微電腦數顯控温

防静电 SMD 热风拆焊台

使

用

手

册

1. Summary of product

1－1 Specifications

Voltage of power supply	110VAC
Consumption of power	When start: maximum 540W When work: maximum 320W
Air pump	Special diaphragm pump
Capacity	24L/min (max)
Temperature of hot air	100～480℃
Overall dimensions	187(W)×135(H)×245(D)mm

1－2 Functions

* Closed loop of sensor, microcomputer to display digital and control temperature, large power in starting, rapid in temperature raising, accuracy and constant in temperature, no effect caused by amount of air exhaust;
* Design of static electricity proof: prevent from damaging PCB caused by static electricity and creepage;
* Because of adapting the soldering method of unnecessary touching solder joint, it can avoid the elements displacement and heat shocking;
* Can adjust amount of air and temperature greatly and can solder IC of QFP and SOP type. When solder or remove tin, different nozzles can be selected in accordance with different requirement;
* Adapt imported heating elements and the nozzle is same as international brand;
* After the work of pulling solder is finished, stop the machine, the air is still blown a little time in order to prolong the life of heating elements and handle;
* The function of dormancy can be selected.
* The normal setting and on－line setting for temperature two ways can be selected random.

1－3 Applications

* It is suitable for disassembling soldering for most of parts an the surface, for example, SOIC, CHIP, QFP, PLCC, BGA so on;
* It is suitable for contractive flexible tube.

1－4 Accessories parts

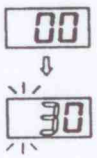
Picking up ····· 1 piece
Picking up wire ····· 1 piece

2 Set sleep and temperature

When set sleep, the heating elements are in the state of electric cutting off

2-1 Choose the function of sleep

Turn off the switch of power supply. The screen has no display. At the same time press the "UP" and "DOWN" knob. Then press the switch of power supply, the display screen will display "C". It indicates the temperature of centigrade. Press the knob of " * ", it display "00".



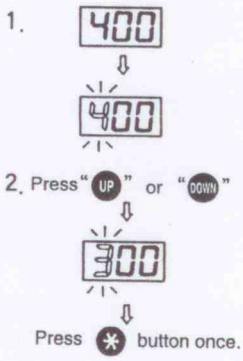
"00" ↔ "30" ↔ "60"

"00" indicates unsleeping.
"30 " indicates to began sleeping after work 30 minutes0
"60"indicates to began sleeping after work 60 minutes
Press the knob of " * " to set and store the data of sleep. Meanwhile it indicates the normal work begins.

2-2 Set temperature normally

When set temperature normally, the heating elements are in the state of electric cutting off.
Press the knob of " * " at least 1 second.

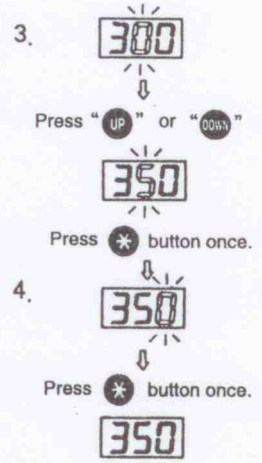
Example: turn 400℃ to 350℃



① First, display the presetting temperature, then the digital position of 100 will flash. It indicates that it has entered into the setting mode of temperature. The digital position of 100 may be adjusted.
②Choose the needed digital to replace the digital position of 100. Use "UP" or "DOWN" knob to change the display digital. It is shown below.

1 ↔ 2 ↔ 3 ↔ 4

When the needed digital displays, press the knob of " * " at once. The middle digital (digital position of 10) begins to flash, it indicates that the digital position of 10 may be set.



③Choose the needed digital to replace the digital position of 10. Use "UP" or "DOWN" knob to change the display digital. It is shown below.

→1↔2↔3↔4↔5↔6↔7↔8↔9↔0←

Press the knob of " * ". The right digital position (digital position of 1) begins to flash. It indicates the digital position of 1 may be set.

④Choose the needed digital to replace the digital position of 10. Use "UP" or "DOWN" knob to change the display digital. Use the method shown above to choose the digital position of 10. Press the knob of * .

Here, press the knob of * .....

a) Input the set temperature into inner memory;

b) Display the set temperature, and

c) Begin to control heating elements

Notes: if power supply is cutting off when set temperature, the set temperature will not be memory.

* If the pressed time of knob has not 1 seeond, the present set temperaturewill display 2 seconds. Then display the temperature at air injecting outlet. When press the knob of * , the power supply of heating elements will be cut off;
* When the temperature is over the scope, the digital position of 100 will flash again. If the condition takes place, please input correct temperature value again.

2-3 Set temperature on -line

In the work, if it is necessary to set temperature quickly and the electricity can not cut off, the way may be selected.

Temperature raising:

Don't press " * " knob and press "UP" knob directly. If so, the setting temperature will raise 1℃ and the display window will display the set temperature. When loose the "UP" knob, the display window will relay the set temperature about 2 seconds. If within 2 seconds of time, press the "UP" knob again, the setting temperature will raise 1 ℃ again. If press the "UP" knob and not loose at least 1 second, the setting temperature will raise rapidly. Till

the needed temperature reaches, then loose the "UP" knob.

Temperature dropping:

Don't press " * " knob and press "DOWN" knob directly. If so, the setting temperature will drop 1℃ and the display window will display the set temperature. When loose the "DOWN" knob, the display window will relay the set temperature about 2 seconds. If 2 seconds later, press the "DOWN" knob again, the setting temperature will drop 1℃ again. If press the "DOWN" knob and not loose at least 1 second, the setting temperature will drop rapidly. Till the needed temperature reaches, then loose the "DOWN" knob.

Notes: "UP" knob equals to "▲" and "DOWN" knob equals to "▼"

3 Explanation to operation.

3-1 Preparation before operation

* Choose the picking up wire that matches the size of IC. The FP picking up device is equipped with small wire (14 mm), but a large picking up wire (30 mm) may be necessary. Please choose the suitable picking up wire in accordance with the size of IC;
* Choose the nozzle that will be matched with the size of IC;
* Loose the screw on the nozzle;
* Attach the nozzle as shown in the drawing;
* Fasten the screw properly.

3-2 Process of detinning

* Press the switch of power supply.
  The display screen displays the set temperature. After 2 seconds, begin to heat it normal. When air is injected automatically, turn on the switch of power supply at any time. When turn on, the heating raw materials begins to heat.
* Adjust the airflow and set the knob of temperature control
  After the temperature is set and the airflow is adjusted, wait for a while till the temperature is stable. We suggest that you may adjust the temperature to 300～350℃. As for airflow, in case of single nozzle, the knob of airflow may be set at 1～5. For other nozzle, the knob of airflow may be set at 4～7.
* Place the picking up device under IC block.
  Place the picking up device under IC block. If the width of IC block can not matched the size of picking up wire, adjust the width of the wire through pressing
* Melt the solder

Hold the iron and make the nozzle aim at the part to be melted.
Let the hot air melt the solder.
Be carefully not touch the leads of IC.

* Remove the IC block
When the solder is melting, lift the picking up device and remove the IC block.

* Turn off the switch of power supply
After the switch of power supply is turned off, the automatic air injecting function begins to work. The cool air is passed through the pipe. It makes the temperature of heating elements and handle drop. Therefore during the stage of cooling, don't pull out the plug. When the temperature of air at nozzle is below 100℃, it can be turn off automatically. In case of not use the unit for a long time, pull the plug out.

* Remove any residue of solder
After remove the IC block, remove the residue of solder with a tin socking wire or detinning pump.

Notes: In case of SOP, PLCC, raise the IC block with tweezer.

3-3 Soldering

* Apply the solder paste
Apply proper solder paste and put SMD on the IC board.

* Preheat SMD.

* Solder
Inject the hot air to lead frame uniformly.

* Clean
After finished, clean the residue of molten materials.
Notes: it is effective to solder it with hot air. But it is possible to cause the defects such as solder balls, solder bridges and so on. We suggest that you should check the condition of solder carefully.

4 Precautions

* When attach the nozzle, don't exert too much force on it or pull the edge of nozzle by pliers. Also don't exert too much force to fasten the screw.

* When attach the nozzle, it is necessary to attach it only when the heating pipe and nozzle have been cooled.

* Caution -operation at high temperature
Don't use the disassembling station near easy inflammable gases, paper or other easy inflammable materials. The nozzle and hot air are very hot. It can burn human body. Never touch the heater or allow the hot air to blow against your skin. Initial, the iron may emit white smoke, but this will disappear soon.

* After use, be sure to cool the unit

After turn off the switch of power supply, the unit will blow cool air for a short time automatically. During the period of cooling, don't pull the plug of power supply out. When the temperature of blowing air is below 100℃, the unit can stop automatically.

* Don't drop it and shock it heavy
  The heating pipe contains quartz glass. If it is dropped or shocked heavy, the quartz glass will be broken.
* Don't disassemble the pump.
* If the unit does not use for a long time, the switch of power supply should be turned off.
* Use the function of sleeping
  If choose the function of sleeping, when the function of sleeping is action, the heating elements will cut off the power supply and the heating will be stopped. At the time, the cooling air can blow still. When press the knob of " * ", the work of heating begins again.
  The time of sleeping function should be calculated from the time when press the knob of " * " last time.
* **The last decimal on the screen of display means the marks to heat.**
* **Don't turn off power supply when set the temperature.**
* **When the screen of display appears "S－E" and flashes in a long time, it indicates that the sensor has troubles. It is necessary to repair or exchange**
* **When the temperature of screen flashes, it indicates that the temperature can not be raised. The heating elements could be damaged.**
* **When the temperature is over 350℃, when start it, the knob of airflow control should be at 3～8 position.**
* **When the working temperature is over 450℃, the knob of airflow control must be over 4 position.**

5. Replace the heating elements

5－1 Replacing parts

No.	Name/specifications
47007	Heating element 100V A1143B
47008	Heating element 110V A1144B
47009	Heating element 120V A1145B
47010	Heating element 220V～240V A1146B
47183	Picking up device including small and big wire
44025	Picking up wire (small)
44024	Picking up wire (big)

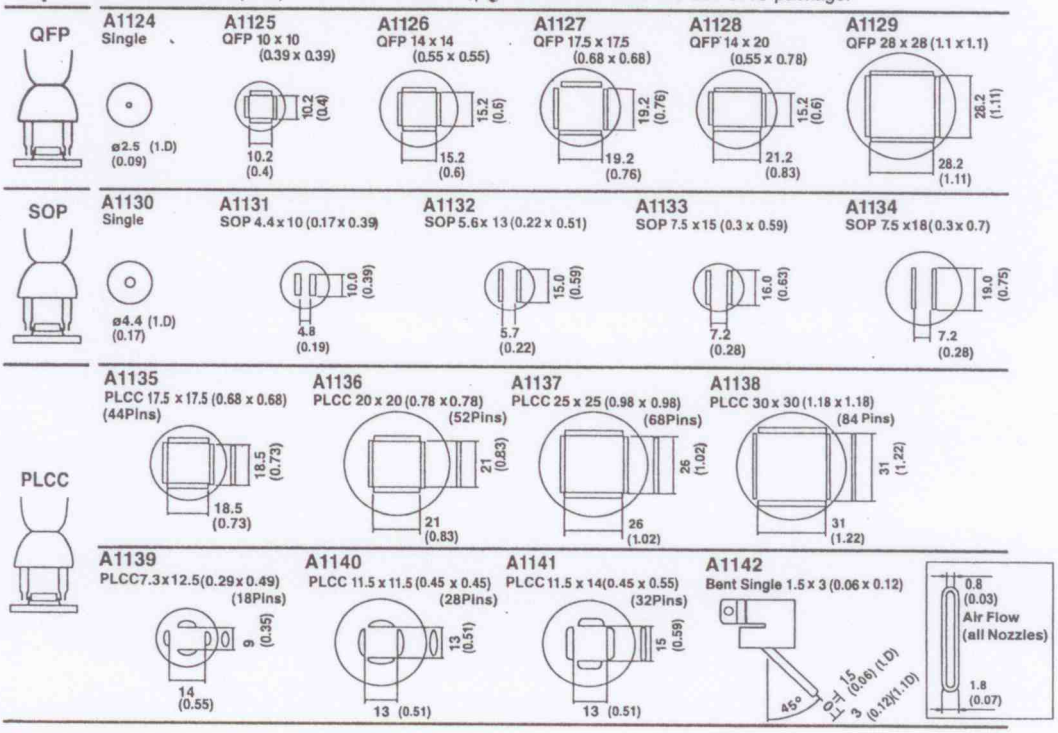
5−2 Replace the heating materials

* Loose the screw and take out the wire tube.
  Loose three screws of handle and take out the wire tube
* Loose the handle
  Loose the protect sheath of grounding wire and take out the tube. It contains quartz glasses and heat insulator in it.
  Don't drop or loss them.
* Take the heating materials out
  Loose the terminal and take the heating materials out
* Insert new heating material
  Treat it carefully. Don't rub the electric line of heating materials. Insert new heating material and connect their terminals. The sensor has polar. It is necessary to distinguish its colors. Connect it with same color.
  According to the reverse procedures of disassemble to install the handle. Make the protruding part of handle telescope the hole of pipe part.

Parts to be selected

* The size of each specification will be the size of integrate circuit block.

•Option Parts mm(inch) *The size in Name/Specification indicates the size of IC package.



1. 产品概要

1-1 規　格

電源電壓	220V　AC
功率消耗	起動時：最大 540W
	工作時：最大 320W
空氣泵	膜片式專用泵
容　量	24L/min 最高
熱空氣溫度	100－480°C
外形尺寸	187(W)×135(H)×245(D)mm

1-2 功　能

* 傳感器閉合回路，微電腦數顯控溫，開機功率大，升溫迅速，溫度精確穩定，不受出風量影響
* 防静電設計，防止因静電及漏電而損壞 PCB 板
* 不需接觸焊點的錫焊方式可免除零件位移及熱冲擊
* 能大幅度調節空氣量及溫度，可焊接 QFP 及 SOP 型 IC，焊接及除錫可根據要求選用不同噴嘴。
* 采用進口發熱絲，噴嘴與國際品牌共同。
* 拔焊工作完畢關機后送風延時工作，延長發熱體與手柄壽命。
* 休眠功能可以選擇
* 溫度的常規設定及即時設定兩種方法可供選擇

1-3 用　途

* 適用于大多數表面貼裝零件的拆焊，如 SOIC、QFP、PLCC、BGA 等。
* 可用于收縮軟管。

1-4 附　件

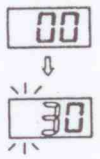
起拔器 …… 1 件
起拔鋼絲 …… 1 件

2. 休眠及溫度设定

設定休眠時，發熱元件是斷電源

2-1 休眠功能选择

關掉電源開關，顯示屏無顯示時同時按住“UP”鈕及“DOWN”鈕，然后按開電源開關顯示屏顯示“C”，表示攝氏溫度，按“*”鈕，顯示“00”。



按“UP”鈕或“DOWN”鈕顯示屏改換顯示數值如下圖所示：

→“00”↔“30”↔“60”←

“00”表示不休眠
“30”表示工作 30 分鐘后休眠開始
“60”表示工作 60 分鐘后休眠開始
按“＊”鈕，設定休眠數據儲存，并開始正常工作

2－2 温度常规设定

温度常規設定時，發熱體是斷電源。

按“＊”鈕，并且按着不放至少 1 秒鐘。

例子:攝氏 400 度改換爲 350 度。

①首先顯示預設温度，然 100 數位開始閃亮，表示已進入温度設定模式。100 數位可以進行調節。

②選擇所需數值以取代 100 數位。利用“UP”或“DOWN”鈕以改換顯示數值如下圖所示：

→1↔2↔3↔4←

當所需數字顯示時，即按下＊鈕。

中間數位（10 數位）開始閃亮，表示 10 數位可以設定。

③選擇所需數值以取代 10 數位。利用“UP”或“DOWN”鈕以改換顯示數值如下圖所示：

→1↔2↔3↔4↔5↔6↔7↔8↔9↔0←

按下“＊”鈕。

右邊數位（1 數位）開始閃亮，表示 1 數位可以設定。

④選擇所需數值以取代 1 數字位。利用“UP”或“DOWN”鈕以改換顯示數值，一如上面所示選擇 10 數位方法。按下“＊”鈕。

在此，按下“＊”鈕……

a）將所設定温度輸入内部記憶。

b）顯示所設定温度，與

c）開始發熱器控制。

注：如果在設定温度時斷電源，所設數值將不存入記憶。

＊如果“＊”鈕按下不至 1 秒鐘，現存的設定温度將顯示兩秒鐘，然后顯示噴氣口温度。按“＊”鈕時發熱體斷電源。

＊當温度值超過這個範圍，100 數位將再次閃亮，發生這種情況時，請再輸入正確的温度值。

2-3 温度即时设定

在工作中若需加熱體不斷電源情况下快速設置温度,則應選擇此法。

升温:不按"＊"鈕,直接按"UP"鍵,則設定温度上升 1℃,顯示窗口顯示設定温度,釋放"UP"鍵后,顯示窗口延時顯示設定温度約 2 秒,若在延時 2 秒内再按"UP"鍵,則設定温度再上升 1℃;若按"UP"不放至少一秒鐘,則設定温度快速上升,直到所需設定温度時釋放"UP"鍵。

降温:不按"＊"鍵,直接按"DOWN"鍵,則設定温度下降 1℃,顯示窗口顯示設定温度,釋放"DOWN"鍵后,顯示窗口延時顯示設定温度約 2 秒,若在延時 2 秒内再按"DOWN"鍵;則設定温度再下降 1℃,若按"DOWN"鍵不放至少 1 秒鐘,則設定温度快速下降,直到所需設定温度時釋放"DOWN"鍵。

注:"UP"鍵同"▲","DOWN"鍵同"▼"

3. 使用说明

3-1 使用前准备工作

＊選擇與電路塊尺寸相配合的起拔鋼綫。
FP 起拔器配有小鋼綫(14 毫米),但可能需要大起拔鋼綫(30 毫米)。請依照電路塊尺寸,選擇適合的起拔鋼綫。

＊選擇與集成電路塊尺寸相配合的噴嘴。

＊松開噴嘴螺絲。

＊按圖裝置噴嘴。

＊適當緊固螺絲。

3-2 除锡过程

＊按開電源開關
顯示屏顯示所示設定加熱温度 2 秒后,開始正常加熱。
自動噴氣時,可隨時按開電源。開電后,發熱材料即開始發熱。

＊調節氣流和設定温控鈕
設定好温度和調節氣流后,稍等一會兒,待温度穩定下來。我們建議,您可調節温度在攝氏 300 度至 350 度之間。在氣流方面。如果是單噴嘴,氣流控制鈕可設在 1－5 檔,其他噴嘴可設定在 4－7 檔。

＊將拔起器置于集成電路塊之下
將拔起器插入集成電路塊底下。如果集成電路塊寬度不配合起拔鋼綫尺寸,可擠壓鋼綫寬度以適應之。

＊熔化焊劑
持着焊鐵,使噴嘴對準所要熔化焊劑部分,讓噴出熱氣熔化焊劑。

噴嘴不可觸及集成電路塊引綫。

* 移開集成電路塊

焊劑熔化時,提起起拔器,移開集成電路塊。

* 按關電源

按關電源開關后,自動噴氣功能開始操作,通過管件輸送凉氣,使發熱材料和手柄降温。因此,在冷却時段,不可拔去電插頭。當噴嘴氣温低于100℃時,自動關機。如果您往后有一段長時間不使用本機身,應拔出電插頭。

* 清除焊劑殘余

移開集成電路塊后,可用吸錫綫或吸錫泵清除焊劑殘余。

注:如果是 SOP、PLCC,可用鑷鉗提起集成電路塊。

3-3 焊 接

* 涂抹適量錫膏

涂抹適量錫膏,將 SMD 放在電路板上。

* 預熱 SMD
* 焊接

向引綫框平均噴出熱氣。

* 清理

焊接完畢,清除熔料殘余

注:用熱氣進行焊接是有效的,但也可能導致焊劑球、焊劑搭連等問題。我們建議您仔細檢查焊接條件。

4. 注意事项

* 裝置噴嘴勿使勁裝置噴嘴,或用鉗子拉動噴嘴邊緣,勿使勁緊拴螺絲。
* 裝置噴嘴時必須在發熱管與噴嘴都冷却時,才能裝噴嘴。
* 小心,高温操作

切勿在近易燃氣體、紙張、或其他易燃物體附近使用本拆焊臺,噴嘴和熱氣都十分炙熱,能灼傷人體。切勿觸摸發熱管,或以熱氣直噴體膚。起動初時,可能會冒出白烟,但不一會兒就没事了。

* 使用后,切記冷却機身。

關電后,發熱管會自動短暫噴出凉氣。在此冷却時段,請勿拔去電源插頭。當噴氣温度低于 100℃時,自動關機。

* 切勿掉落或重震

發熱管含有石英玻璃。如果掉落或重震,會使玻璃破碎。

* 勿拆開泵
* 長久不使用,應關電源開關。

* 使用休眠功能。
若選擇休眠功能,當休眠動作時,發熱體斷電源,停止加熱,但冷風繼續送,不會停止。
當重按"*"時,恢復加熱工作。
休眠功能時間計算應從開機或最近一次按"*"鈕開始算起。
* 顯示屏最后一位小數點是加熱指示標志。
* 設定溫度時,請不要關電源。
* 當顯示屏長時間出現"S—E"并閃爍時,表示傳感器部分有故障,需修復或更換。
* 當顯示屏所顯示溫度閃爍時,表示溫度升不上,發熱體有可能損壞,或處于休眠狀態。
* **當溫度超過 350 時,開機起動時氣流控制鈕應盡量在 3~8 檔。**
* **當使用溫度超過 450℃時,請務必把氣流控制鈕旋到 4 檔以上。**

5. 替换发热材料

5-1 替换部件

編　號	名　稱　/　規　格
47007	發熱材料 100V A1143B
47008	發熱材料 110V A1144B
47009	發熱材料 120V A1145B
47010	發熱材料 220V~240V A1146B
47183	起拔器,包括大小鋼絲
44025	起拔鋼絲(小)
44024	起拔鋼絲(大)

5-2 替换发热材料

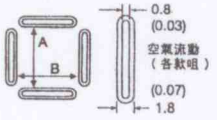
* 松開螺絲,移出電綫管。
松開拴緊手柄的 3 枚螺絲,移出電綫管。
* 拆開手柄。
松開接地電綫護套,取出管件,管内裝置有石英玻璃和熱絶緣體。
勿掉落或遺失。
* 取出發熱材料
松開終端,取出發熱材料。
* 插入新發熱材料
小心處理,切勿磨擦發熱材料電綫。插入新發熱材料,重接終端。傳感器綫有極性,應注意顏色區别,相同顏色綫對接。
依拆開時的相反程序,回裝手柄。將手柄凸起部分套入管件孔徑。

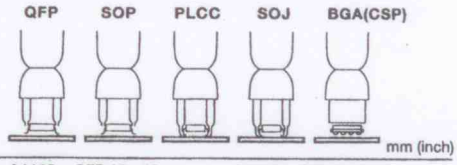
選用部件

＊名稱規格之尺寸，是集成塊之尺寸氣流

共用噴嘴

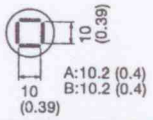
噴咀的規格及尺寸
表示該IC的尺寸



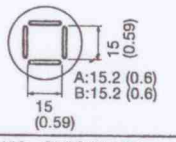


mm (inch)

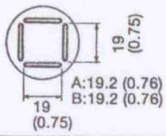
A1125 QFP 10 x 10 (0.39 x 0.39)



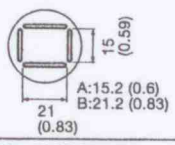
A1126 QFP 14 x 14 (0.55 x 0.55)



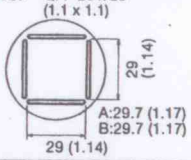
A1127 QFP 17.5 x 17.5 (0.68 x 0.68)



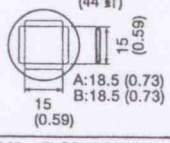
A1128 QFP 14 x 20 (0.55 x 0.78)



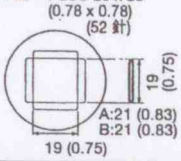
A1129 QFP 28 x 28 (1.1 x 1.1)



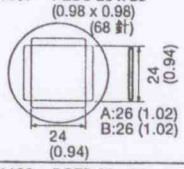
A1135 PLCC 17.5 x 17.5 (0.68 x 0.68) (44 針)



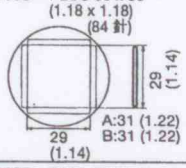
A1136 PLCC 20 x 20 (0.78 x 0.78) (52 針)



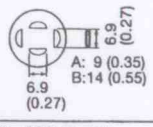
A1137 PLCC 25 x 25 (0.98 x 0.98) (68 針)



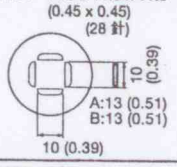
A1138 PLCC 30 x 30 (1.18 x 1.18) (84 針)



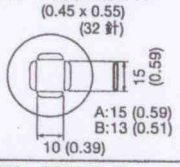
A1139 PLCC 12.5 x 7.3 (0.49 x 0.29) (18 針)



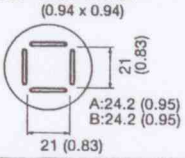
A1140 PLCC 11.5 x 11.5 (0.45 x 0.45) (28 針)



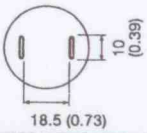
A1141 PLCC 11.5 x 14 (0.45 x 0.55) (32 針)



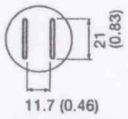
A1182 BQFP 24 x 24 (0.94 x 0.94)



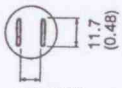
A1187 TSOL 18.5 x 8 (0.73 x 0.31)



A1257 SOP 11 x 21 (0.43 x 0.83)

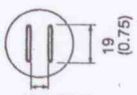


A1258 SOP 7.6 x 12.7 (0.3 x 0.5)

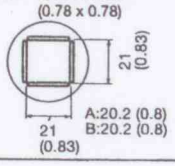


A1259 SOP 13 x 28 (0.51 x 1.1)

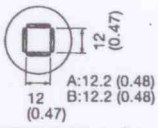
A1260 SOP 8.6 x 18 (0.34 x 0.71)



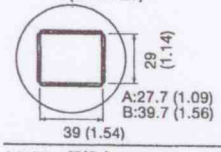
A1261 QFP 20 x 20 (0.78 x 0.78)



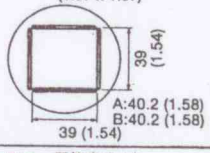
A1262 QFP 12 x 12 (0.47 x 0.47)



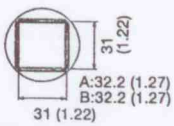
A1263 QFP 28 x 40 (1.1 x 1.57)



A1264 QFP 40 x 40 (1.57 x 1.57)



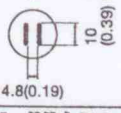
A1265 QFP 32 x 32 (1.26 x 1.26)



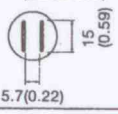
A1124 單管式 Ø2.5 (0.09)

A1130 單管式 Ø4.4 (0.17)

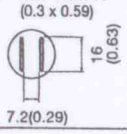
A1131 SOP 4.4 x 10 (0.17 x 0.39)



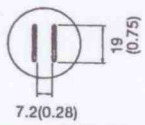
A1132 SOP 5.6 x 13 (0.22 x 0.51)



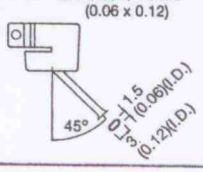
A1133 SOP 7.5 x 15 (0.3 x 0.59)



A1134 SOP 7.5 x 18 (0.3 x 0.7)



A1142 彎形單管式 1.5 x 3 (0.06 x 0.12)



A1325 雙管式 Ø1.5 x 5.10 (0.06 x 0.2-0.39) 可調校 管腳距離