

敬 呈
CUSTOMER: Chicony

承 認 書

SPECIFICATION APPROVAL SHEET

品 名 PRODUCT NAME	DCAJ0S10
客戶料號/版次 CUSTOMER P/N:/REV.	072-02151LHA01
(供應商)料號/版次 (Vendor)P/N:/REV.	43A15G03000D21T
單重(單位:克): Weight(Unit:g):	0.08g

(供應商) 確認 (Vendor) CONFIRMATION		客戶確認 CUSTOMER CONFIRMATION	
			
審核 CHECKED BY	制作 MADE BY	確認 APPROVED BY	審核 CHECKED BY
Tim	Eva		

供應商名稱: 太盟光電科技股份有限公司
Cirocomm Technology Corp.

聯系地址: 桃園市平鎮區工業二路5號

聯系E-mail: No.5, Industrial 2nd Road, PingZhen Dist., Taoyuan City 324, Taiwan
hannah.lin@cirocomm.com.tw

聯絡電話: 03-469-9868#625

SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	1/9	

SPECIFICATION

SPEC NO. : SP03AE24500-0050

PART NO. : 43A15G03000D21T

PRODUCT NAME : DCAJ0S10

DESCRIPTION : Dielectric Chip Antenna
(3.23x1.66x1.23 mm)
RoHS Compliant Product

REVISION STATUS

VERSION	DATE	PAGE	REVISION DESCRIPTION	PREPARED	CHECKED	APPROVED
01	2022.05.20	Whole	New Issued	翁秀惠	馬得淞	張敦信、吳佳宗

Prepared By	Checked By	Approved By
翁秀惠	馬得淞	張敦信 吳佳宗

SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	2/9	

CIROCOMM TECHNOLOGY .

PART NUMBER: 43A15G03000D21T

1. Scope

This specification covers the [dielectric chip antenna](#) for [Bluetooth / WLAN Applications](#).

2. Name of the product

This product is named "[Dielectric Chip Antenna](#)".

3. Electrical characteristics

3-1 Electrical characteristics of antenna

The antenna has the electrical characteristics given in Table 1 under the *cirocomm* standard installation conditions shown in the figure of Evaluation Board.

Table 1

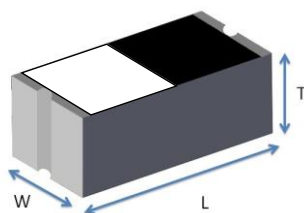
No	Parameter	Specification
1	Working Frequency	2400~2500 MHz
2	Return Loss	-6.5 dB (Max)
3	Peak Gain	2.7 dBi
4	Impedance	50 Ohm
5	Operating Temperature	-40°C ~ +110°C
6	Maximum Power	4 W
7	Resistance to Soldering Heats	10 sec. (@ 260°C)
8	Polarization	Linear
9	Azimuth	Omni-directional
10	Termination	Cu / Sn (Leadless)

* Actual performance will depend on customer device environment.



SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	3/9	

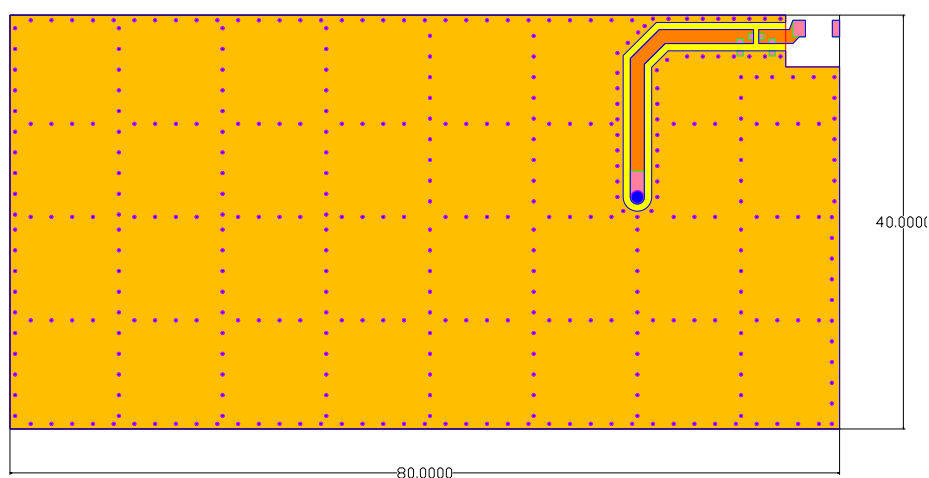
4. Antenna Dimension



	Dimension (mm)
L	3.23 ± 0.20
W	1.66 ± 0.20
T	1.23 ± 0.20

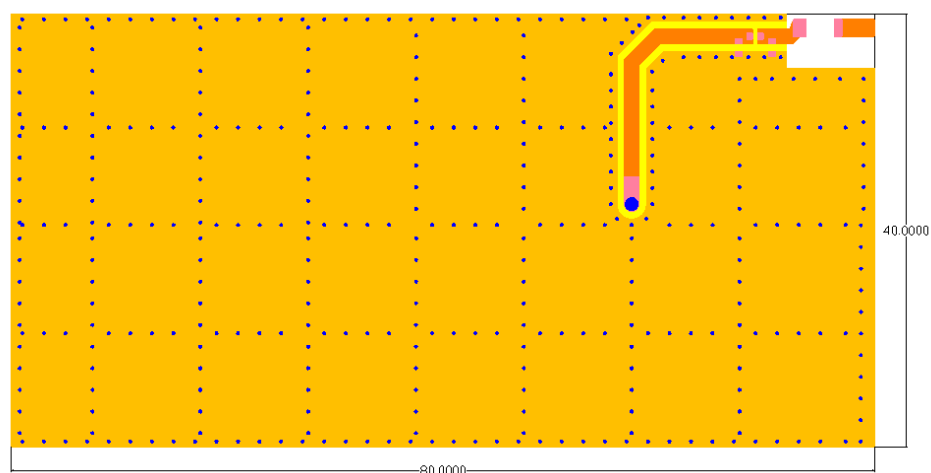
5.Recommended PCB Pattern

5-1.Evaluation Board Dimension



5-2.Evaluation Board Dimension

(若淨空區夠大，建議使用此Layout，效能較佳)



Unit : mm



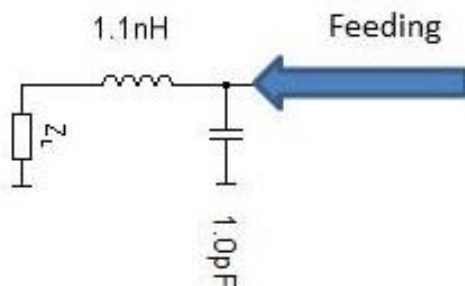
This document is held by Cirocomm, cannot be reproduced without permission .

SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	4/9	

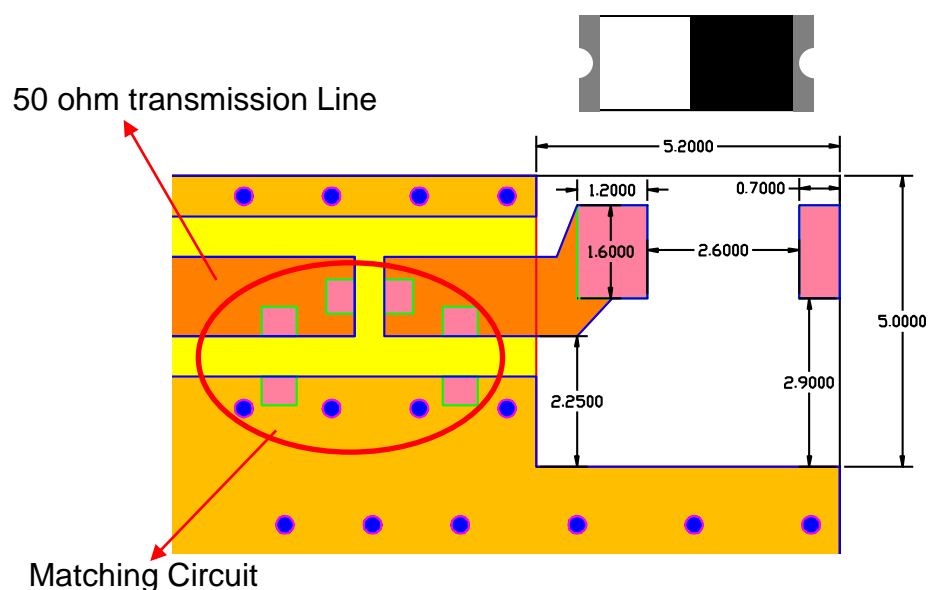
Suggested Matching Circuit

重要資訊：

匹配元件建議使用精準度高的電感 $\pm 0.1 \sim 0.3 \text{ nH}$ 、電容 $\pm 0.1 \text{ pF}$

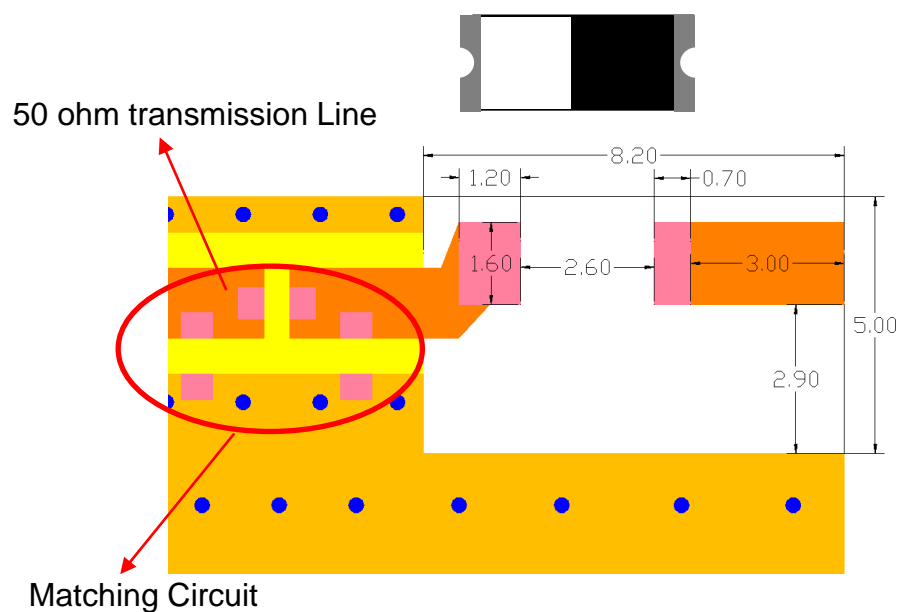


5-3 Layout Dimensions in Clearance area (Size=5.2*5.0mm)



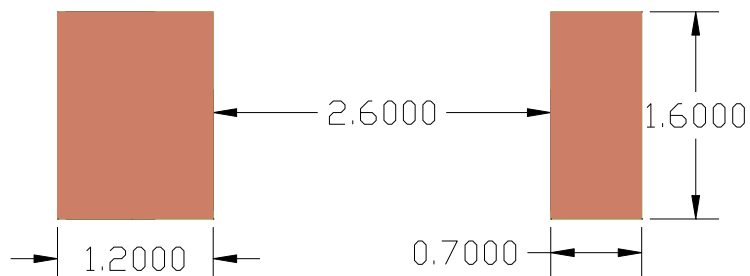
5-4 Layout Dimensions in Clearance area (Size=8.2*5.0mm)

(若淨空區夠大，建議使用此Layout，效能較佳)



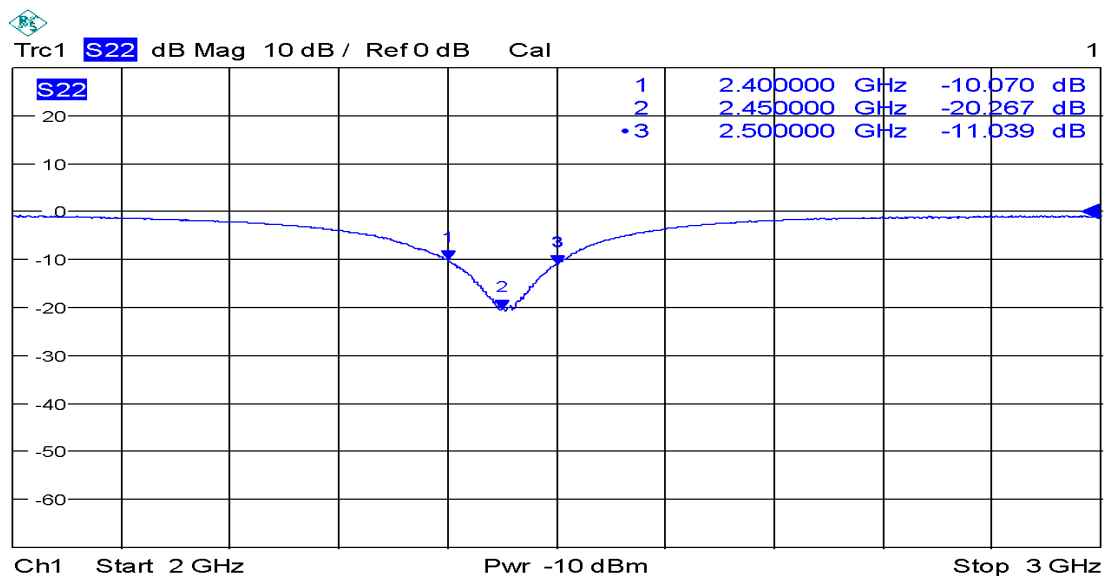
SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	5/9	

FootPrint (Unit : mm)



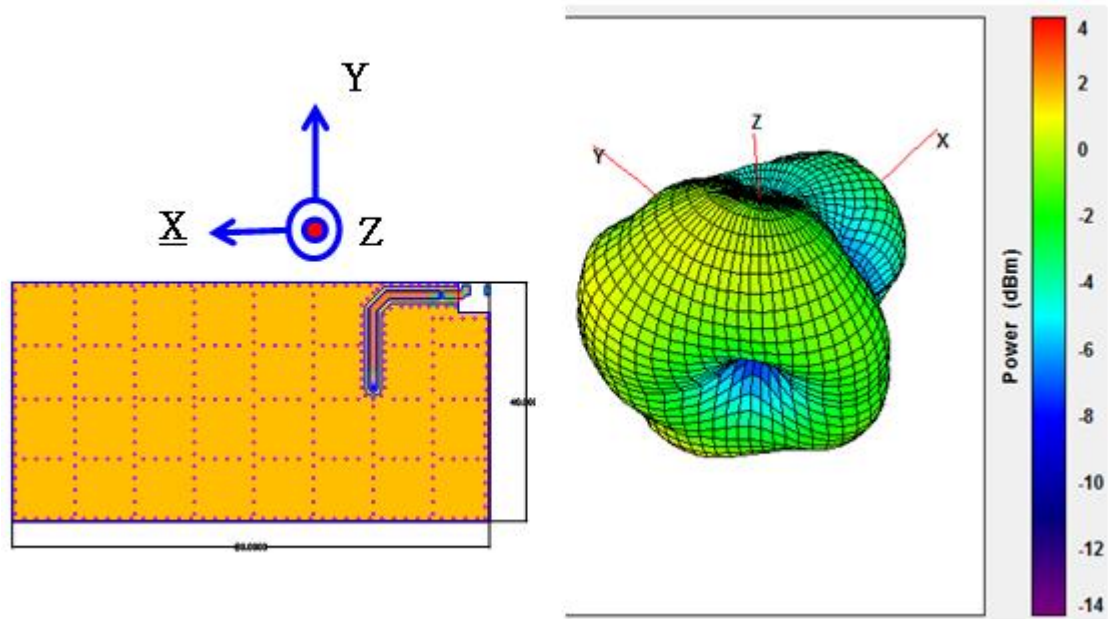
6.Measurement Results

Return Loss



SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	6/9	

Radiation Pattern

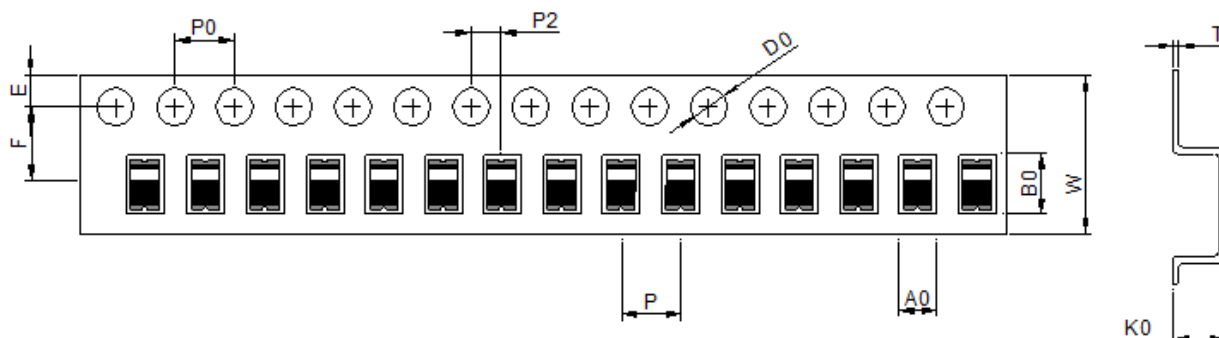


	Efficiency	Peak Gain
2400MHz	55.21 %	1.45 dBi
2450MHz	66.45 %	2.71 dBi
2500MHz	57.53 %	1.98 dBi

SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	7/9	

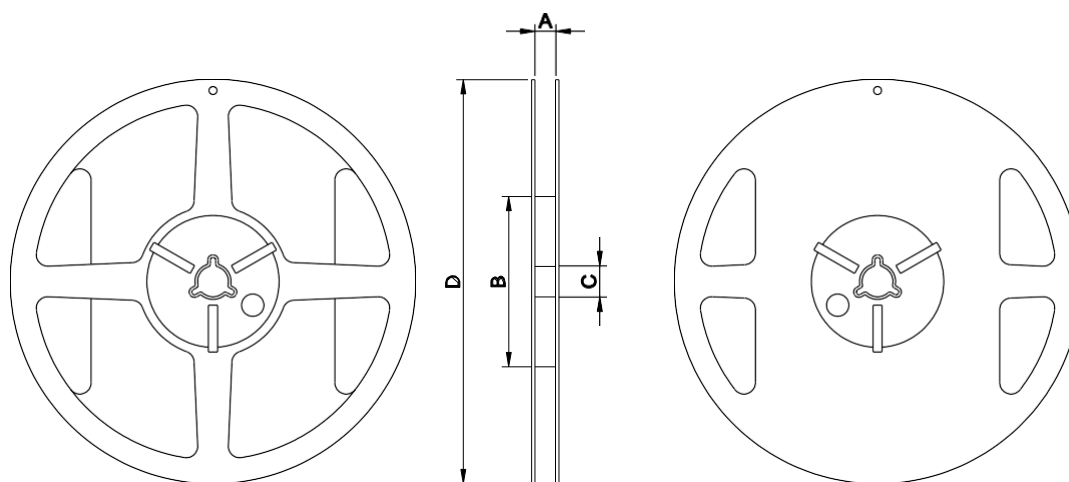
7. Packaging Information

Tape Specification:



W	Ao	Bo	Ko	P	F	E	D	D1	Po	P2	t
8.0	1.80	3.51	1.59	4.00	3.50	1.75	1.50	0.00	4.00	2.00	0.25
±0.30	±0.05	±0.10	±0.10	±0.05	±0.05	±0.10	±0.10	±0.10	±0.10	±0.05	±0.05

Reel Specification: (7", Φ180 mm)



7"x 8 mm

Tape Width(mm)	A(mm)	B(mm)	C(mm)	D(mm)	Chip/Reel(pcs)
8	9.0±0.5	60±2	13.5±0.5	178±2	3000

SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	8/9	

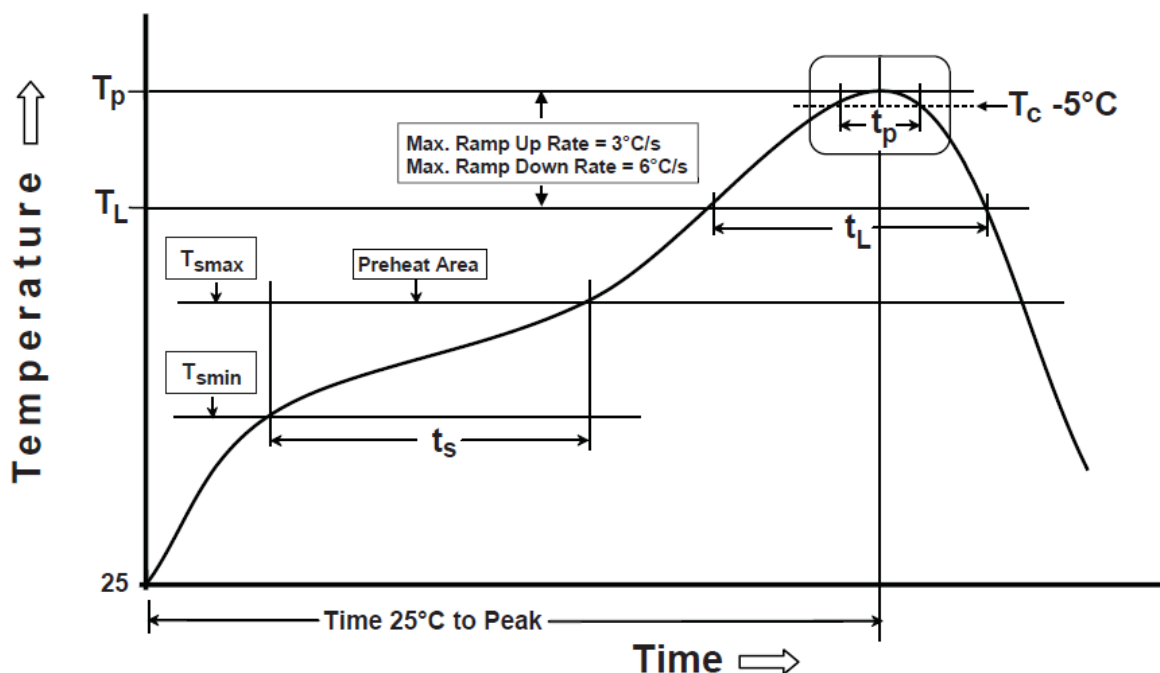
8. Recommended Reflow Temperature Profile

Cirocomm products can be assembled following Pb-free assembly. According to the Standard IPC/JEDEC J-STD-020C, the temperature profile suggested is as follow:

Phase	Profile features	Pb-Free Assembly (SnAgCu)
PREHEAT	-Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(ts) form (Tsmin to Tsmax)	150°C 200°C 60-120 seconds
RAMP-UP	Avg. Ramp-up Rate (Tsmax to TP)	3°C/second(max)
REFLOW	-Temperature(TL) -Total Time above TL (t L)	217°C 30-100 seconds
PEAK	-Temperature(TP) -Time(tp)	260°C 10 second
RAMP-DOWN	Rate	6°C / second max.
Time from 25°C to Peak Temperature		8 minutes max.
Composition of solder paste		96.5Sn/3Ag/0.5Cu
Solder Paste Model		SHENMAO PF606-P26

Note : All the temperature measure point is on top surface of the component, if temperature over recommend, it will make component surface peeling or damage.

The graphic shows temperature profile for component assembly process in reflow ovens



SPEC NO.	SP03AE24500-0050	ISSUED DATE	2022.05.20	PUBLISHED BY
PRODUCT NAME	DCAJ0S10	VERSION	01	
		PAGE	9/9	

Soldering With Iron:

Soldering condition : Soldering iron temperature $270\pm 10^{\circ}\text{C}$.

Apply preheating at 120°C for 2-3 minutes. Finish soldering for each terminal within 3 seconds, if soldering iron over temperature $270\pm 10^{\circ}\text{C}$ or 3 seconds, it will make component surface peeling or damage.

Soldering iron can not leakage of electricity.