

2SA743, 2SA743A

Silicon PNP Epitaxial

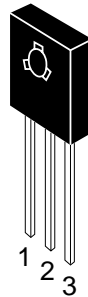
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Application

Low frequency power amplifier complementary pair with 2SC1212 and 2SC1212A

Outline

TO-126 MOD



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

| Item | Symbol | Ratings | | Unit |
|------------------------------|------------|-------------|-------------|------|
| | | 2SA743 | 2SA743A | |
| Collector to base voltage | V_{CBO} | -50 | -80 | V |
| Collector to emitter voltage | V_{CEO} | -50 | -80 | V |
| Emitter to base voltage | V_{EBO} | -4 | -4 | V |
| Collector current | I_C | -1 | -1 | A |
| Collector power dissipation | P_C | 0.75 | 0.75 | W |
| | P_C^{*1} | 8 | 8 | |
| Junction temperature | T_j | 150 | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | -55 to +150 | °C |

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

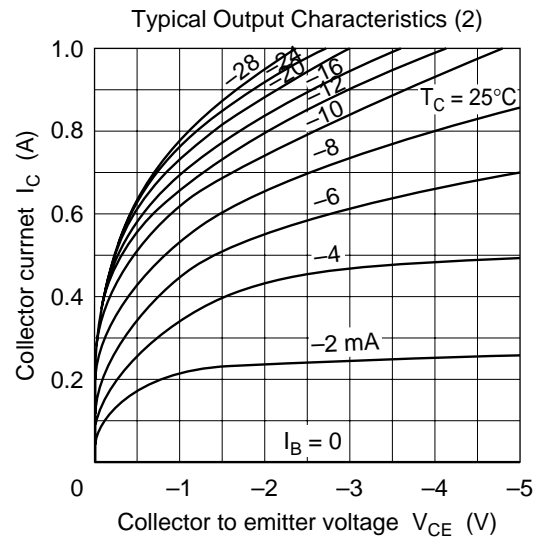
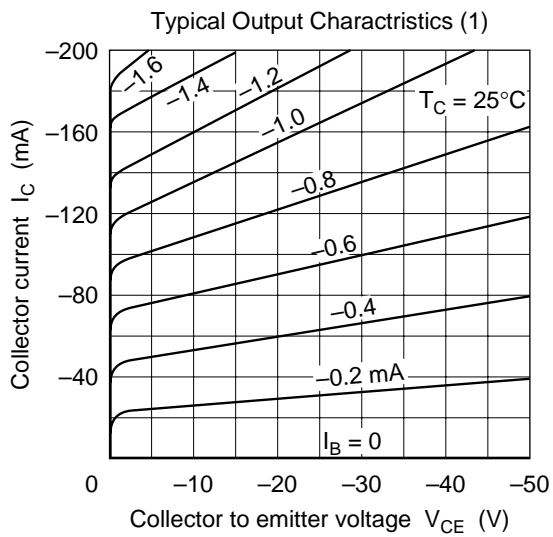
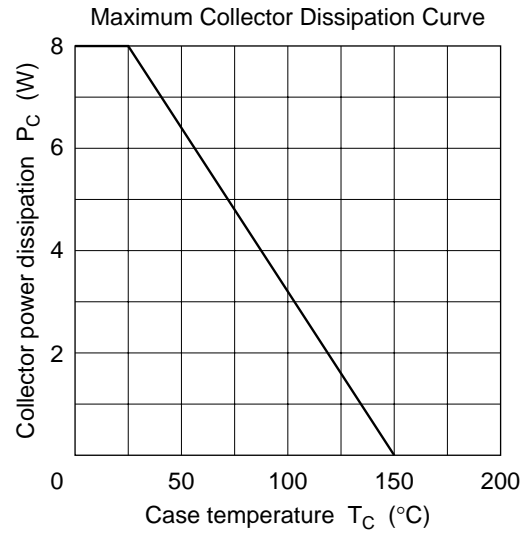
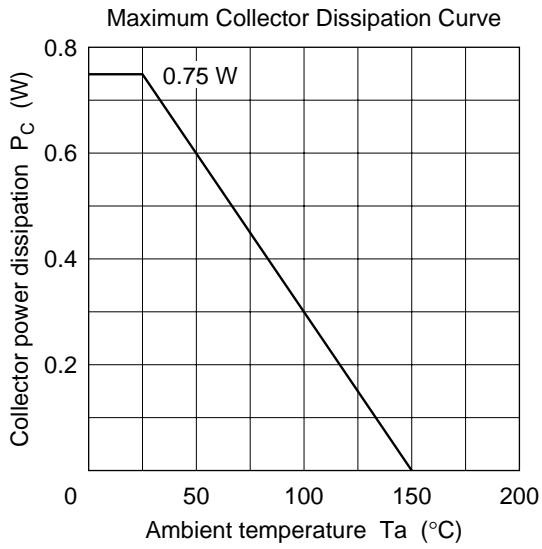
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Electrical Characteristics (T_a = 25°C)

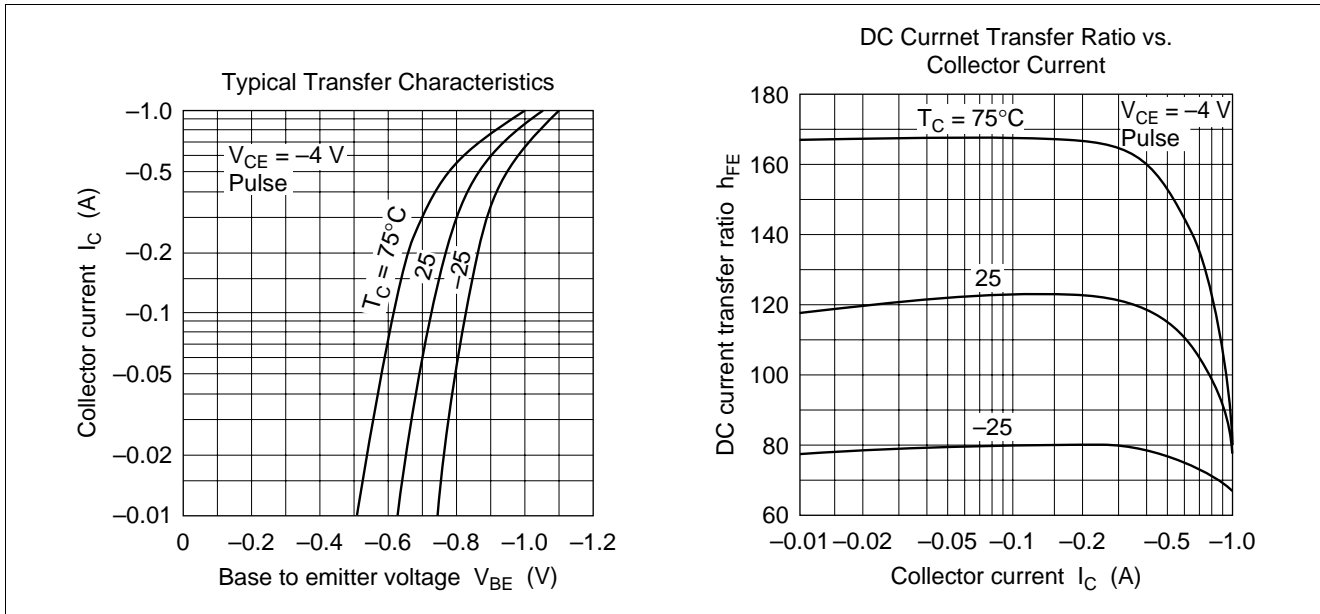
| Item | Symbol | 2SA743 | | | 2SA743A | | | Unit | Test conditions |
|---|----------------------|--------|-------|------|---------|-------|------|------|---|
| | | Min | Typ | Max | Min | Typ | Max | | |
| Collector to base breakdown voltage | V _{(BR)CBO} | -50 | — | — | -80 | — | — | V | I _C = -1 mA, I _E = 0 |
| Collector to emitter breakdown voltage | V _{(BR)CEO} | -50 | — | — | -80 | — | — | V | I _C = -10 mA, R _{BE} = ∞ |
| Emitter to base breakdown voltage | V _{(BR)EBO} | -4 | — | — | -4 | — | — | V | I _E = -1 mA, I _C = 0 |
| Collector cutoff current | I _{CER} | — | — | -20 | — | — | — | μA | V _{CE} = -50 V, R _{BE} = 1 kΩ |
| | I _{CER} | — | — | — | — | — | -20 | | V _{CE} = -80 V, R _{BE} = 1 kΩ |
| DC current transfer ratio | h _{FE} *1 | 60 | 120 | 200 | 60 | 120 | 200 | | V _{CE} = -4 V, I _C = -50 mA |
| | h _{FE} | 20 | — | — | 20 | — | — | | V _{CE} = -4 V, I _C = -1 A (pulse) |
| Base to emitter voltage | V _{BE} | — | -0.65 | -1.0 | — | -0.65 | 1.0 | V | V _{CE} = -4 V, I _C = -50 mA |
| Collector to emitter saturation voltage | V _{CE(sat)} | — | -0.75 | -1.5 | — | -0.75 | -1.5 | V | I _C = -1 A, I _B = -0.1 A |
| Gain bandwidth product | f _T | — | 120 | — | — | 120 | — | MHz | V _{CE} = -4 V, I _C = -30 mA |

Note: 1. The 2SA743 and 2SA743A is grouped by h_{FE} as follows.

| B | C |
|-----------|------------|
| 60 to 120 | 100 to 200 |

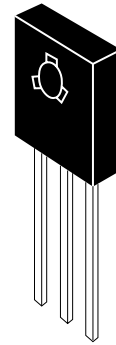
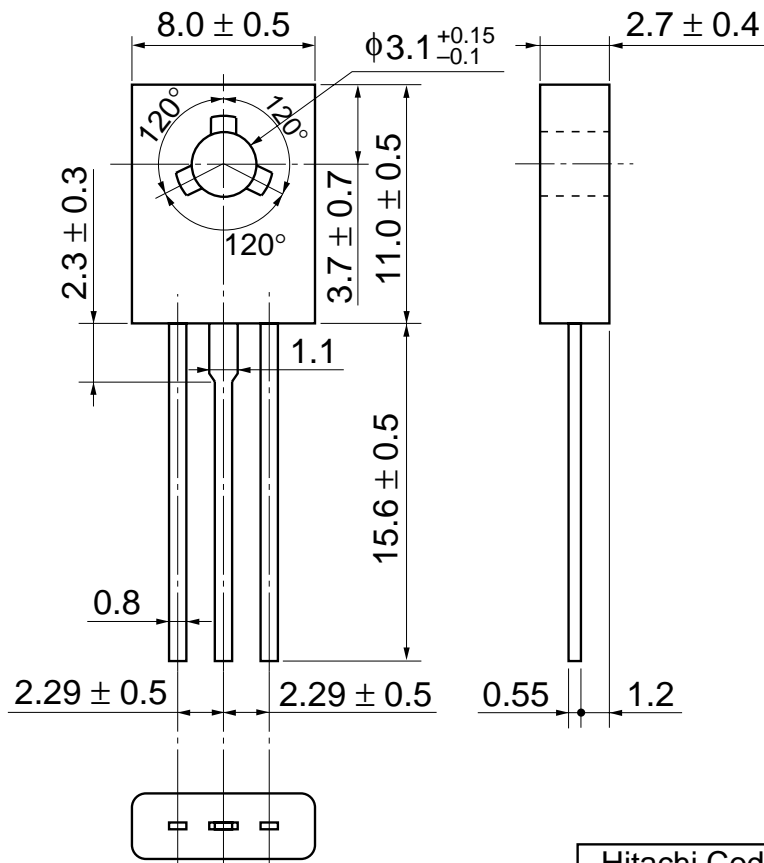


2SA743, 2SA743A



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Unit: mm



| | |
|--------------------------|------------|
| Hitachi Code | TO-126 Mod |
| JEDEC | — |
| EIAJ | — |
| Weight (reference value) | 0.67 g |

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