wakefield-vette

# BOARD LEVEL POWER SEMICONDUCTOR HEAT SINKS



## 647 SERIES

HIGH-PERFORMANCE HEAT SINKS FOR VERTICAL BOARD MOUNTING

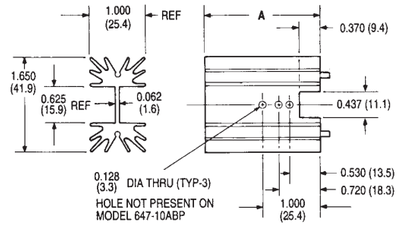
TO-220

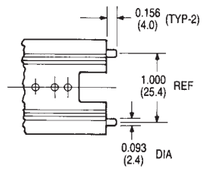
Wave-solderable pins on 1 in. centers for vertical mounting of larger devices on printed circuit boards. Maximum semiconductor package width: 0.625 (15.9). Refer to the Accessory Products section for thermal interface materials, 126 Series silicone-free thermal compounds, and other accessories products.

| Standard P/N | Height Above PC Board "A" in. (mm) | Maximum Footprint in. (mm) | Thermal Performance at Typical Load | | Weight lbs. (grams) |
|---|---|---|---|---|---|
| | | | Natural Convection | Forced Convection | |
| 647-1OABEP | 1.000 (25.4) | 1.650 (41.9) x 1.000 (25.4) | 42°C @ 6W | 3.8°C/W @ 200 LFM | 0.055 (24.95) |
| 647-15ABEP | 1.500 (38.1) | 1.650 (41.9) x 1.000 (25.4) | 37°C @ 6W | 3.5°C/W @ 200 LFM | 0.075 (34.02) |
| 647-175ABEP | 1.750 (44.5) | 1.650 (41.9) x 1.000 (25.4) | 34°C @ 6W | 3.3°C/W @ 200 LFM | 0.090 (40.82) |
| 647-20ABEP | 2.000 (50.8) | 1.650 (41.9) x 1.000 (25.4) | 31°C @ 6W | 3.1°C/W @ 200 LFM | 0.104 (47.17) |
| 647-25ABEP | 2.500 (63.5) | 1.650 (41.9) x 1.000 (25.4) | 25°C @ 6W | 2.8°C/W @ 200 LFM | 0.125 (56.70) |

**Material:** Aluminum, Black Anodized

### MECHANICAL DIMENSIONS

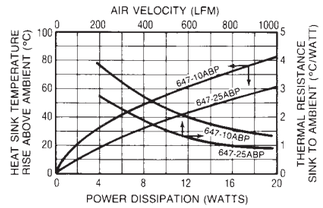



647 SERIES
*(EXTRUSION PROFILE 5195)*

**Dimensions: in. (mm)**

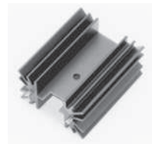
### NATURAL AND FORCED CONVECTION CHARACTERISTICS




## 657 SERIES

HIGH-PERFORMANCE HEAT SINKS FOR VERTICAL BOARD MOUNTING

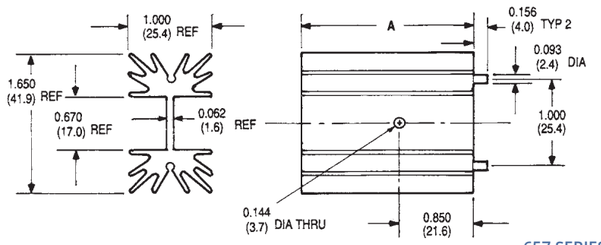
TO-218; TO-247; TO-220



| Standard P/N | Height Above PC Board "A" in. (mm) | Maximum Footprint in. (mm) | Thermal Performance at Typical Load | | Weight lbs. (grams) |
|---|---|---|---|---|---|
| | | | Natural Convection | Forced Convection | |
| 657-10ABEP | 1.000 (25.4) | 1.650 (41.9) x 1.000 (25.4) | 41°C @ 6W | 3.7°C/W @ 200 LFM | 0.0515 (23.36) |
| 657-15ABEP | 1.500 (38.1) | 1.650 (41.9) x 1.000 (25.4) | 38°C @ 6W | 3.3°C/W @ 200 LFM | 0.0760 (34.60) |
| 657-20ABEP | 2.000 (50.8) | 1.650 (41.9) x 1.000 (25.4) | 32°C @ 6W | 2.9°C/W @ 200 LFM | 0.1030 (47.00) |
| 657-25ABEP | 2.500 (63.5) | 1.650 (41.9) x 1.000 (25.4) | 25°C @ 6W | 2.7°C/W @ 200 LFM | 0.1250 (57.00) |

**Wave-solderable pins. Material:** Aluminum, Black Anodized

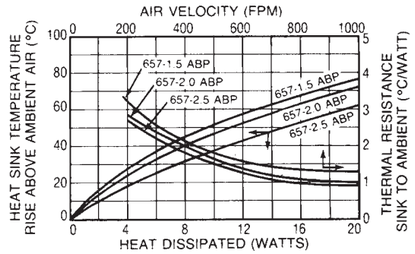
### MECHANICAL DIMENSIONS




**Dimensions: in. (mm)**

657 SERIES
*(EXTRUSION PROFILE 6533)*

### NATURAL AND FORCED CONVECTION CHARACTERISTICS





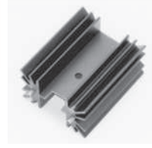



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## 657 SERIES

HIGH-PERFORMANCE NOTCHED HEAT SINKS FOR VERTICAL BOARD MOUNTING

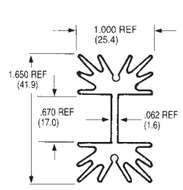
TO-218; TO-247; TO-220

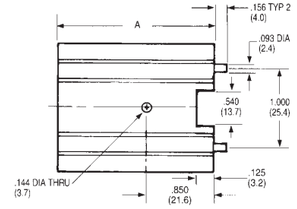


| Standard P/N | Height Above PC Board "A" in. (mm) | Maximum Footprint in. (mm) | Thermal Performance at Typical Load | |
|---|---|---|---|---|
| | | | Natural Convection | Forced Convection |
| 657-10ABEPN | 1.000 (25.4) | 1.650 (41.9) x 1.000 (25.4) | 41°C @ 6W | 3.7°C/W @ 200 LFM |
| 657-15ABEPN | 1.500 (38.1) | 1.650 (41.9) x 1.000 (25.4) | 38°C @ 6W | 3.3°C/W @ 200 LFM |
| 657-20ABEPN | 2.000 (50.8) | 1.650 (41.9) x 1.000 (25.4) | 32°C @ 6W | 2.9°C/W @ 200 LFM |
| 657-25ABEPN | 2.500 (63.5) | 1.650 (41.9) x 1.000 (25.4) | 25°C @ 6W | 2.7°C/W @ 200 LFM |

**Wave-solderable pins. Material:** Aluminum, Black Anodized

### MECHANICAL DIMENSIONS

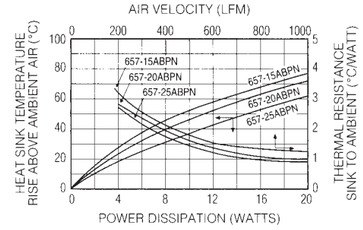



**Dimensions: in. (mm)**

657 SERIES
*(EXTRUSION PROFILE 6533)*

### NATURAL AND FORCED CONVECTION CHARACTERISTICS






## 657 SERIES

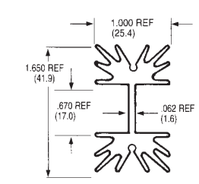
HIGH-PERFORMANCE HEAT SINKS WITH SPEEDCLIPS™ FOR VERTICAL BOARD MOUNTING

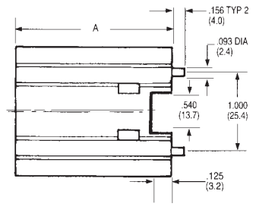
TO-218; TO-247; TO-220

| Standard P/N | Height Above PC Board "A" in. (mm) | Maximum Footprint in. (mm) | Thermal Performance at Typical Load | |
|---|---|---|---|---|
| | | | Natural Convection | Forced Convection |
| 657-10ABEPSC | 1.000 (25.4) | 1.650 (41.9) x 1.000 (25.4) | 41°C @ 6W | 3.7°C/W @ 200 LFM |
| 657-15ABEPSC | 1.500 (38.1) | 1.650 (41.9) x 1.000 (25.4) | 38°C @ 6W | 3.3°C/W @ 200 LFM |
| 657-20ABEPSC | 2.000 (50.8) | 1.650 (41.9) x 1.000 (25.4) | 32°C @ 6W | 2.9°C/W @ 200 LFM |
| 657-25ABEPSC | 2.500 (63.5) | 1.650 (41.9) x 1.000 (25.4) | 25°C @ 6W | 2.7°C/W @ 200 LFM |

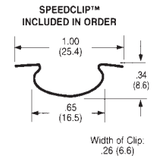
**Wave-solderable pins. Material:** Aluminum, Black Anodized

### MECHANICAL DIMENSIONS




**Dimensions: in. (mm)**




657 SERIES
*(EXTRUSION PROFILE 6533)*

### NATURAL AND FORCED CONVECTION CHARACTERISTICS

