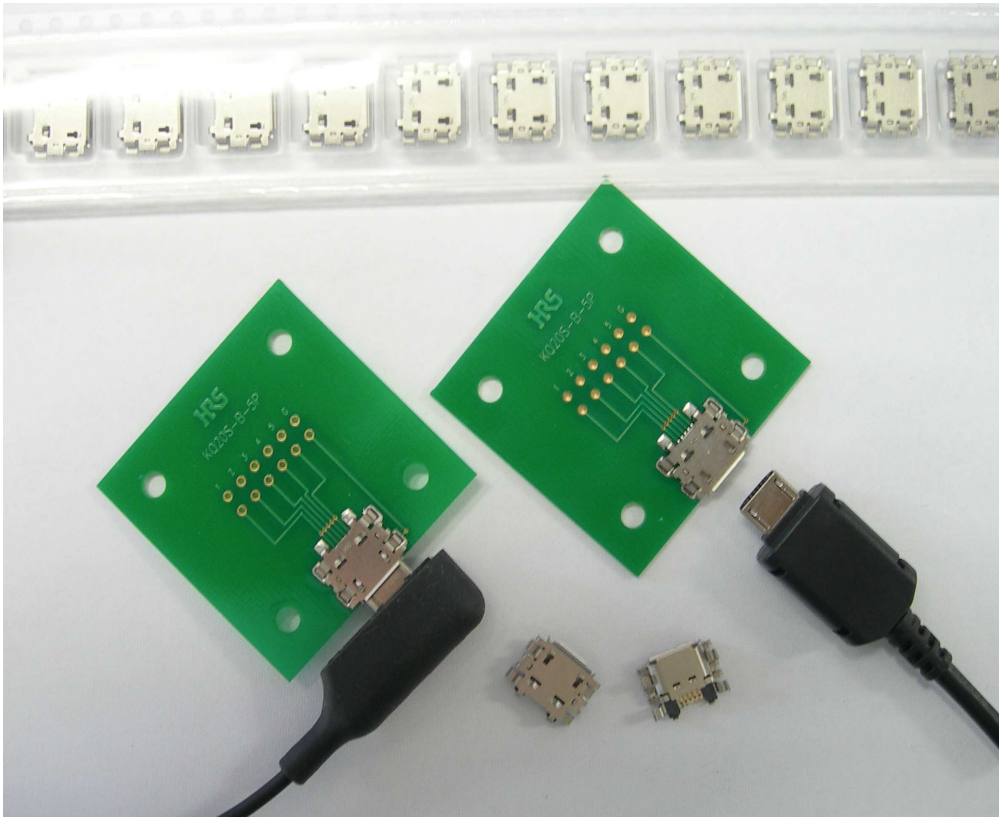
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No.	제 품 명	Pin 수	Size (가로*세로*높이)	관련page
1	KQ20S1-B-5P	5	10.4 × 8.5 × 2.7mm	4
2	KQ20SP-B-5S	5	8.0 × 11.8 × 3.0mm	5

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Micro USB Connector

KQ20 - Series



■ 특징

1. 용도

휴대기기용 Micro USB Conn'

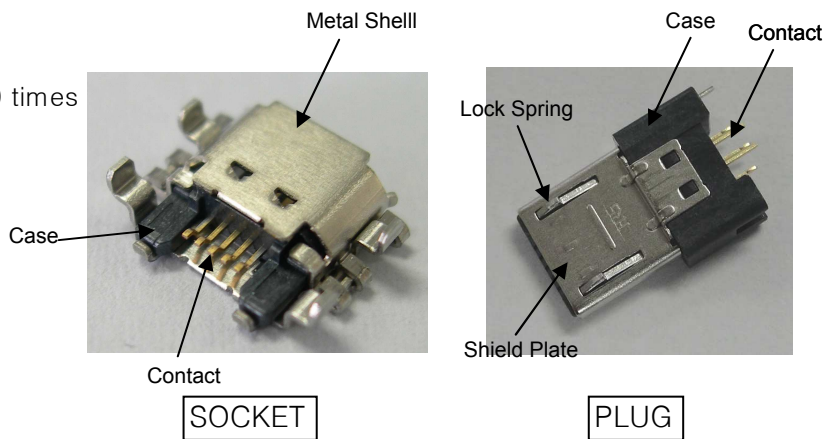
2. 성능

Mating/Unmating Cycles : 10,000 times

3. 구조

초소형 SIZE
5PIN, 0.65 PITCH

4. RoHS 대응



■ 제품 규격

Rating	1)Signal only : 1A/pin 2)Power apply : 1.8A/pin(pin No.1,5) 0.5A/pin(pin No.2-4)	Operating temperature range	Storage temperature range
	Voltage AC 30V	-30 °C ~ +85°C	-30 °C ~ +85°C

Item	Test Method	Condition									
1.Insulation Resistance	DC 500V	100MΩ Min									
2.Voltage Proof	AC 100V for 1min	No Flashover or Breakdown									
3.Contact Resistance	100mA(DC or 1000Hz)	30mΩ Max									
4.Vibration	Frequency 10 ~ 55Hz Single Amplitude 0.75mm at 2Hr for 3Direction.	No Electrical Discontinuity of 1μs									
5.Humidity	Temperature : -10~65 °C Relative Humidity : 90 ~ 98% 7cycle(168Hr)	No Damage, Crack and Looseness, of parts.									
6.Mechanical Operation	Mated 10,000 Times	1) Contact resistance : No increase of more than 10mΩ from initial value. (단위:N) <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">/</td> <td style="text-align: center;">Insertion force</td> <td style="text-align: center;">Withdrawal force</td> </tr> <tr> <td style="text-align: center;">SOCKET</td> <td style="text-align: center;">35 Max</td> <td style="text-align: center;">8 Min</td> </tr> <tr> <td style="text-align: center;">PLUG</td> <td style="text-align: center;">2~25</td> <td style="text-align: center;">8~20</td> </tr> </table>	/	Insertion force	Withdrawal force	SOCKET	35 Max	8 Min	PLUG	2~25	8~20
/	Insertion force	Withdrawal force									
SOCKET	35 Max	8 Min									
PLUG	2~25	8~20									

■ 부품별 적용 원재료
(SOCKET)

Part	Material	Finish	Remark
Case	LCP	Black	UL94V-0
Male Contact	Copper Alloy	Gold plating	-
Metal Shell	Copper Alloy	Ni plating	-

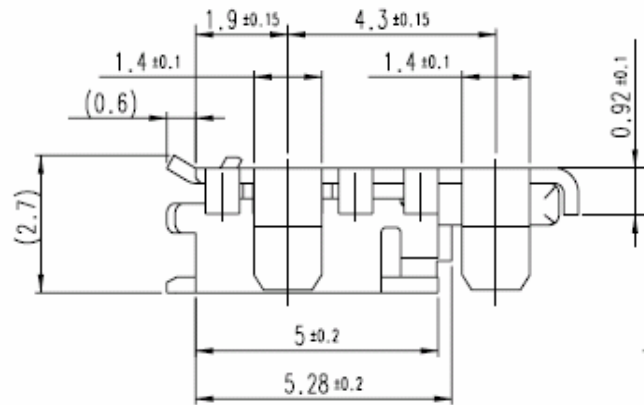
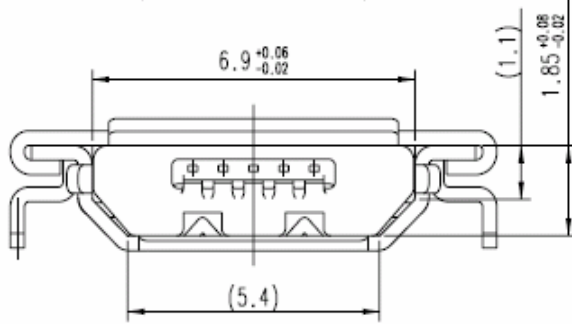
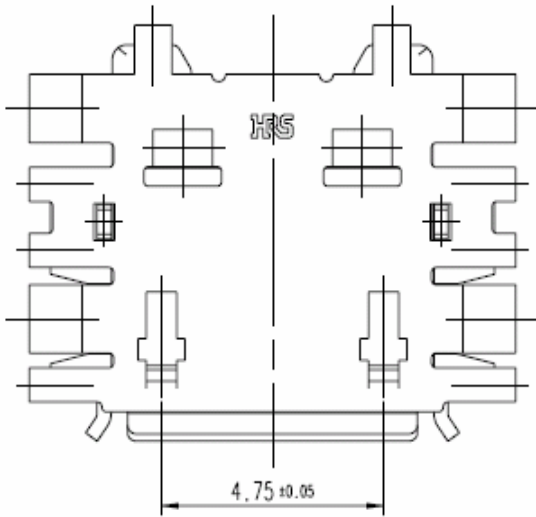
※Reflow최대 온도 260°C를 만족시킴으로Pb-Free Soldering의 요구조건에 적합한 제품임.

■ Part Number 의 구성

KQ20S* - B - 5P
 ① ② ③ ④ ⑤ ⑥

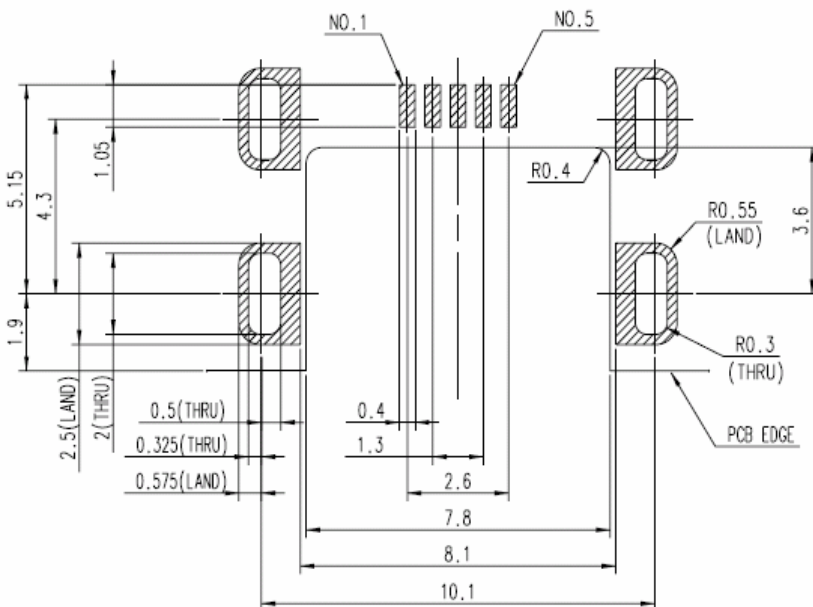
①	Series Name	KQ20
②	Type	S : Offset type Receptacle A : Onboard type Receptacle
③	Serial No.	1, 2, ... / P: PLUG
④	Key style	Receptacle : AB, B Plug : A, B
⑤	Number of contacts	5
⑥	Contact type	P : Male contact S : Fe-male contact

■ KQ20S1-B-5P



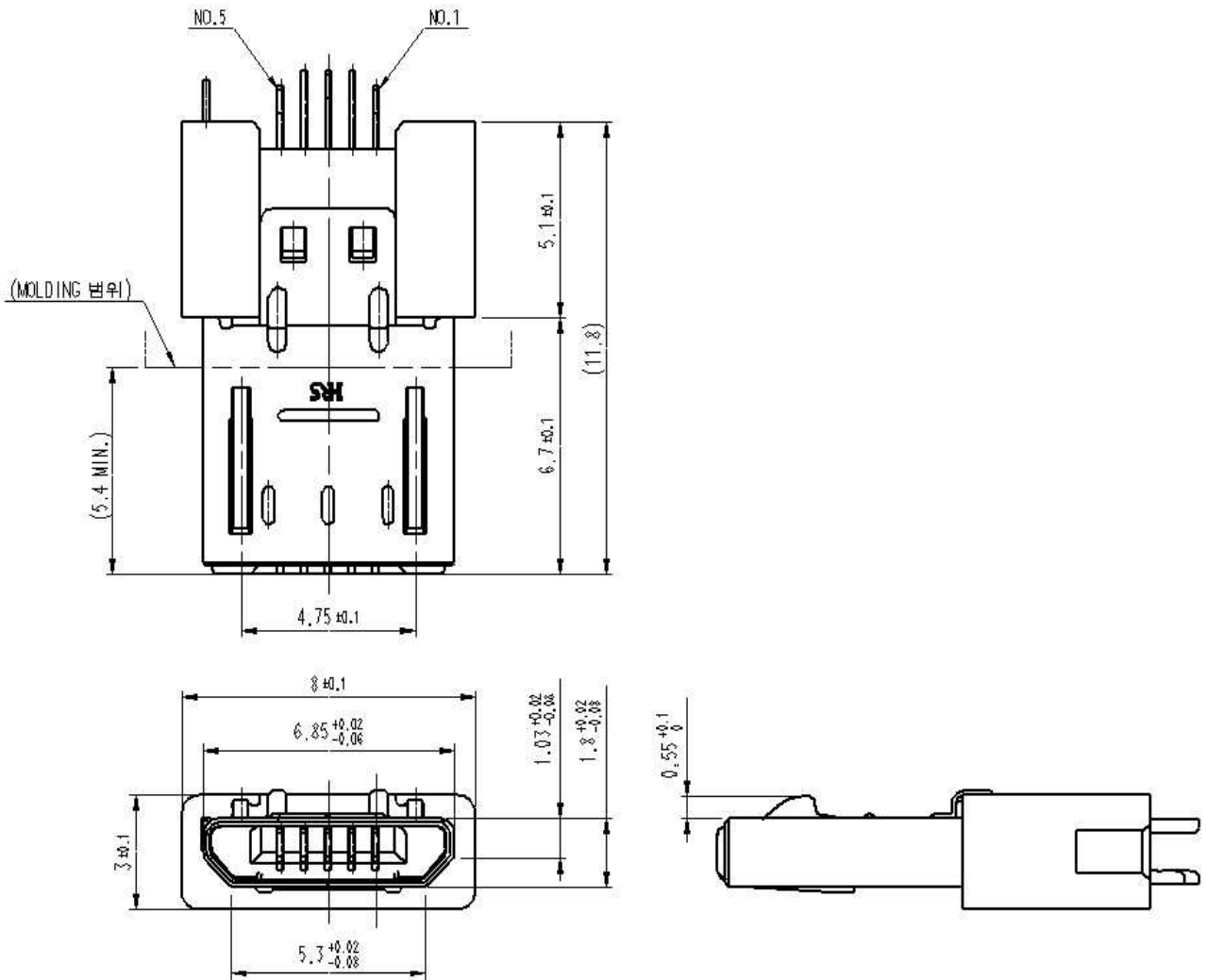
RECOMMENDED PCB LAYOUT

(Tolerance : ±0.05)

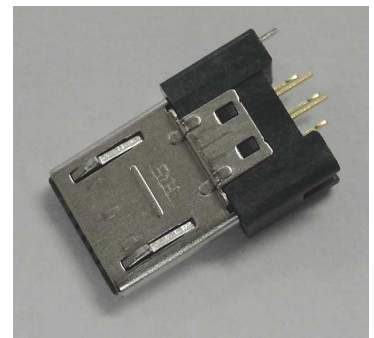
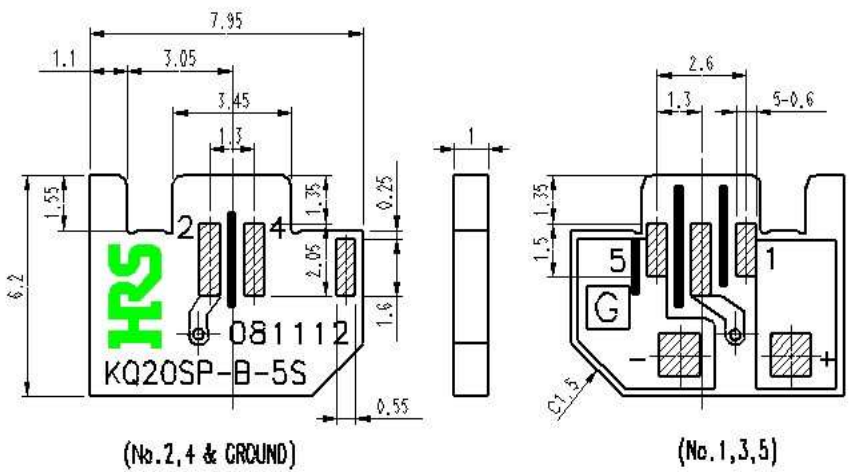


Hirose Part No.	Product Name	Contact	Package	Remark
CL 6228-0002-8-	KQ20S1-B-5P	5	Emboss Tape	2,000ea/Reel

■ KQ20SP-B-5S



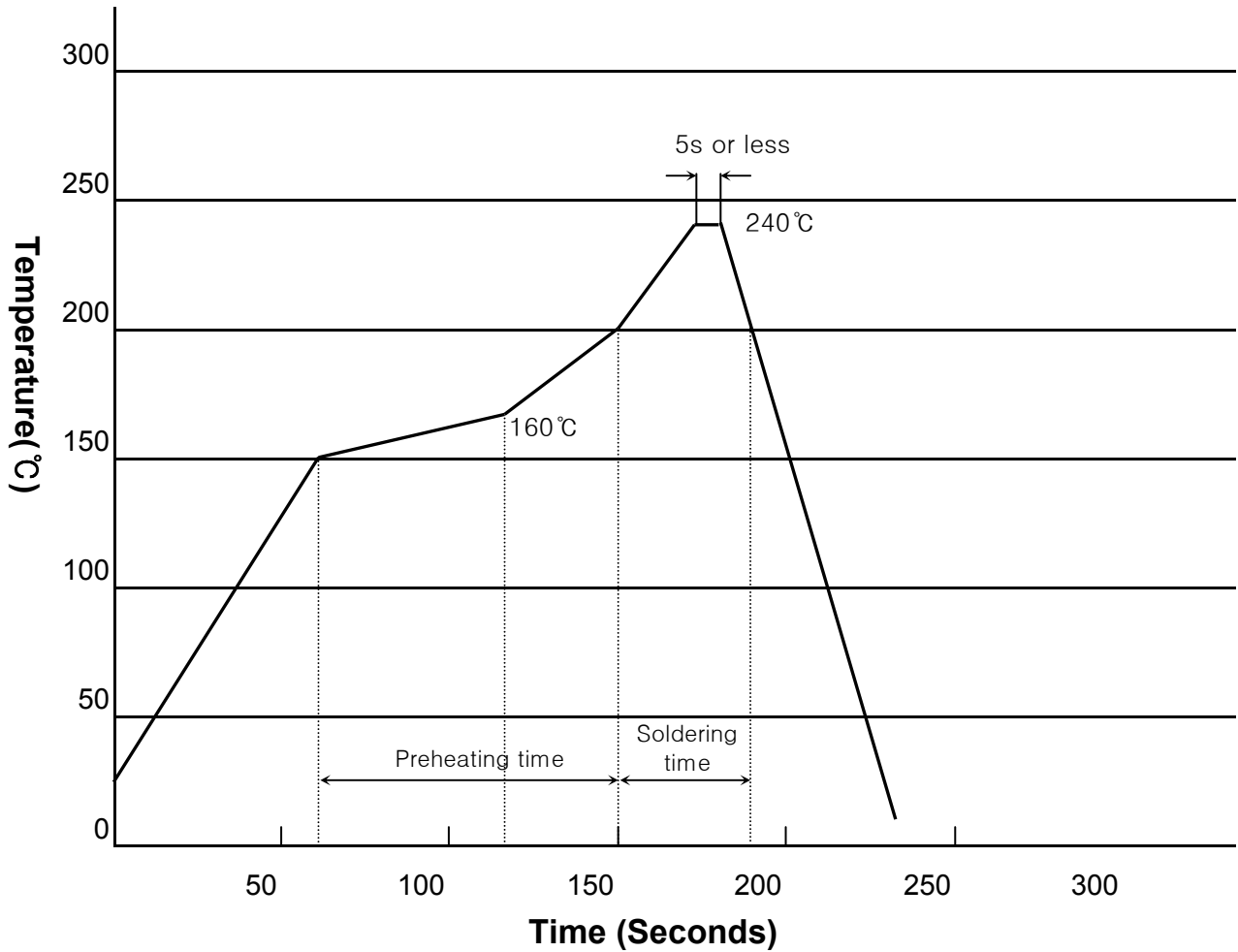
RECOMMENDED PCB LAYOUT



Hirose Part No.	Product Name	Contact	Package	Remark
CL 6228-0003-0	KQ20SP-B-5S	5	PACK	15,000ea/PACK

■ Reflow Profile

Using Conventional Solder Paste



Recommended Application Conditions

Reflow System: IR reflow

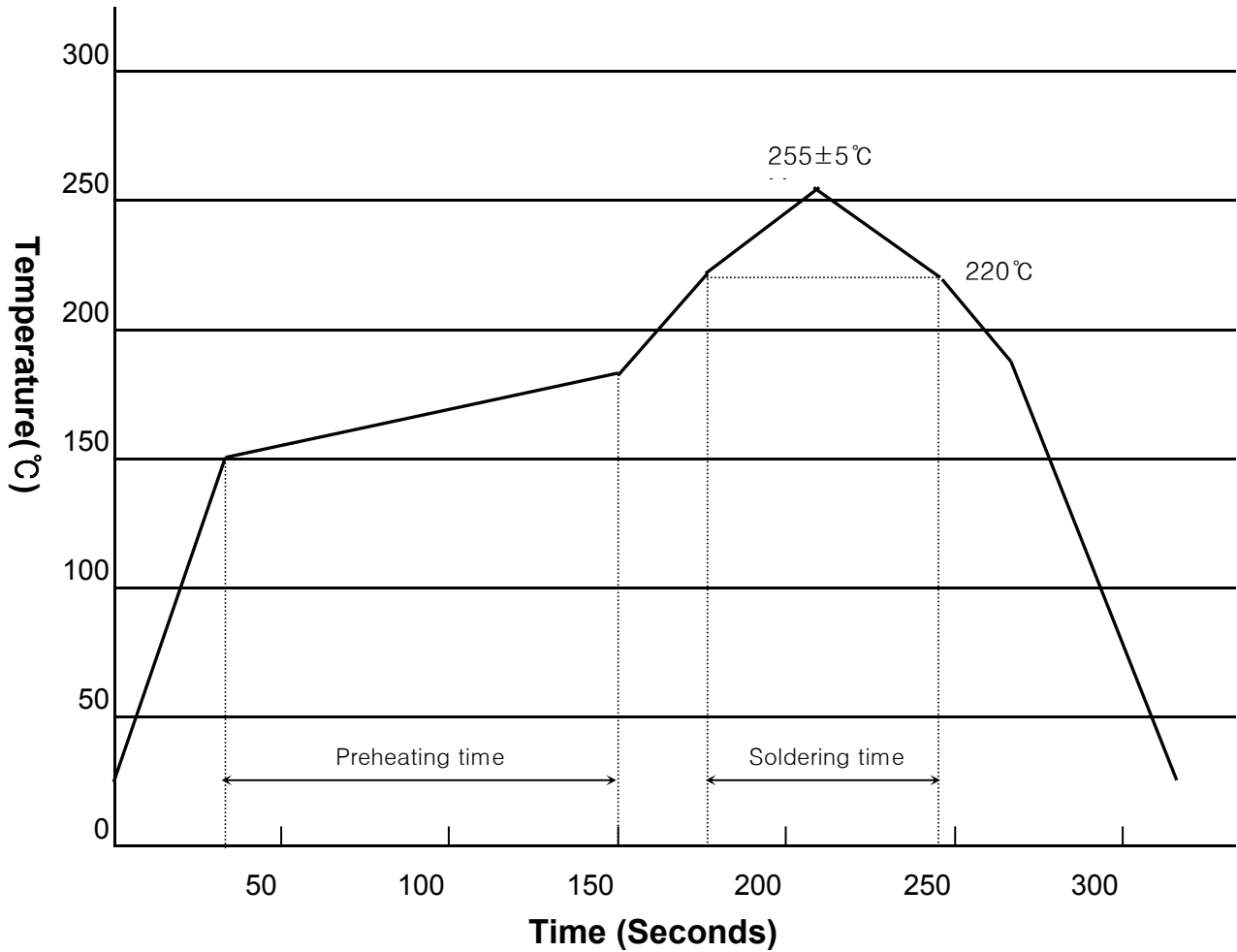
Solder: Cream type 63 Sn / 37 Pb

Flux content 11%wt

Metal mask thickness: 0.15mm

■ Reflow Profile

Using Lead-free Solder Paste



Recommended Application Conditions

Reflow System: IR reflow

Solder: Cream type Sn / 0.3 Ag / 0.5 Cu

Flux content 11%wt

Metal mask thickness: 0.15mm

Preheating time: 150°C~180°C, 90±30seconds

Soldering time: 255±5°C Max

220°C Min, 60±10seconds