

2SD2115(L)/(S)

Silicon NPN Epitaxial Planar

HITACHI

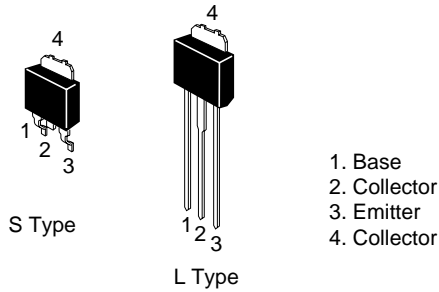
ADE-208-924 (Z)
1st. Edition
Sep. 2000

Application

Low frequency power amplifier

Outline

DPAK



Absolute Maximum Ratings (Ta = 25°C)

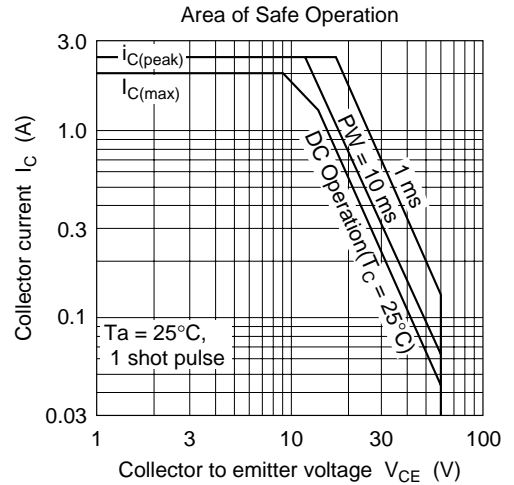
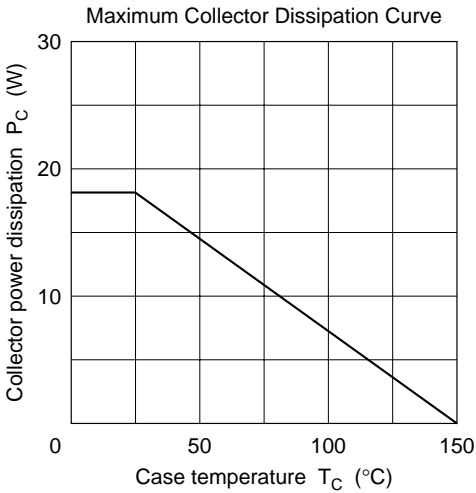
| Item | Symbol | Rating | Unit |
|------------------------------|---------------|-------------|------|
| Collector to base voltage | V_{CBO} | 150 | V |
| Collector to emitter voltage | V_{CEO} | 60 | V |
| Emitter to base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 2 | A |
| Collector peak current | $I_{C(peak)}$ | 2.5 | A |
| Collector power dissipation | P_C^{*1} | 18 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

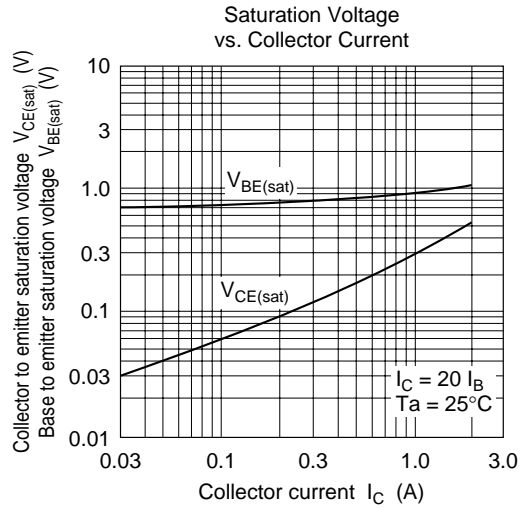
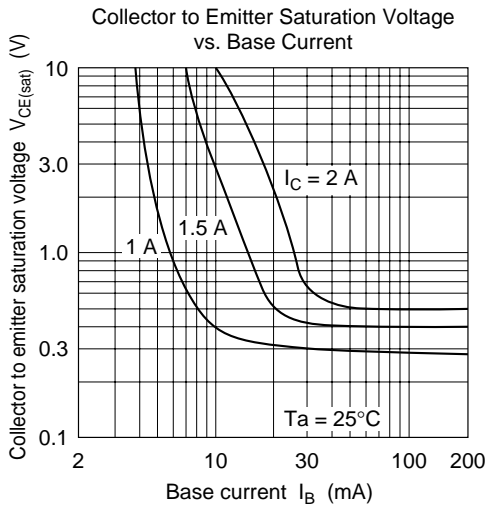
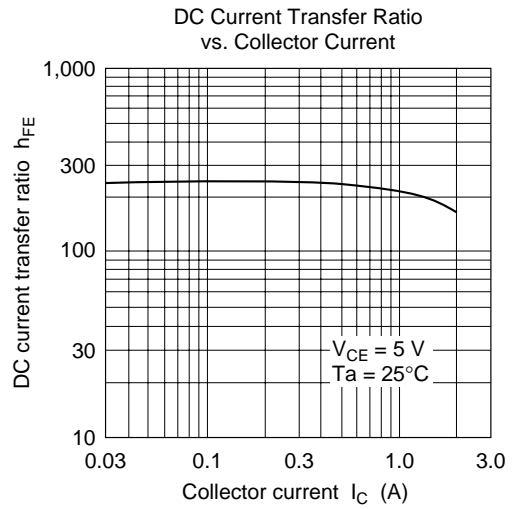
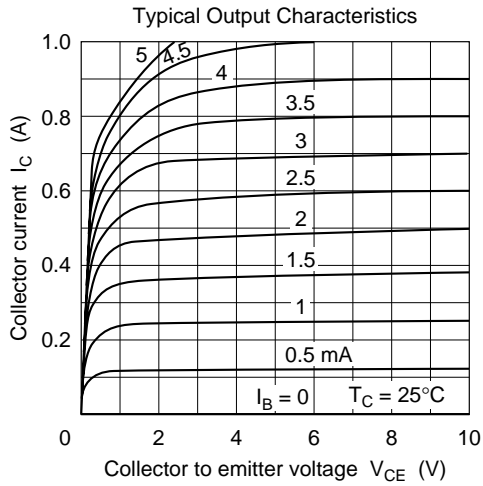
Note: 1. Value at $T_C = 25^\circ\text{C}$.

Electrical Characteristics (Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|-----------------------------------------|---------------|-----|-----|-----|---------------|---------------------------------------------------------|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 150 | — | — | V | $I_C = 1 \text{ mA}, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | 60 | — | — | V | $I_C = 10 \text{ mA}, R_{BE} = \infty$ |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | 5 | — | — | V | $I_E = 1 \text{ mA}, I_C = 0$ |
| Collector cutoff current | I_{CBO} | — | — | 10 | μA | $V_{CB} = 100 \text{ V}, I_E = 0$ |
| DC current transfer ratio | h_{FE} | 150 | — | — | | $V_{CE} = 5 \text{ V}, I_C = 1.5 \text{ A}^{*1}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | 0.8 | V | $I_C = 1.5 \text{ A}, I_B = 0.05 \text{ A}^{*1}$ |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | — | — | 1.3 | V | $I_C = 1.5 \text{ A}, I_B = 0.05 \text{ A}^{*1}$ |
| Fall time | t_f | — | — | 0.6 | μs | $I_C = 1.5 \text{ A}, I_{B1} = -I_{B2} = 50 \text{ mA}$ |

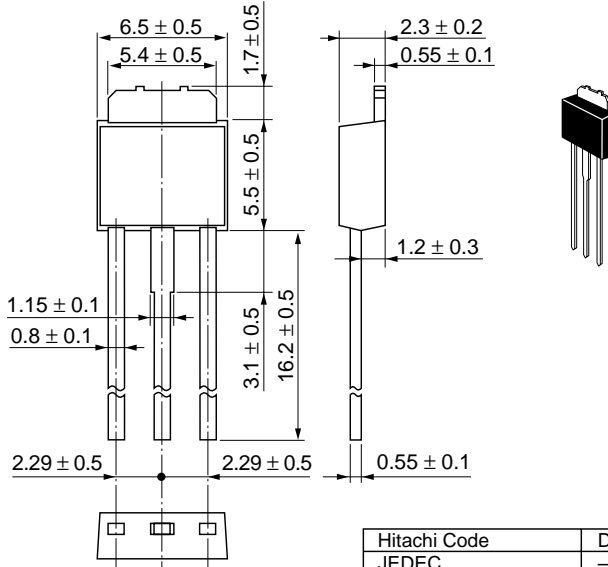
Note: 1. Pulse test.





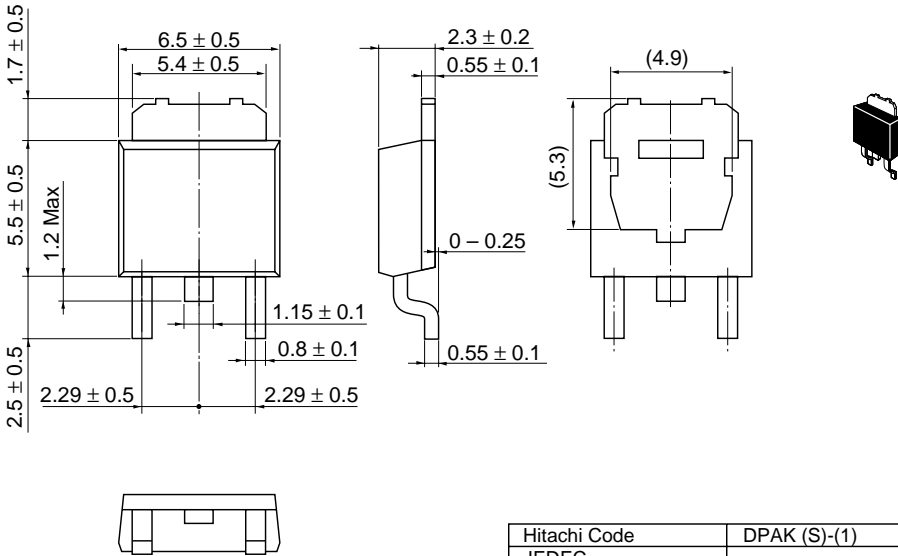
Package Dimensions

Unit: mm



| | |
|------------------------|--------------|
| Hitachi Code | DPAK (L)-(1) |
| JEDEC | — |
| EIAJ | Conforms |
| Mass (reference value) | 0.42 g |

Unit: mm



| | |
|------------------------|--------------|
| Hitachi Code | DPAK (S)-(1) |
| JEDEC | — |
| EIAJ | Conforms |
| Mass (reference value) | 0.28 g |

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