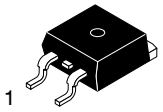
# PNP Silicon Epitaxial Transistor

# KSB834W




1. Base
2. Collector
3. Emitter

**D²PAK−3 (TO−263, 3−LEAD)**
**CASE 418AJ**

### Features

- Complement to KSD880W
- This is a Pb−Free Device

### Applications

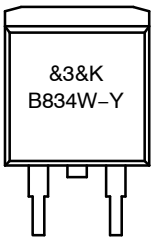
- Low Frequency Power Amplifier

### ABSOLUTE MAXIMUM RATINGS ($T_C$ = 25°C unless otherwise noted)

| Symbol | Parameter | Ratings | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector−Base Voltage | −60 | V |
| $V_{CEO}$ | Collector−Emitter Voltage | −60 | V |
| $V_{EBO}$ | Emitter−Base Voltage | −7 | V |
| $I_C$ | Collector Current | −3 | A |
| $I_B$ | Base Current | −0.5 | A |
| $P_C$ | Collector Dissipation ($T_C$ = 25°C) | 30 | W |
| $P_C$ | Collector Dissipation ($T_A$ = 25°C) | 1.5 | W |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | −55 ~ 150 | °C |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### MARKING DIAGRAM




| | |
|---|---|
| &3 | = Date Code Format |
| &K | = Lot Run Traceability Code |
| B834W−Y | = Specific Device Code |

### ORDERING INFORMATION

| Device | Package | Shipping† |
|---|---|---|
| KSB834WYTM | D2PAK−3 (Pb−Free) | 800 Units / Tape & Reel |

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

**ELECTRICAL CHARACTERISTICS** ($T_C$ = 25°C unless otherwise noted)

| Symbol | Characteristic | Test Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $I_{CBO}$ | Collector Cut−off Current | $V_{CB}$ = −60 V, $I_E$ = 0 | | | −100 | μA |
| $I_{EBO}$ | Emitter Cut−off Current | $V_{EB}$ = −7 V, $I_C$ = 0 | | | −100 | μA |
| $BV_{CEO}$ | Collector−Emitter Breakdown Voltage | $I_C$ = −50 mA, $I_B$ = 0 | −60 | | | V |
| $h_{FE1}$<br>$h_{FE2}$ | DC Current Gain | $V_{CE}$ = −5 V, $I_C$ = −0.5 A<br>$V_{CE}$ = −5 V, $I_C$ = −3 A | 60<br>20 | | 200 | |
| $V_{CE}$(sat) | Collector−Emitter Saturation Voltage | $I_C$ = −3 A, $I_B$ = −0.3 A | | −0.5 | −1 | V |
| $V_{BE}$(on) | Base−Emitter On Voltage | $V_{CE}$ = −5 V, $I_C$ = −0.5 A | | −0.7 | −1 | V |
| $f_T$ | Current Gain Bandwidth Product | $V_{CE}$ = −5 V, $I_C$ = −0.5 A | | 9 | | MHz |
| $C_{cb}$ | Collector Output Capacitance | $V_{CB}$ = −10 V, $I_E$ = 0, f = 1 MHz | | 150 | | pF |
| $t_{ON}$ | Turn On Time | $V_{CC}$ = −30 V, $I_C$ = −1 A, $I_{B1}$ = −$I_{B2}$ = −0.2 A, $R_L$ = 30 Ω | | 0.4 | | μs |
| $t_{STG}$ | Storage Time | | | 1.7 | | μs |
| $t_F$ | Fall Time | | | 0.5 | | μs |

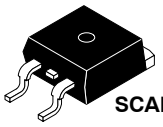
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

**$h_{FE}$ CLASSIFICATION**

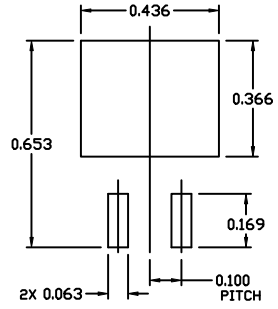
| Classification | O | Y |
|---|---|---|
| $h_{FE1}$ | 60 ~ 120 | 100 ~ 200 |

# D²PAK–3 (TO–263, 3–LEAD)
CASE 418AJ
ISSUE F

DATE 11 MAR 2021



**SCALE 1:1**



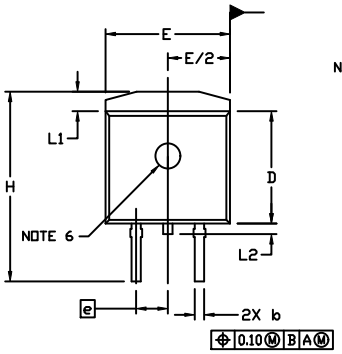

RECOMMENDED
MOUNTING FOOTPRINT

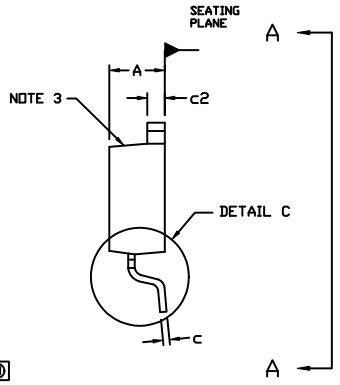
* For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

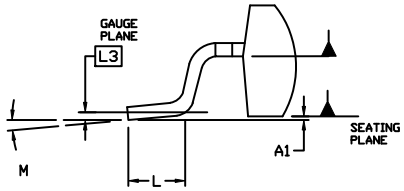
NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2009.
2. CONTROLLING DIMENSION: INCHES
3. CHAMFER OPTIONAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH. MOLD FLASH SHALL NOT EXCEED 0.005 PER SIDE. THESE DIMENSIONS ARE MEASURED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY AT DATUM H.
5. THERMAL PAD CONTOUR IS OPTIONAL WITHIN DIMENSIONS E, L1, D1, AND E1.
6. OPTIONAL MOLD FEATURE.
7. ①, ② ... OPTIONAL CONSTRUCTION FEATURE CALL OUTS.

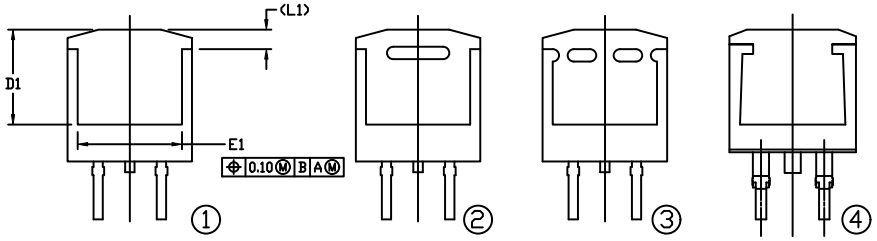
| | INCHES | | MILLIMETERS | |
|---|---|---|---|---|
| DIM | MIN. | MAX. | MIN. | MAX. |
| A | 0.160 | 0.190 | 4.06 | 4.83 |
| A1 | 0.000 | 0.010 | 0.00 | 0.25 |
| b | 0.020 | 0.039 | 0.51 | 0.99 |
| c | 0.012 | 0.029 | 0.30 | 0.74 |
| c2 | 0.045 | 0.065 | 1.14 | 1.65 |
| D | 0.330 | 0.380 | 8.38 | 9.65 |
| D1 | 0.260 | --- | 6.60 | --- |
| E | 0.380 | 0.420 | 9.65 | 10.67 |
| E1 | 0.245 | --- | 6.22 | --- |
| e | 0.100 BSC | | 2.54 BSC | |
| H | 0.575 | 0.625 | 14.60 | 15.88 |
| L | 0.070 | 0.110 | 1.78 | 2.79 |
| L1 | --- | 0.066 | --- | 1.68 |
| L2 | --- | 0.070 | --- | 1.78 |
| L3 | 0.010 BSC | | 0.25 BSC | |
| M | 0° | 8° | 0° | 8° |



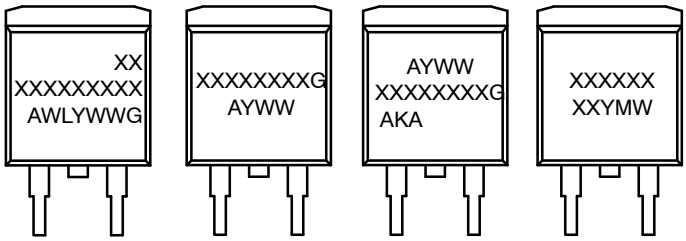

DETAIL C
TIP LEADFORM
ROTATED 90° CW




VIEW A–A

VIEW A–A
OPTIONAL CONSTRUCTIONS

## GENERIC MARKING DIAGRAMS*




**IC** **Standard** **Rectifier** **SSG**

XXXXXX = Specific Device Code
A = Assembly Location
WL = Wafer Lot
Y = Year
WW = Work Week
W = Week Code (SSG)
M = Month Code (SSG)
G = Pb–Free Package
AKA = Polarity Indicator

*This information is generic. Please refer to device data sheet for actual part marking. Pb–Free indicator, “G” or microdot “ ▪”, may or may not be present. Some products may not follow the Generic Marking.

| | | |
|---|---|---|
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| **DESCRIPTION:** | **D²PAK–3 (TO–263, 3–LEAD)** | **PAGE 1 OF 1** |

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