



A

B

30.6 mm (1.20)

A: 35.2 mm (1.39)

B: 35.2 mm (1.39)

30.6 mm



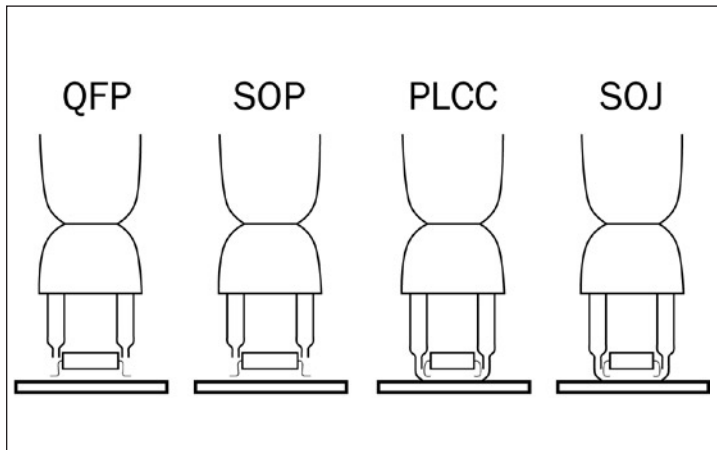
7.2  
(0.28)

45°

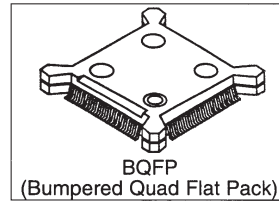
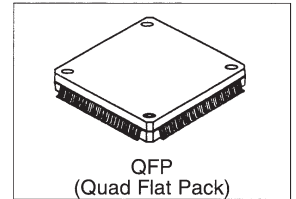
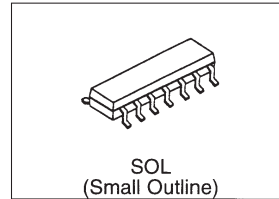
1.5 mm  
(0.06) I.D.

# NOZZLE CATALOG

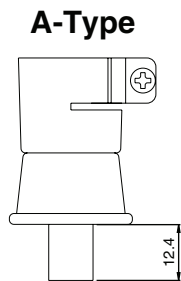
## Nozzle Shape for Surface Mount Component



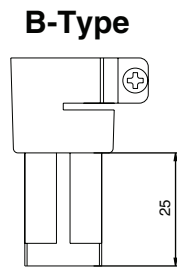
### Gull-Wing Leaded Components



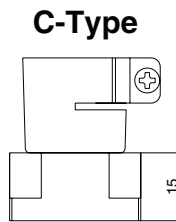
### BGA Packages



BGA package size  
5mm<sup>2</sup> ~ 15mm<sup>2</sup>

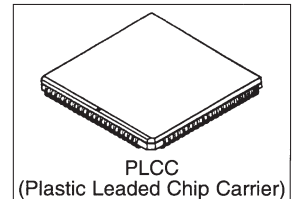
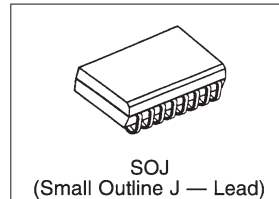


BGA package size  
15mm<sup>2</sup> ~ 20mm<sup>2</sup>



BGA package size  
20mm<sup>2</sup> ~ 45mm<sup>2</sup>

### J-Lead Components



## Hakko 850/852 SMD Rework Station Line-up

Model 850



Model 850D  
(new model)



Model 852



Model 850B

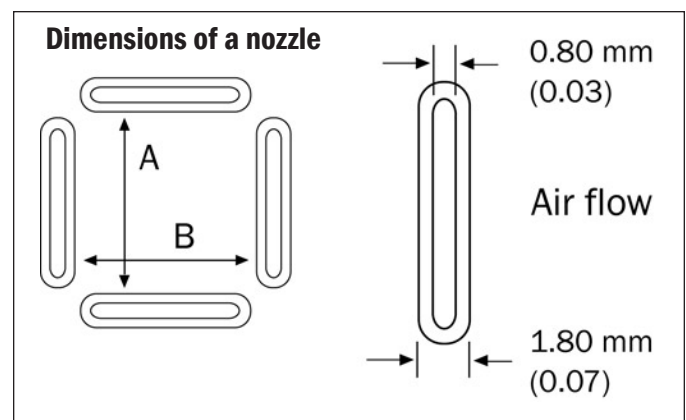


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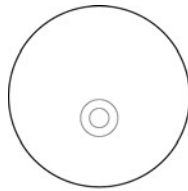
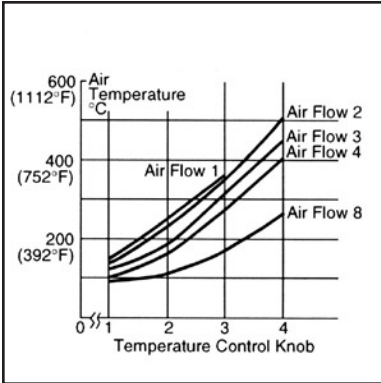
**Note:** Dimensions in ( ) = inches.  
 \* Vacuum function inoperative when attaching the nozzle to Hakko 852.

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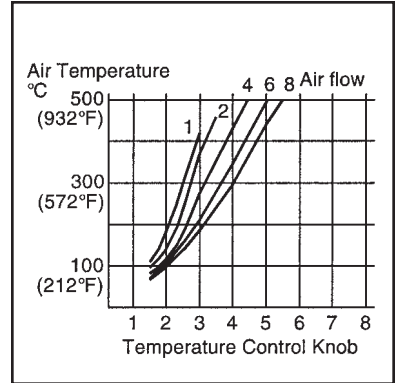
# Single Type

## 850 Temperature Chart

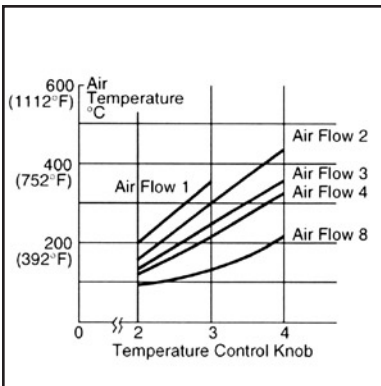


Ø2.5 mm I.D.  
(0.10)

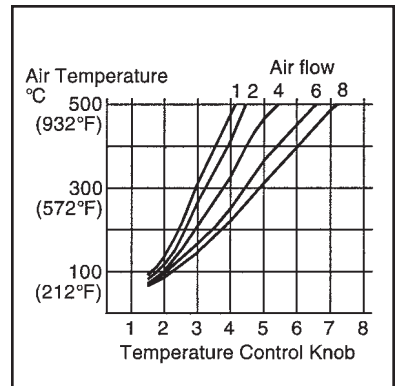
## 850B Temperature chart



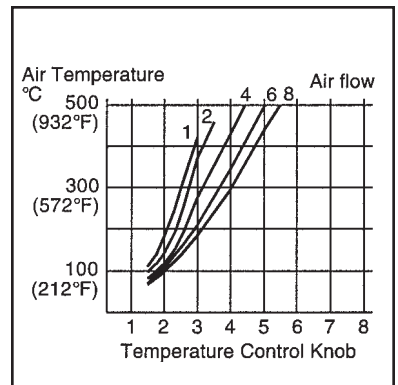
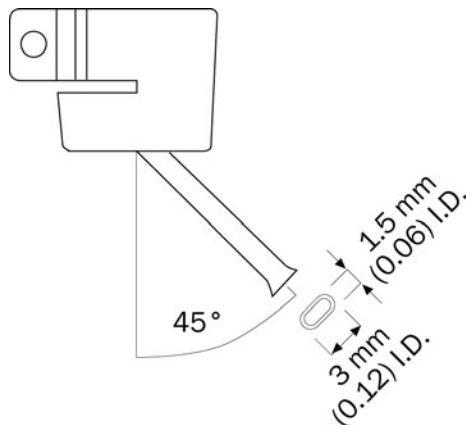
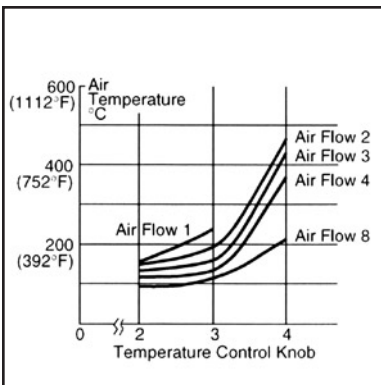
**A1124B : Single Ø2.5 (0.10)**



Ø4.4 mm I.D.  
(0.17)

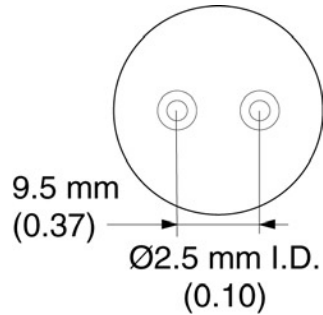
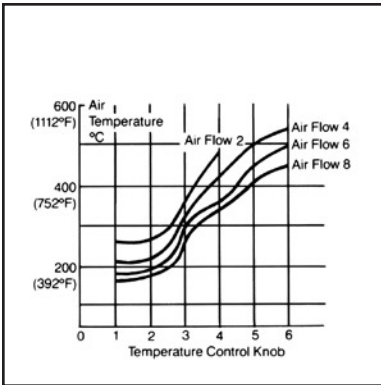


**A1130 : Single Ø4.4 (0.17)**

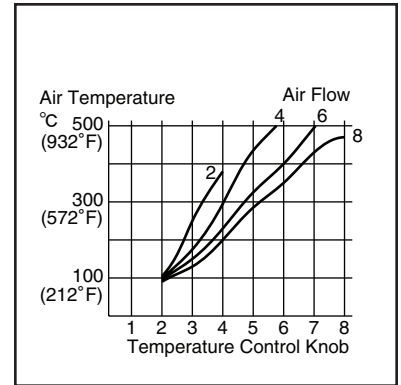


**A1142B : Bent single 1.5 x 3 (0.06 x 0.12)**

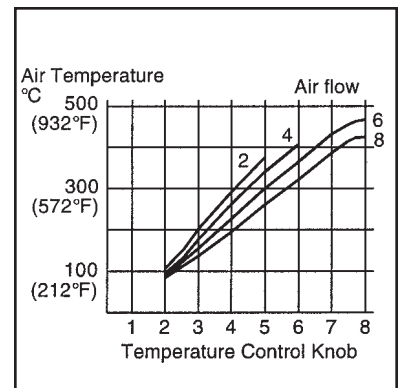
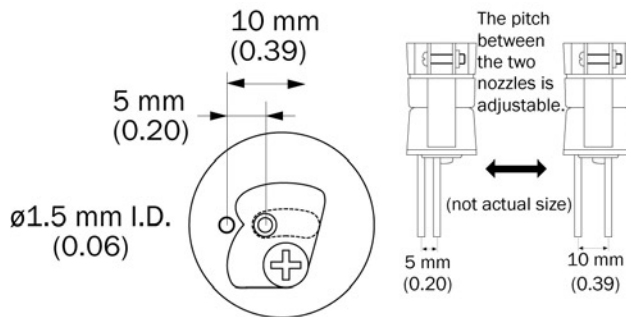
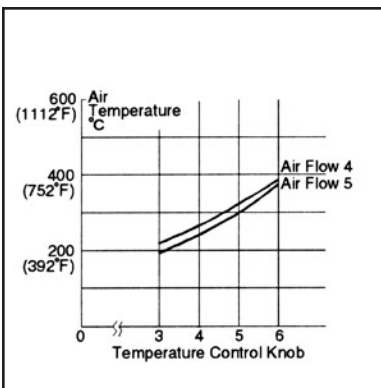
## 850 Temperature Chart



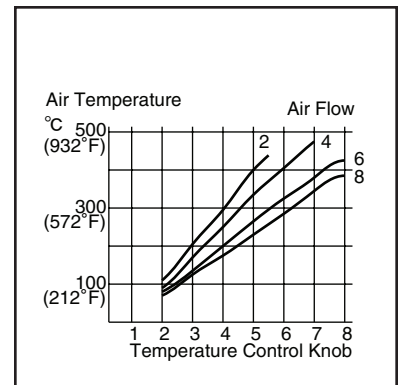
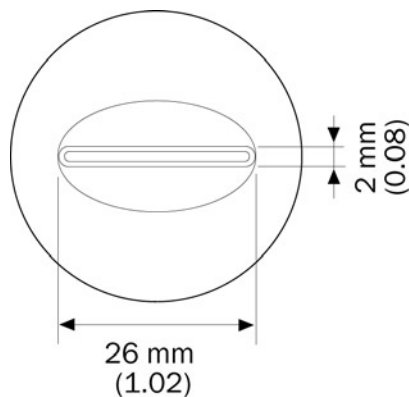
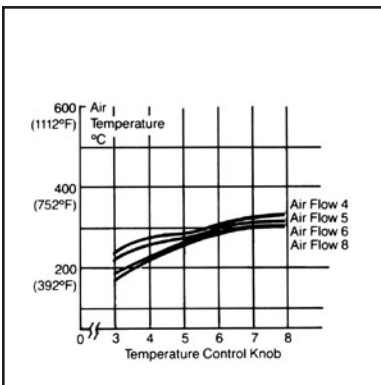
## 850B Temperature Chart



**A1190 : Dual single 2.5 x 9.5 pitch (0.10 x 0.37)**



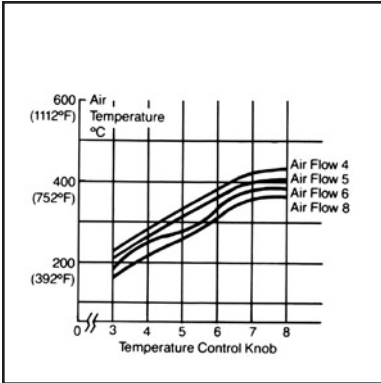
**A1325 : Dual single adjustable Ø1.5 x 5-10 (0.06 x 0.20-0.39)**



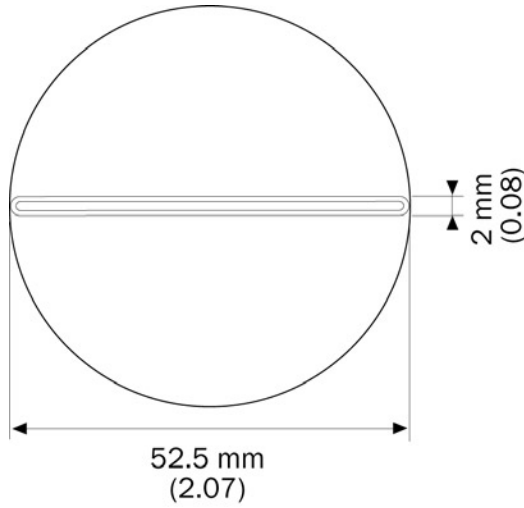
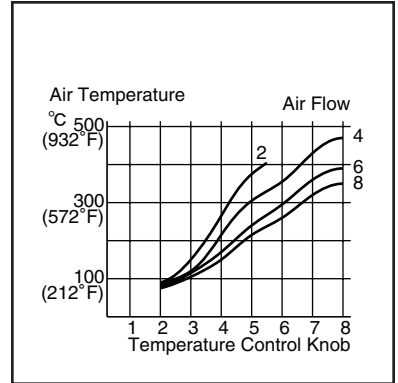
**A1191 : SIP 25L (0.98)**

# Single Type

## 850 Temperature Chart

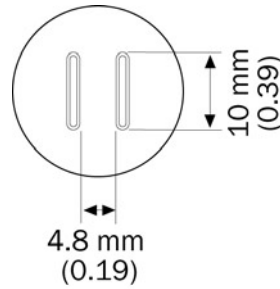
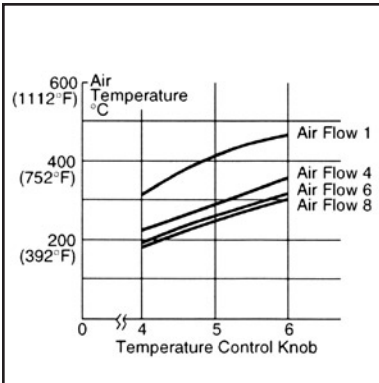


## 850B Temperature chart

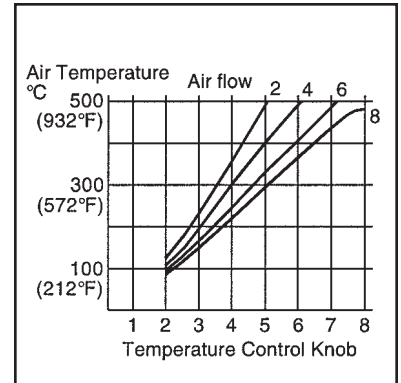


**A1192 : SIP 50L (1.97)**

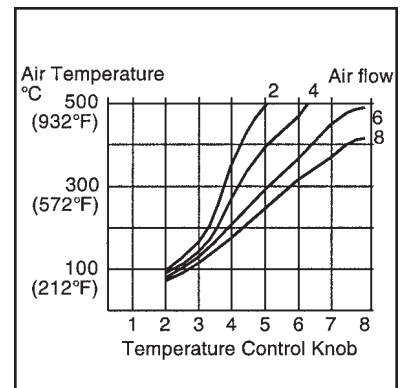
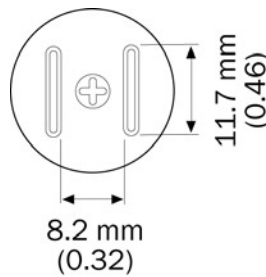
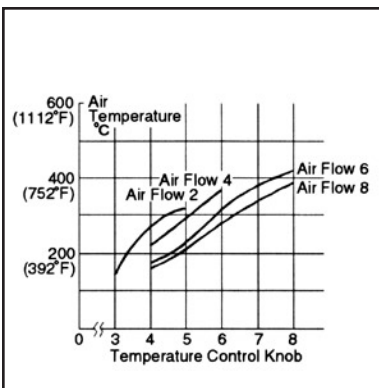
## 850 Temperature Chart



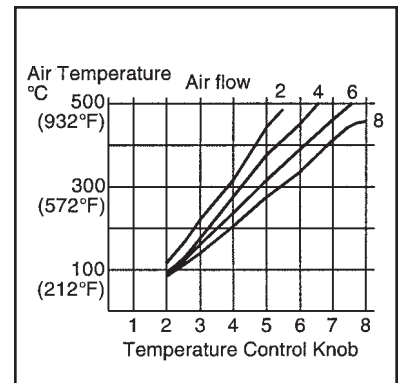
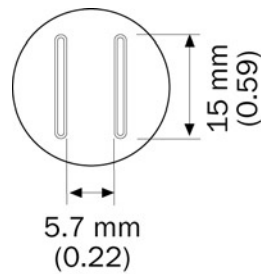
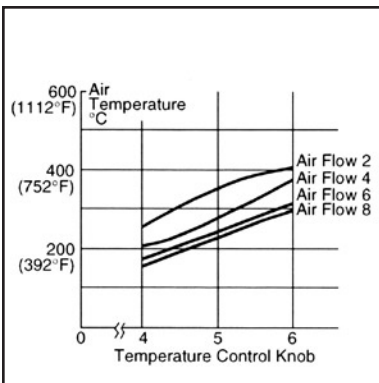
## 850B Temperature Chart



**A1131 : SOP 4.4 x 10 (0.17 x 0.39)**



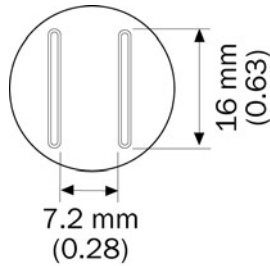
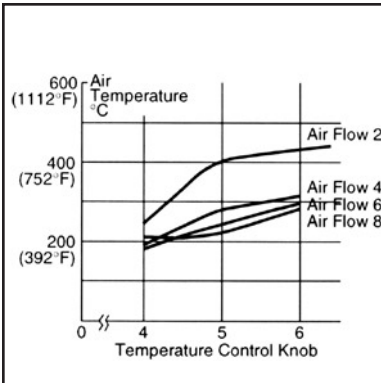
**A1258B : SOP 7.6 x 12.7 (0.30 x 0.50)**



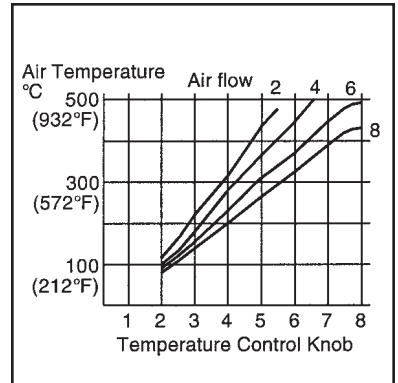
**A1132 : SOP 5.6 x 13 (0.22 x 0.51)**

# Gull Wing - SOP

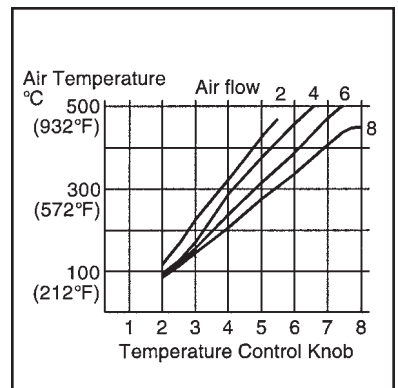
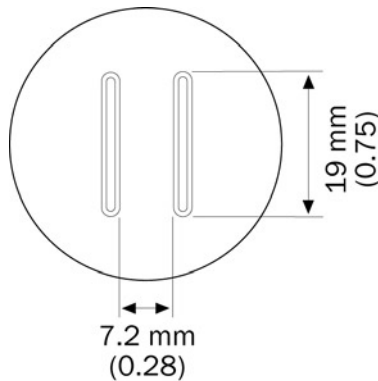
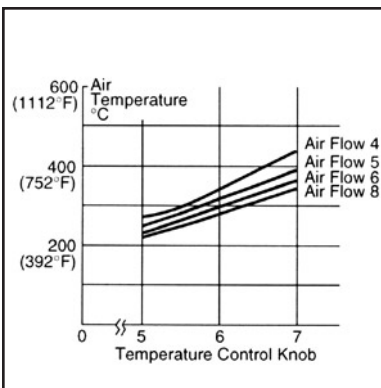
## 850 Temperature Chart



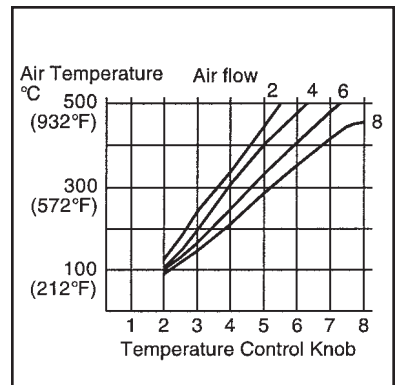
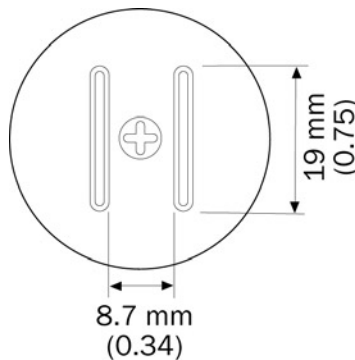
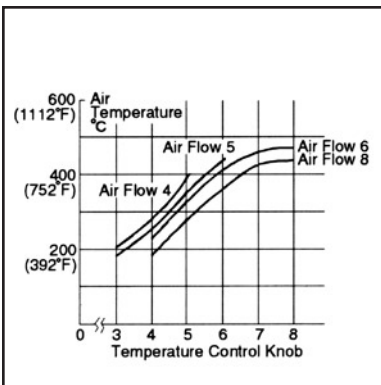
## 850B Temperature chart



### A1133 : SOP 7.5 x 15 (0.30 x 0.59)



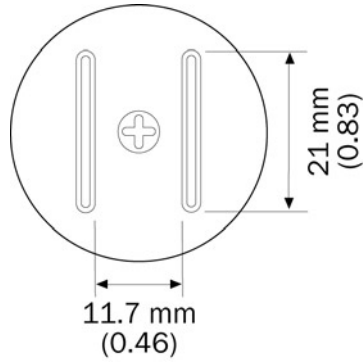
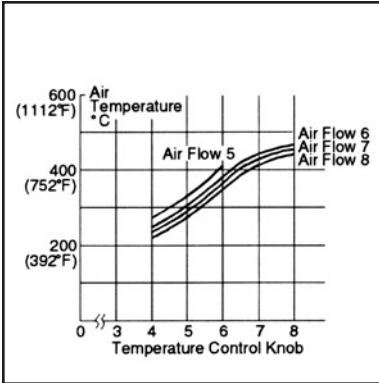
### A1134 : SOP 7.5 x 18 (0.30 x 0.71)



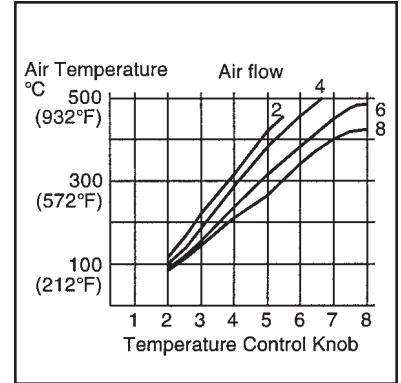
### A1260B : SOP 8.6 x 18 (0.34 x 0.71)



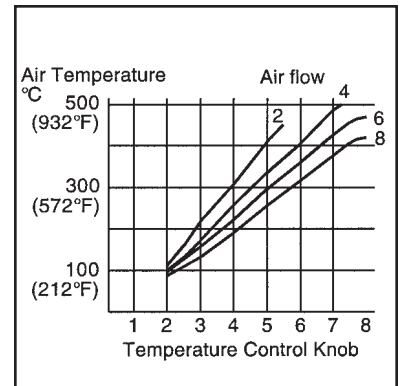
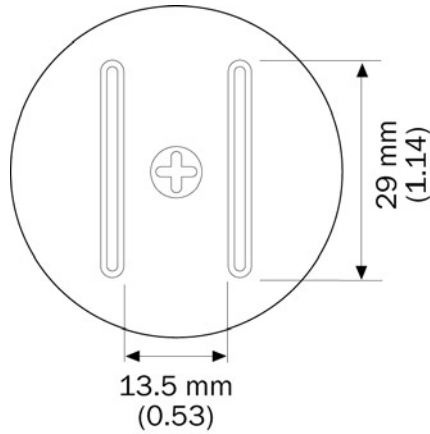
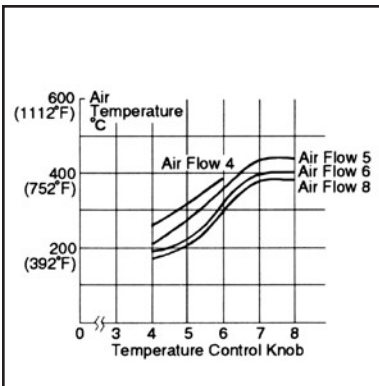
## 850 Temperature Chart



## 850B Temperature Chart



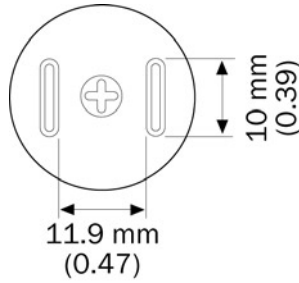
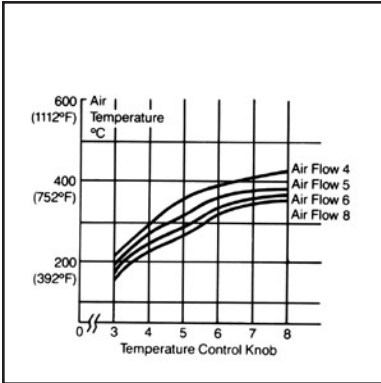
**A1257B : SOP 11 x 21 (0.43 x 0.83)**



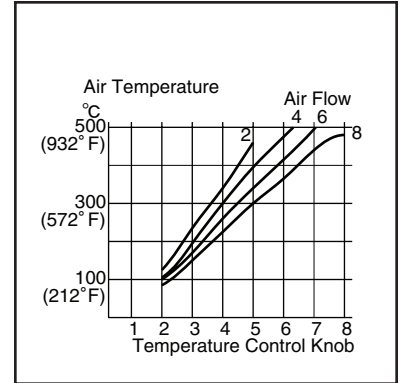
**A1259B : SOP 13 x 28 (0.51 x 1.10)**

# Gull Wing - TSOL

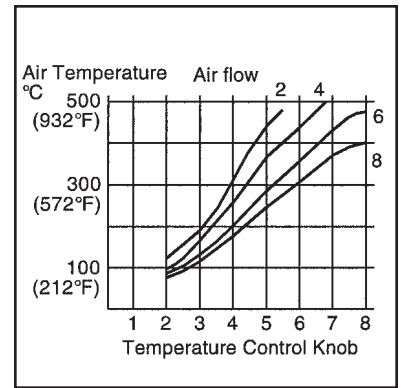
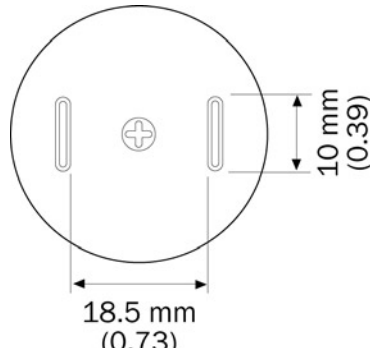
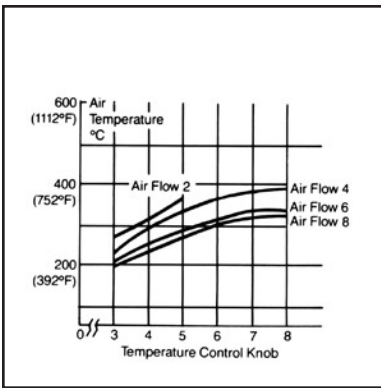
## 850 Temperature Chart



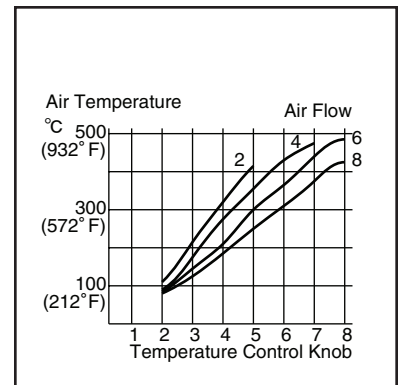
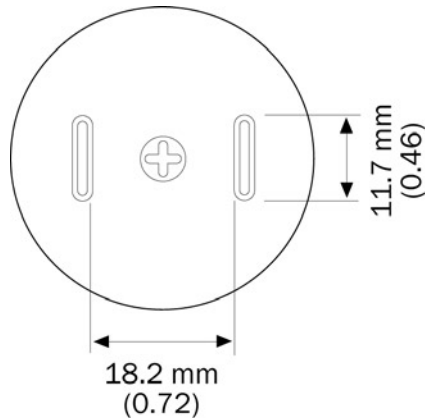
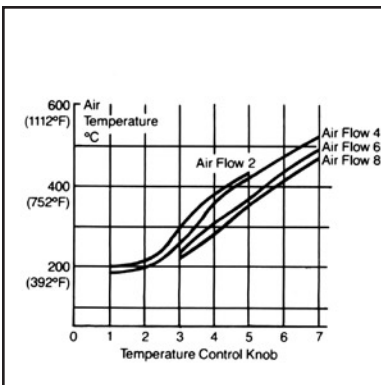
## 850B Temperature chart



**A1185B : TSOL 13 x 10 (0.51 x 0.39)**

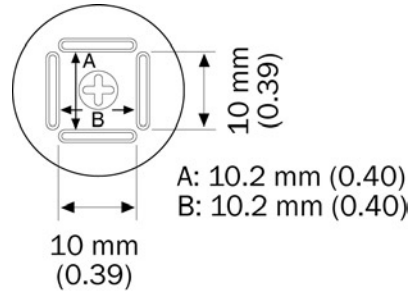
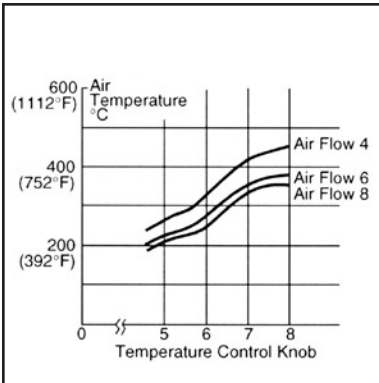


**A1187B : TSOL 18.5 x 8 (0.73 x 0.31)**

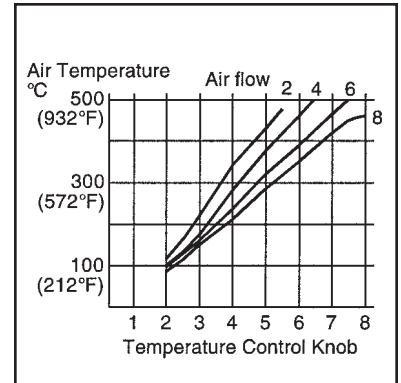


**A1186B : TSOL 18 x 10 (0.71 x 0.39)**

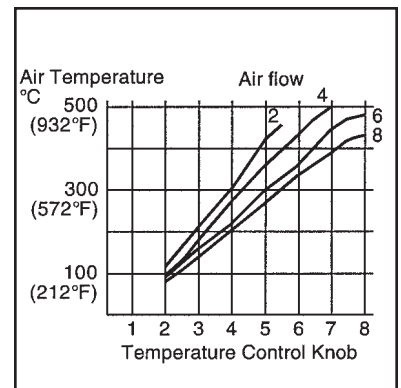
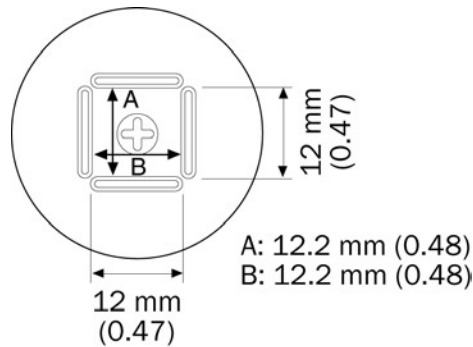
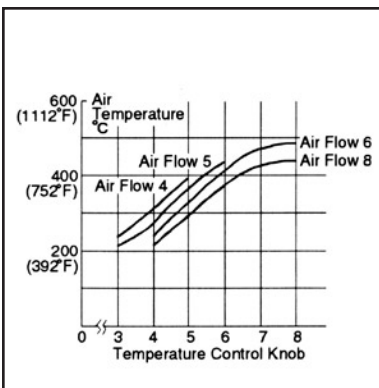
## 850 Temperature Chart



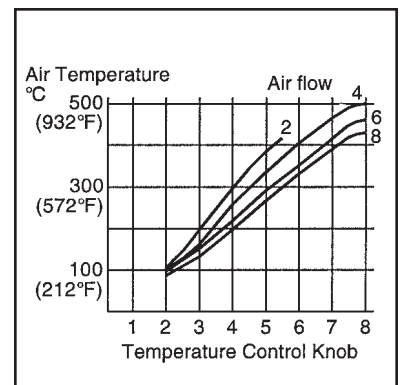
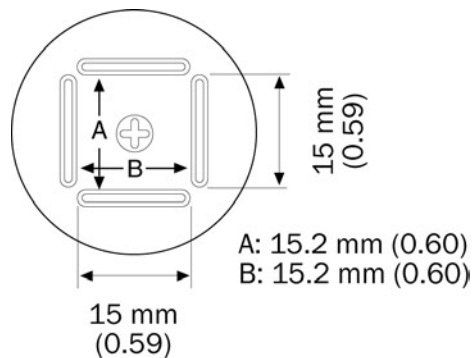
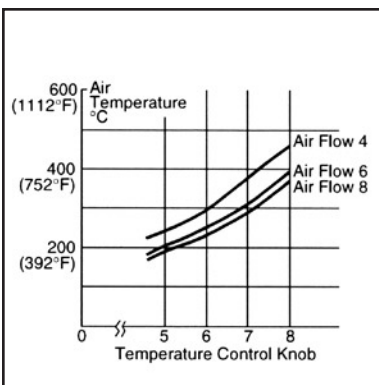
## 850B Temperature Chart



### A1125B : QFP 10 x 10 (0.39 x 0.39)



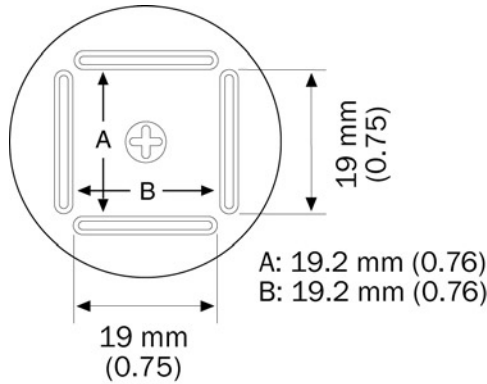
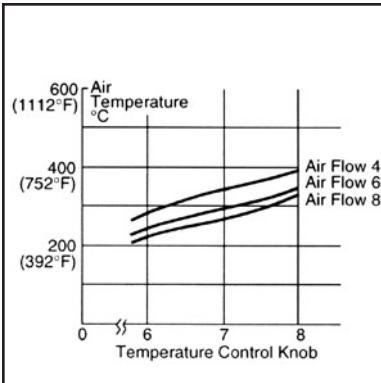
### A1262B : QFP 12 x 12 (0.47 x 0.47)



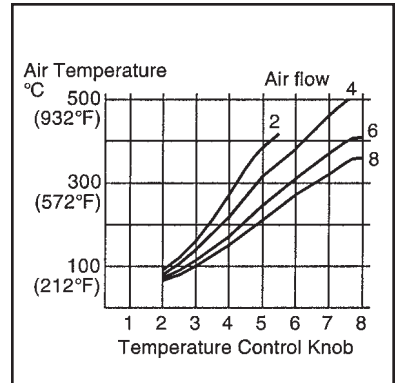
### A1126B : QFP 14 x 14 (0.55 x 0.55)

# Gull Wing - QFP

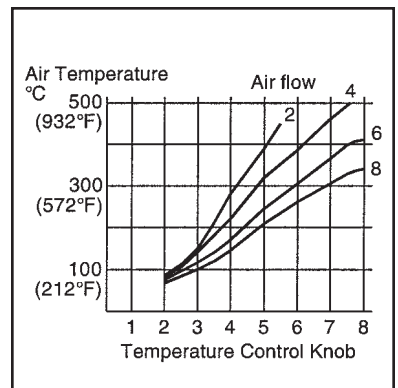
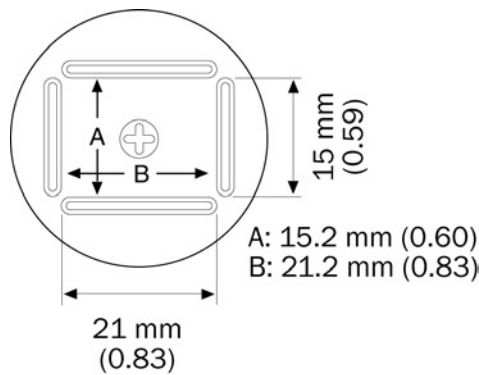
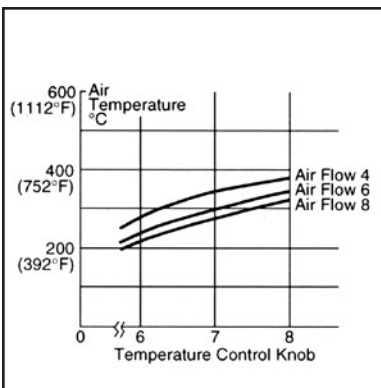
## 850 Temperature Chart



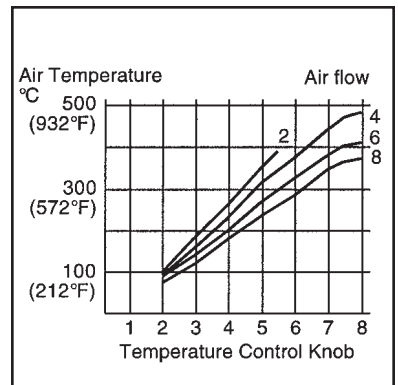
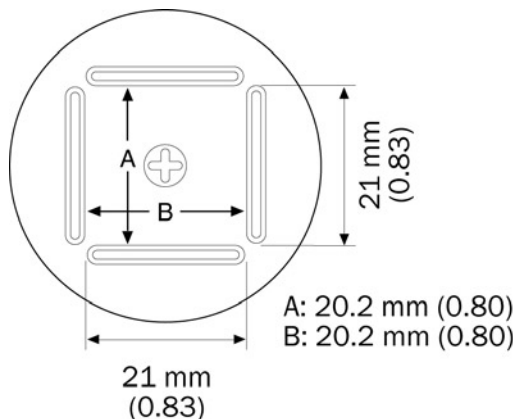
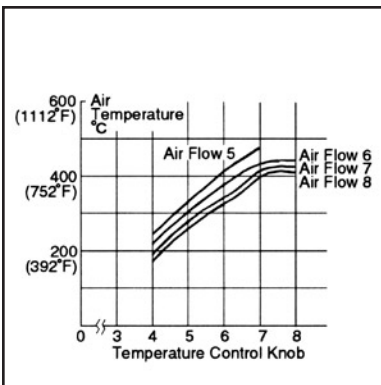
## 850B Temperature chart



**A1127B : QFP 17.5 x 17.5 (0.69 x 0.69)**

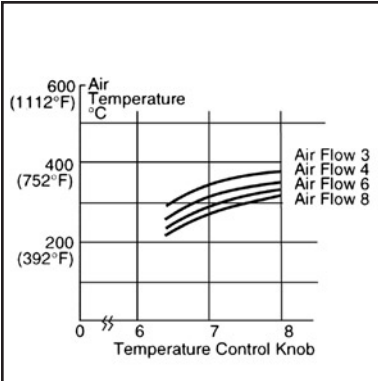


**A1128B : QFP 14 x 20 (0.55 x 0.79)**

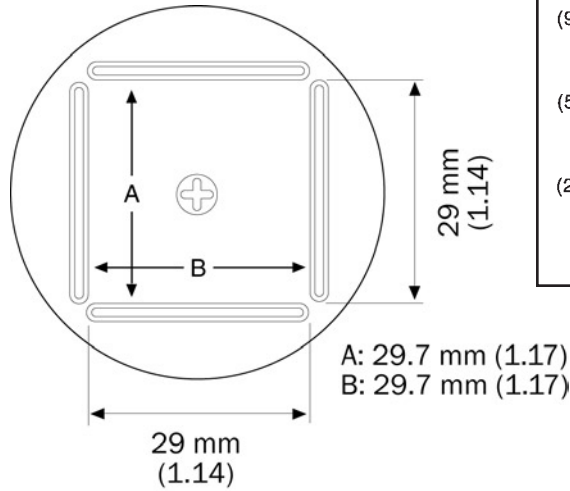
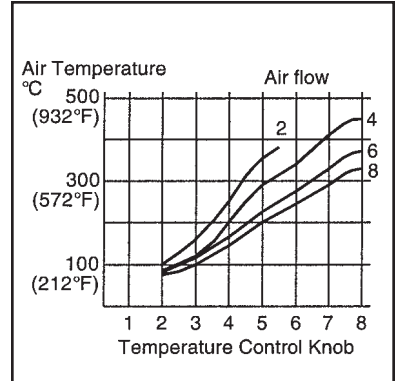


**A1261B : QFP 20 x 20 (0.79 x 0.79)**

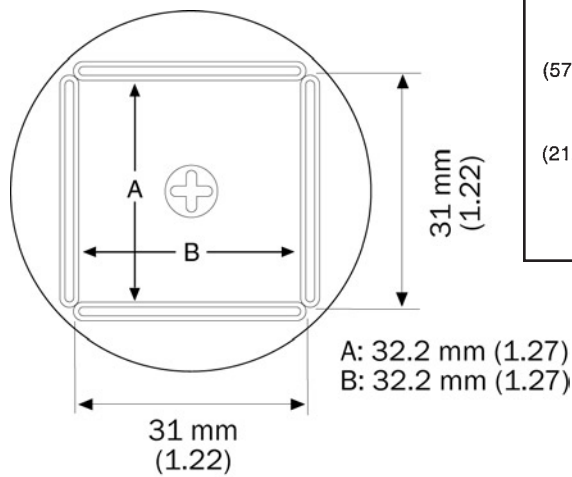
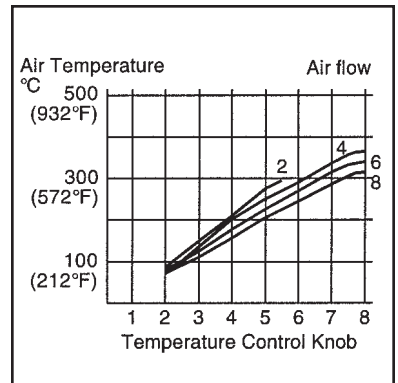
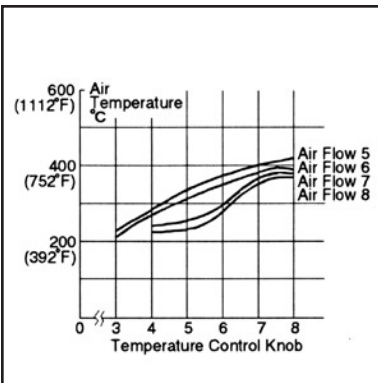
## 850 Temperature Chart



## 850B Temperature Chart



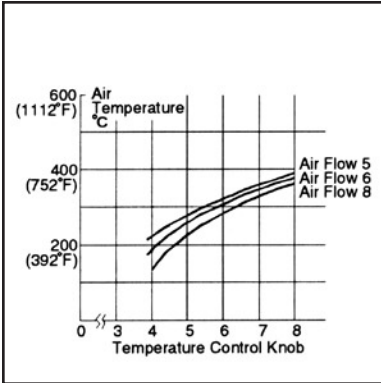
## A1129B : QFP 28 x 28 (1.10 x 1.10)



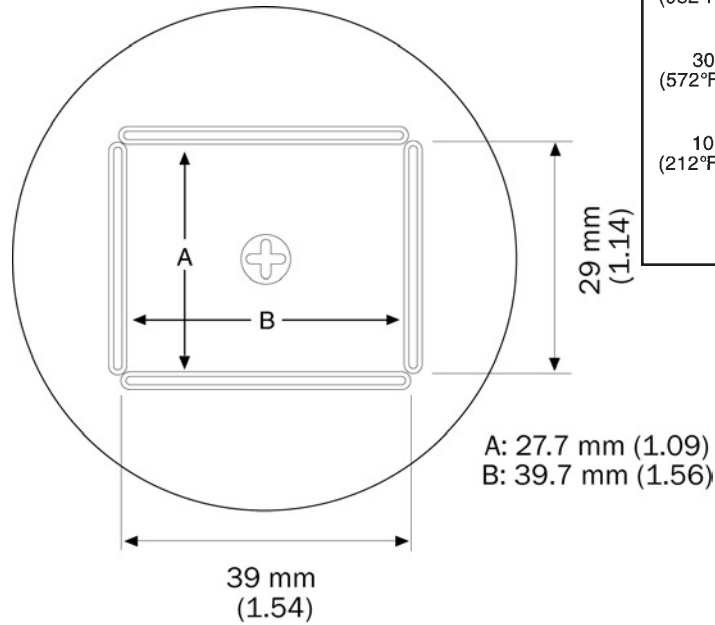
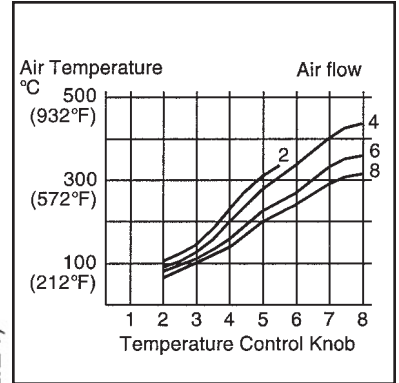
## A1265B : QFP 32 x 32 (1.26 x 1.26)

# Gull Wing - QFP

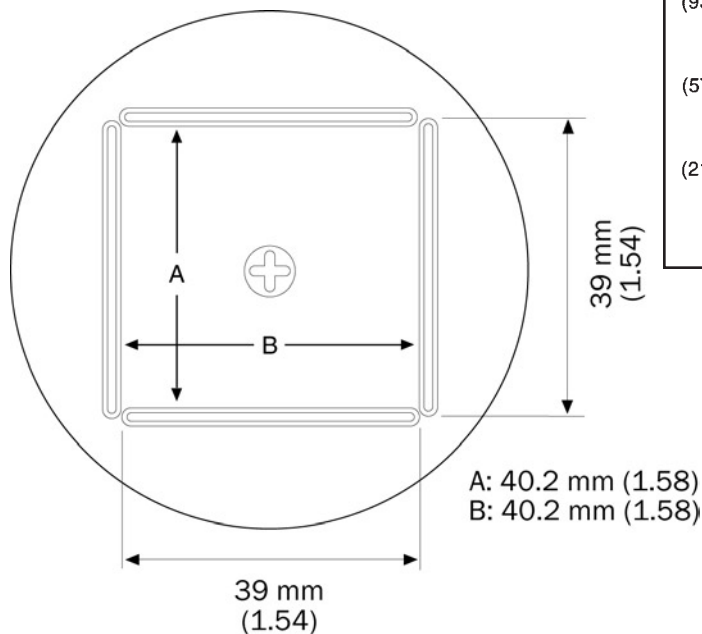
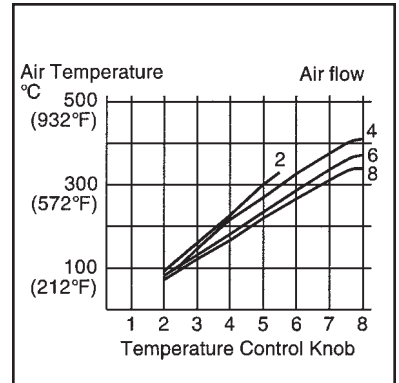
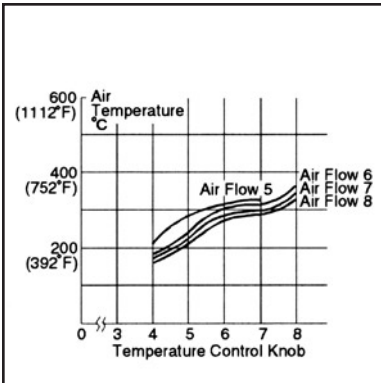
## 850 Temperature Chart



## 850B Temperature chart

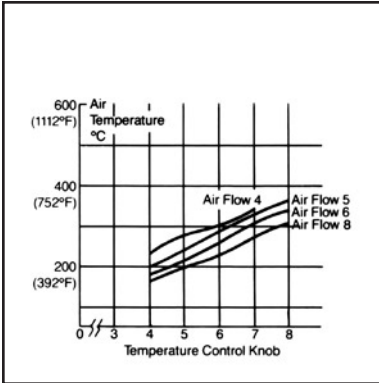


**A1263B : QFP 28 x 40 (1.10 x 1.57)**

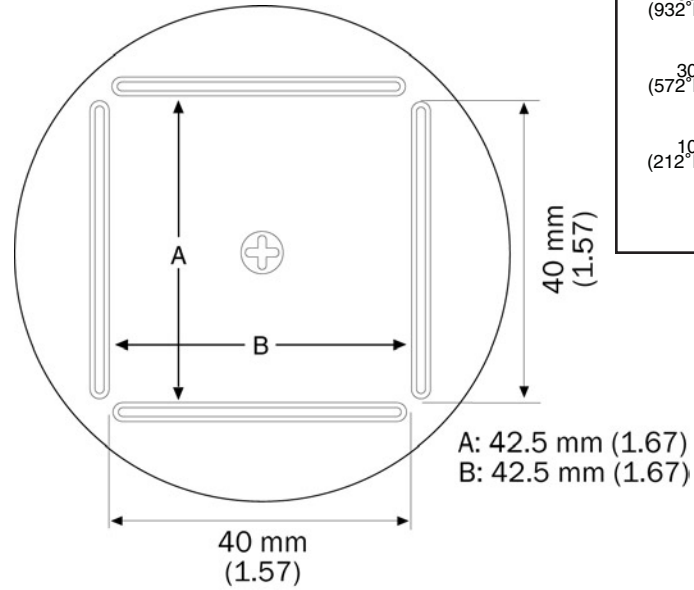
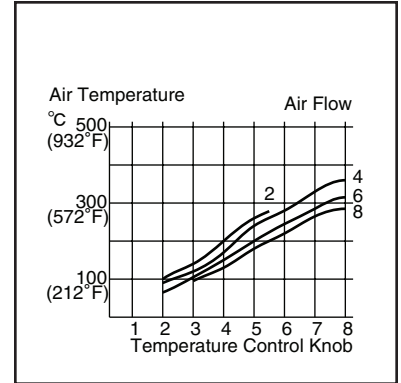


**A1264B : QFP 40 x 40 (1.57 x 1.57)**

## 850 Temperature Chart



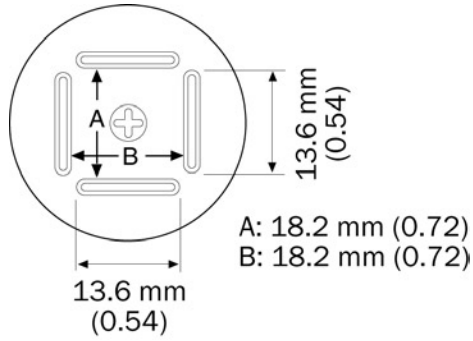
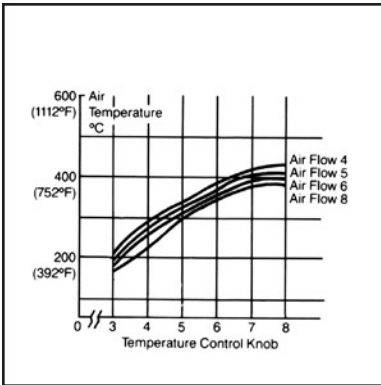
## 850B Temperature Chart



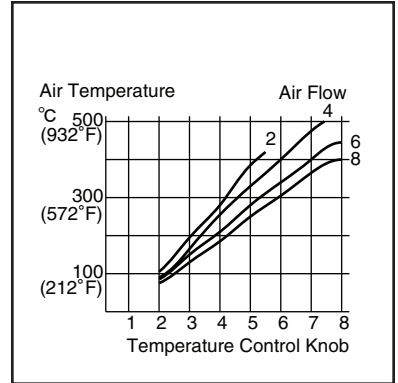
**A1215B : QFP 42.5 x 42.5 (1.67 x 1.67)**

# Gull Wing - BQFP

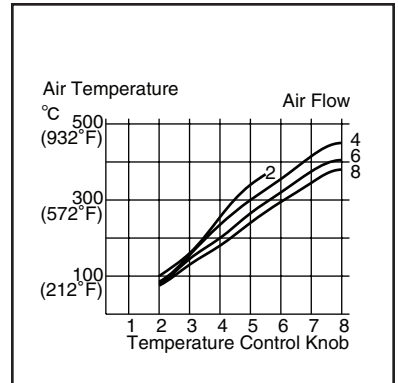
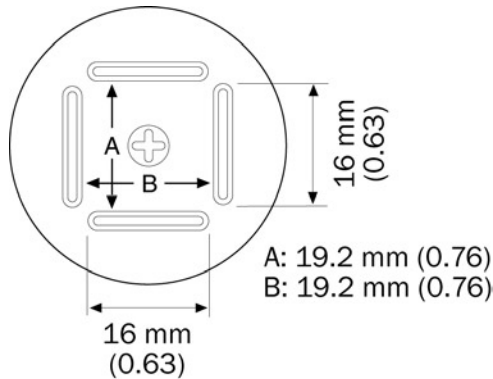
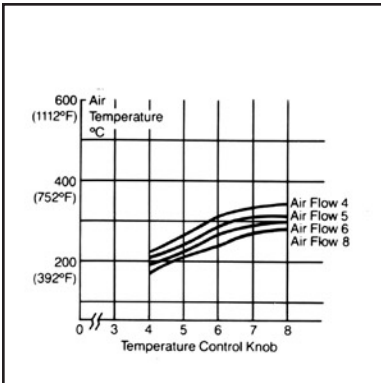
## 850 Temperature Chart



## 850B Temperature chart



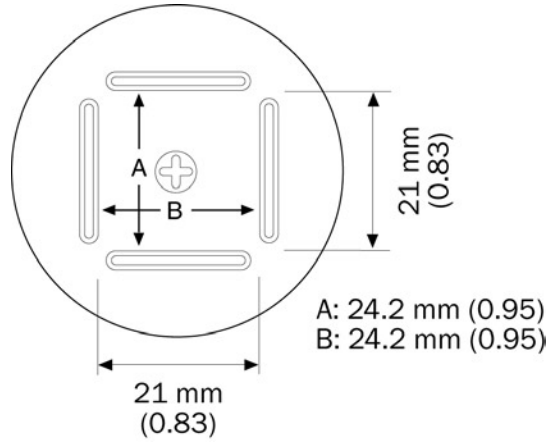
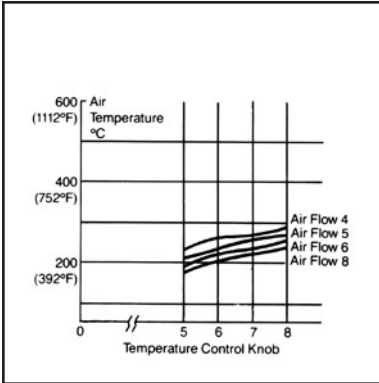
### A1180B : BQFP 17 x 17 (0.67 x 0.67)



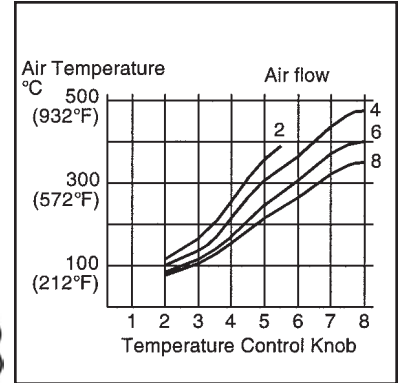
### A1181B : BQFP 19 x 19 (0.75 x 0.75)



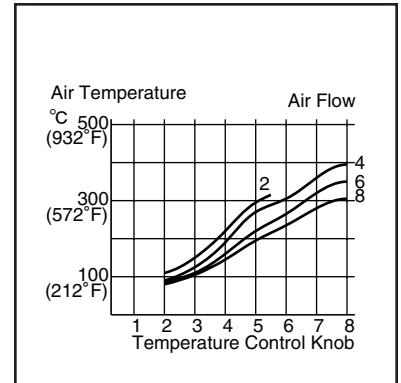
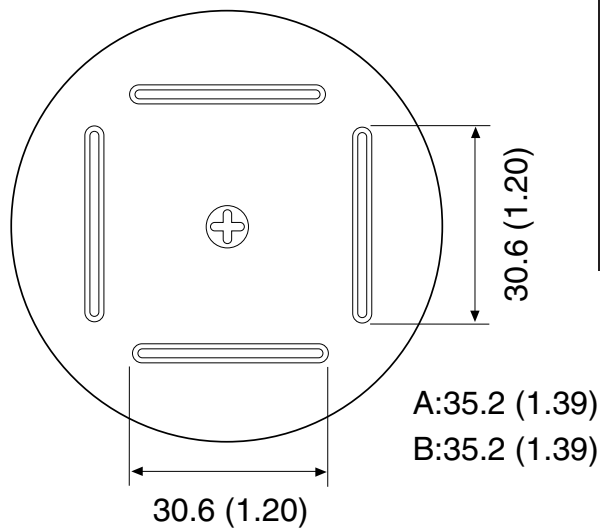
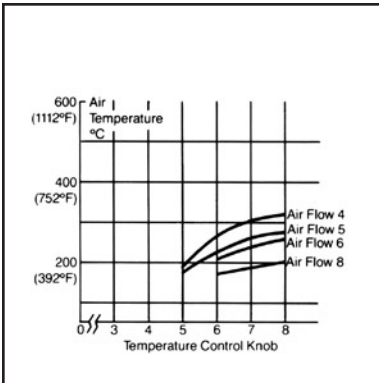
## 850 Temperature Chart



## 850B Temperature Chart



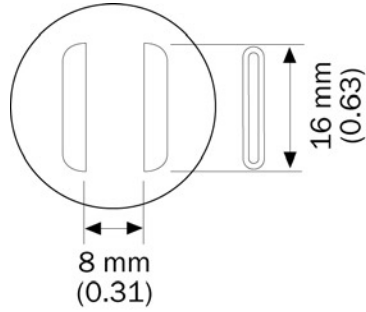
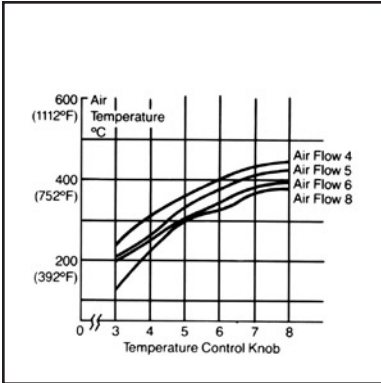
## A1182B : BQFP 24 x 24 (0.94 x 0.94)



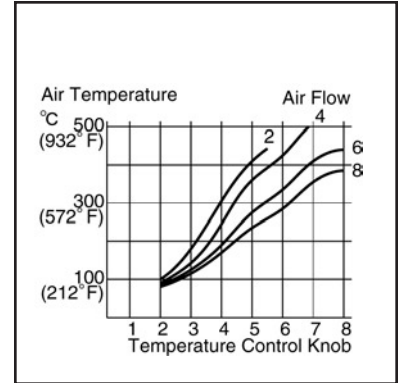
## A1203B : BQFP 35 x 35 (1.38 x 1.38)

# J Lead - SOJ

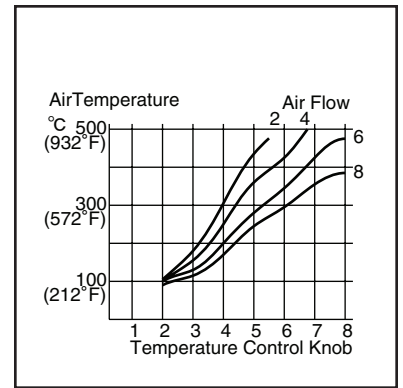
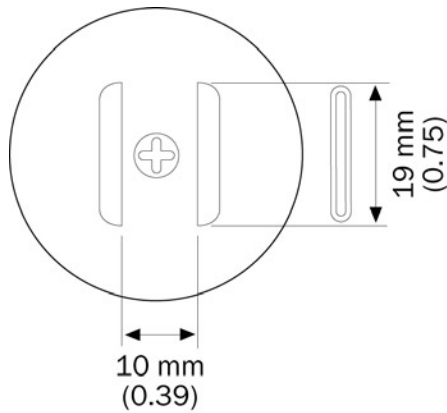
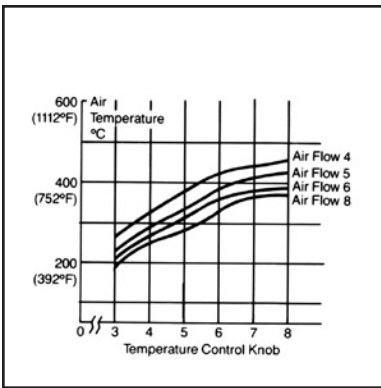
## 850 Temperature Chart



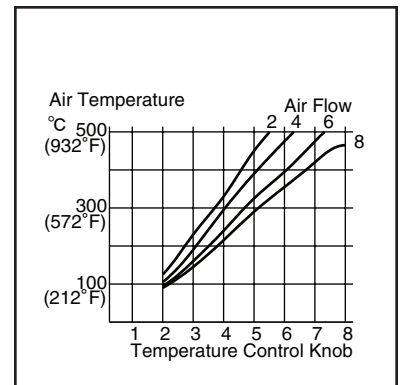
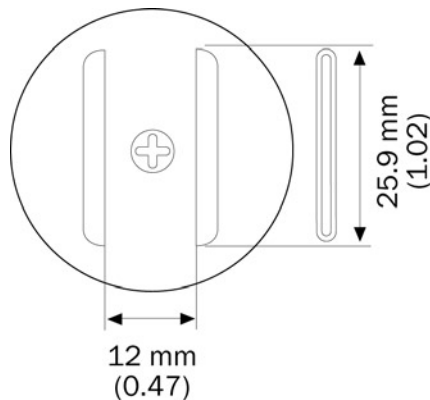
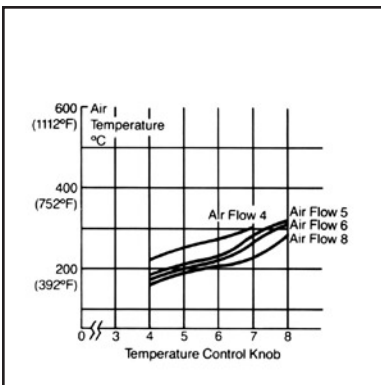
## 850B Temperature chart



**A1183 : SOJ 15 x 8 (0.59 x 0.31)**

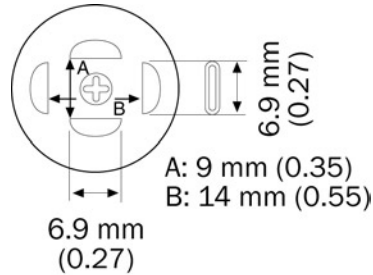
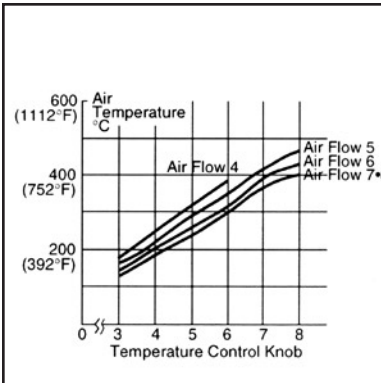


**A1184B : SOJ 18 x 8 (0.71 x 0.31)**

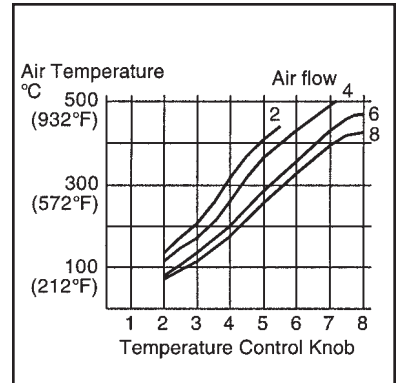


**A1214B : SOJ 10 x 26 (0.39 x 1.02)**

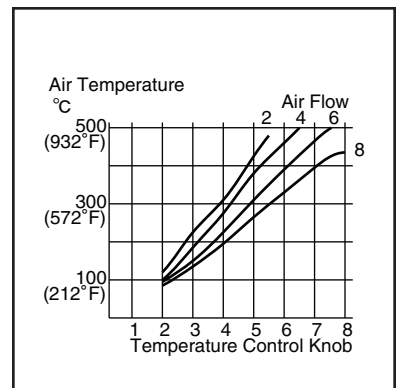
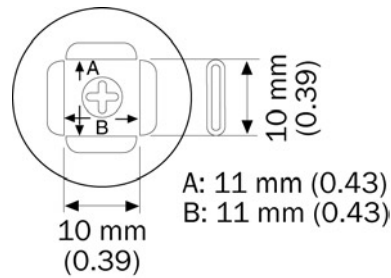
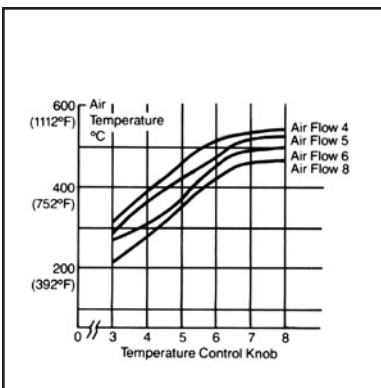
## 850 Temperature Chart



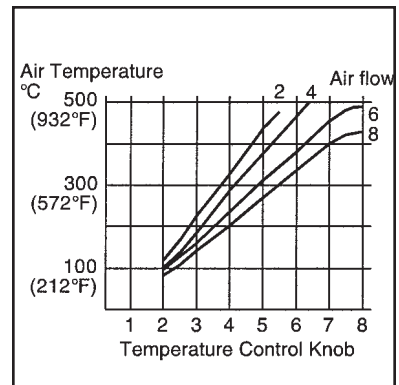
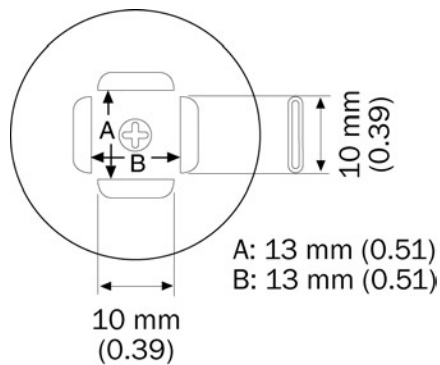
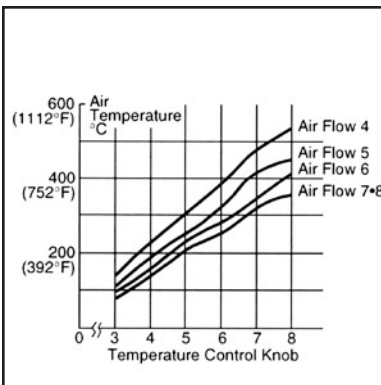
## 850B Temperature Chart



## A1139B : PLCC 12.5 x 7.3 (0.49 x 0.29) (18pins)



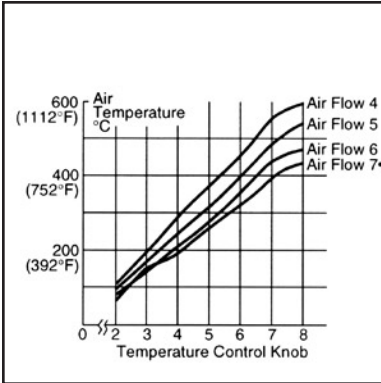
## A1188B : PLCC 9 x 9 (0.35 x 0.35) (20pins)



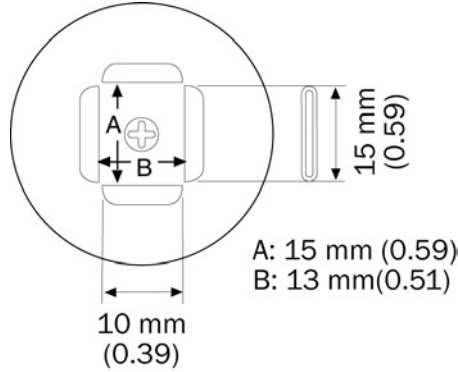
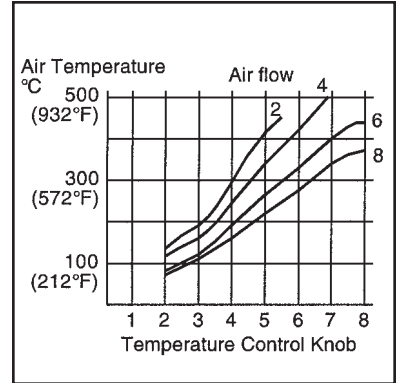
## A1140B : PLCC 11.5 x 11.5 (0.45 x 0.45) (28pins)

# J Lead - PLCC

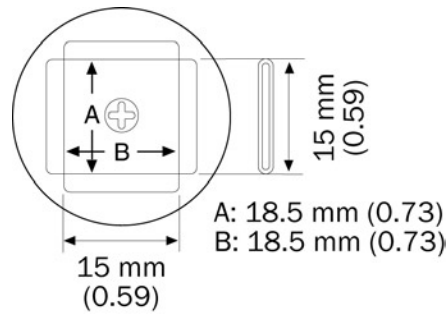
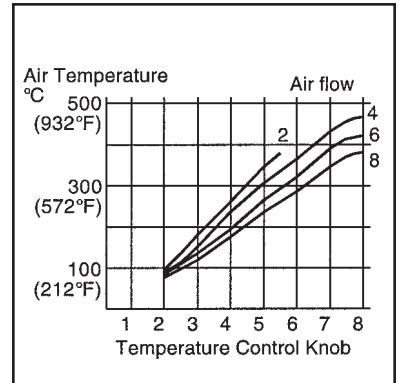
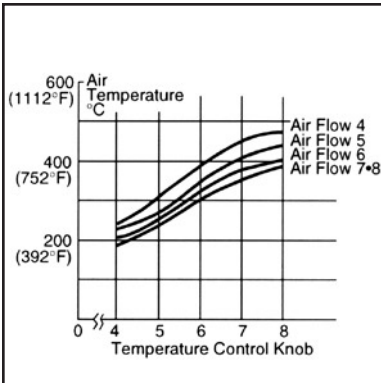
## 850 Temperature Chart



## 850B Temperature chart

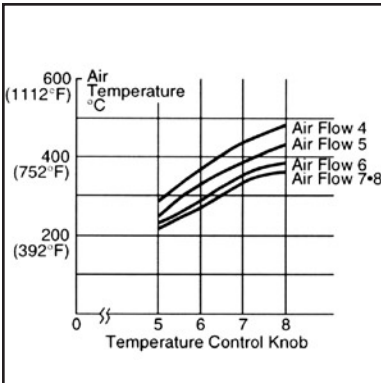


### A1141B : PLCC 11.5 x 14 (0.45 x 0.55) (32pins)

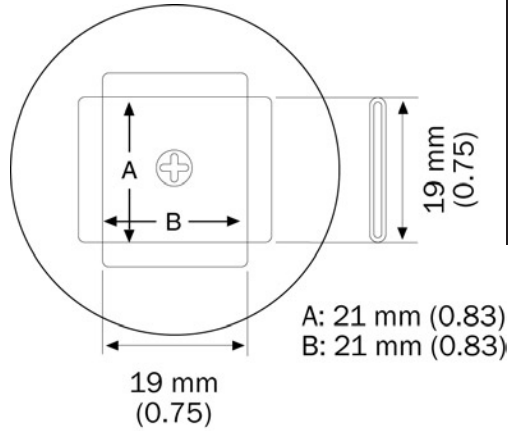
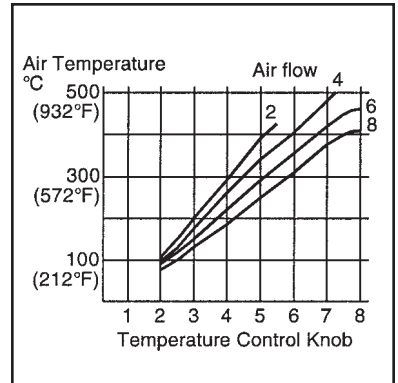


### A1135B : PLCC 17.5 x 17.5 (0.69 x 0.69) (44pins)

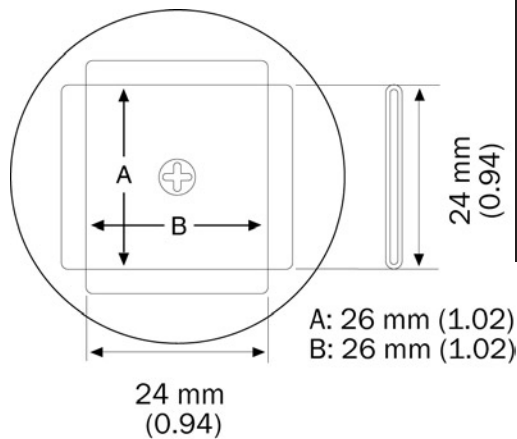
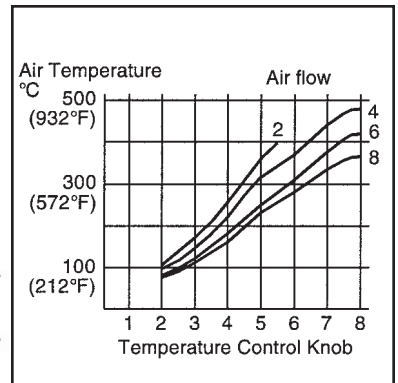
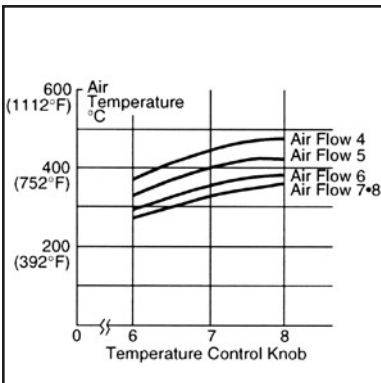
## 850 Temperature Chart



## 850B Temperature Chart



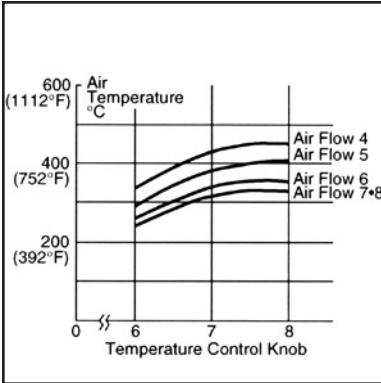
### A1136B : PLCC 20 x 20 (0.79 x 0.79) (52pins)



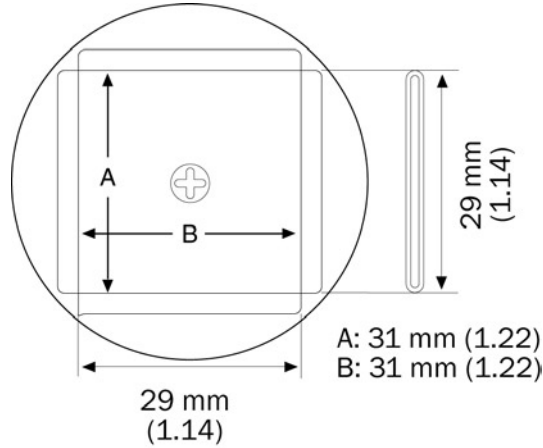
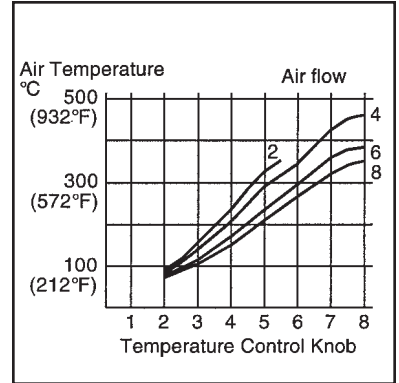
### A1137B : PLCC 25 x 25 (0.98 x 0.98) (68pins)

# J Lead - PLCC

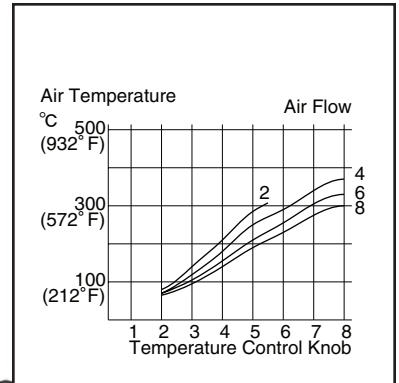
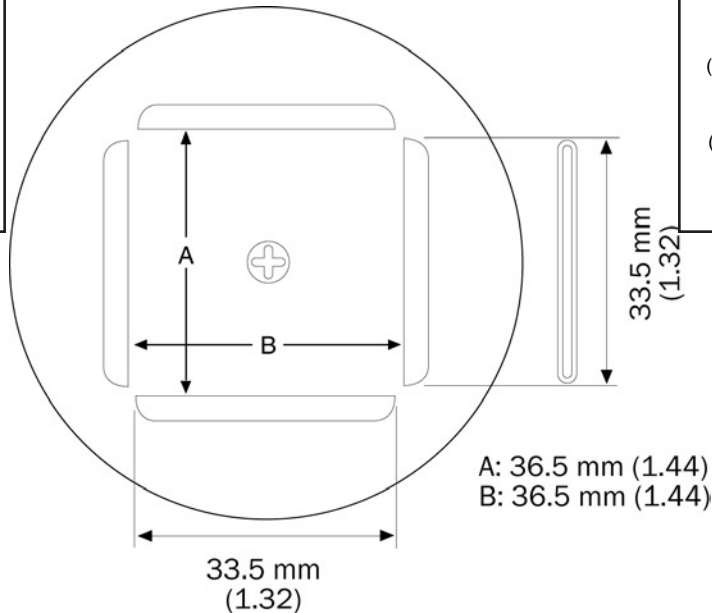
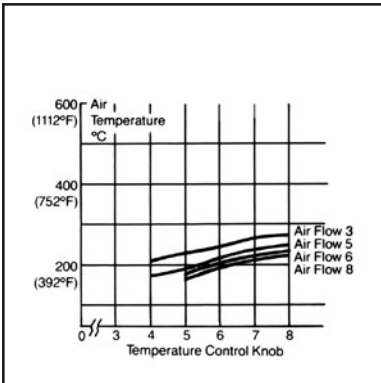
## 850 Temperature Chart



## 850B Temperature chart



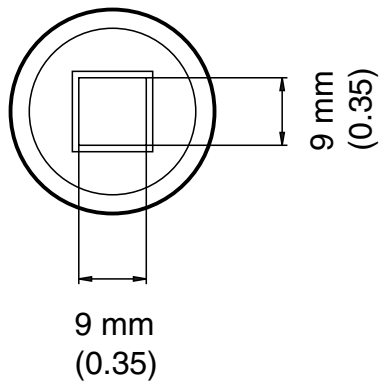
## A1138B : PLCC 30 x 30 (1.18 x 1.18) (84pins)



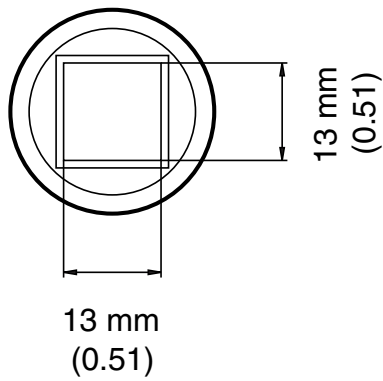
## A1189B : PLCC 34 x 34 (1.34 x 1.34) (100pins)

## BGA - Type-A and Type-B

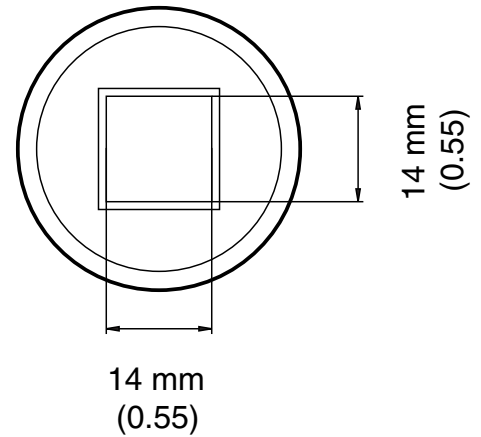
**FOR USE WITH  
HAKKO 850D/HAKKO 852  
ONLY**



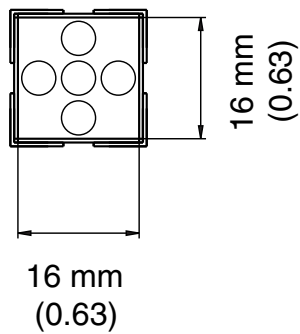
**A1470 : BGA 8 x 8 (0.31 x 0.31)**



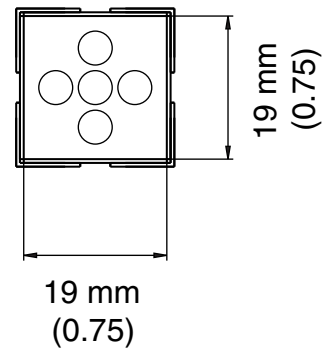
**A1471 : BGA 12 x 12 (0.47 x 0.47)**



**A1472 : BGA 13 x 13 (0.51 x 0.51)**



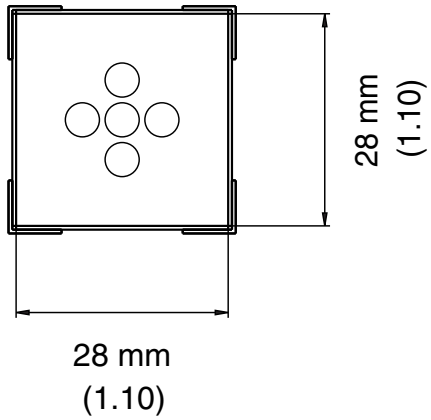
**A1473 : BGA 15 x 15 (0.59 x 0.59)**



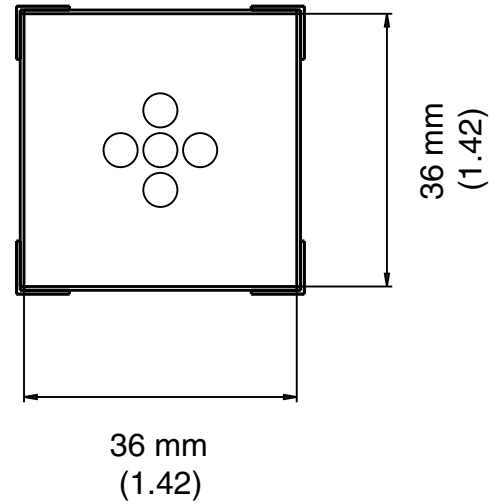
**A1474 : BGA 18 x 18 (0.70 x 0.70)**

**BGA - Type-C**

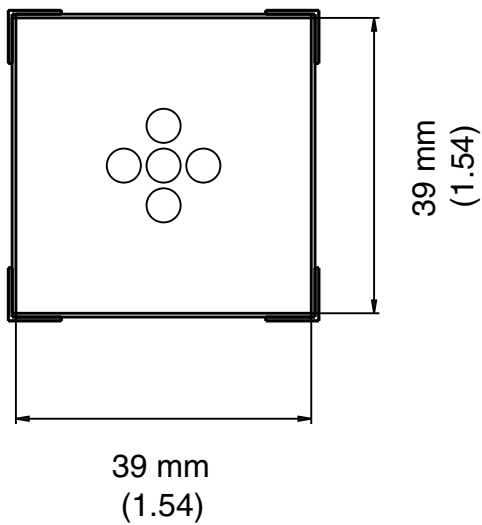
**FOR USE WITH  
HAKKO 850D/HAKKO 852  
ONLY**



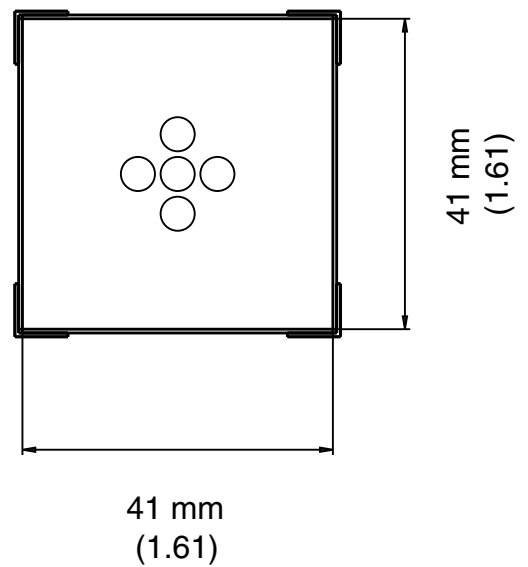
**A1475 : BGA 27 x 27 (1.06 x 1.06)**



**A1476 : BGA 35 x 35 (1.37 x 1.37)**



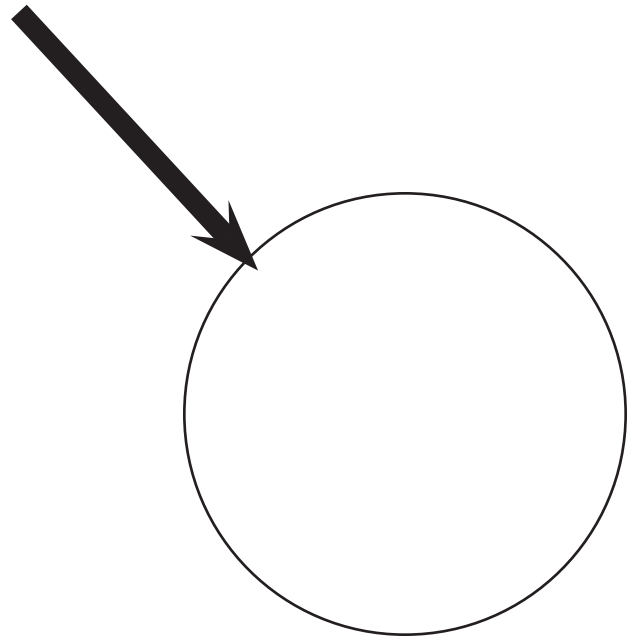
**A1477 : BGA 38 x 38 (1.49 x 1.49)**



**A1478 : BGA 40 x 40 (1.57 x 1.57)**



**American Hakko can make custom nozzles if your surface mount component can fit inside this circle.**

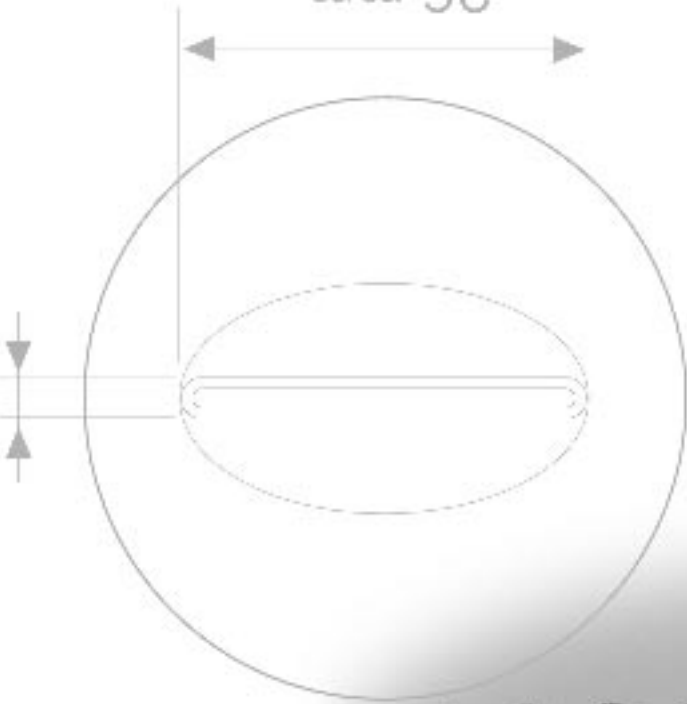


**To order a custom nozzle, provide American Hakko Products with any one of the following:**

- **A sample of the component**
- **The manufacturer's component drawing**
- **Form "850/852 Custom Nozzle Specification Sheet" (AHP 18).**

**The form can be obtained by calling Hakko Customer Support at 1-800-88-HAKKO (42556).**

26 mm  
(1.02)



Ø2.5 mm I.D.  
(0.10)



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Toll Free: (800) 88-HAKKO (42556) • Customer Service: (661) 294-0090 • Fax: (661) 294-0096  
[HakkoUSA.com](http://HakkoUSA.com)

