

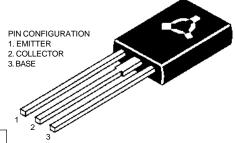


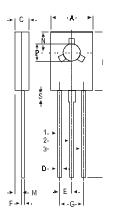
## TO-126 (SOT-32) Plastic Package

**CSA715** 

# CSA715 PNP PLASTIC POWER TRANSISTOR

Complementary to CSC1162 Low frequency Power Amplifier





| DIM | MIN.      | MAX.          |  |
|-----|-----------|---------------|--|
| A   | 7.4       | 7.8           |  |
| Ð   | 10.5      | 10.8          |  |
| С   | 2.4       | 2.7           |  |
| D   | 0.7       | 0.9           |  |
| Е   | 2.25 TYP. |               |  |
| F   | 0.49      | 0.75          |  |
| G   | 4.5       | TYP.          |  |
| L   | 15.7      | TYP.          |  |
| M   | 1.27      | TYP.          |  |
| N   | 3.75      | TY <b>P</b> . |  |
| P   | 3.0       | 3.2           |  |
| \$  | 2.5       | TYP.          |  |

ALL DIMENSIONS IN MM

#### ABSOLUTE MAXIMUM RATINGS

| Collector-base voltage (open emitter)             | $V_{CBO}$     | max. | 35 V   |
|---|---------------|------|--------|
| Collector-emitter voltage (open base)             | $V_{C\!E\!O}$ | max. | 35 V   |
| Collector current                                 | $I_C$         | max. | 2.5 A  |
| Total power dissipation up to $T_C = 25^{\circ}C$ | $P_{tot}$     | max. | 10 W   |
| Junction temperature                              | $T_{i}$       | max. | 150 °C |
| Collector-emitter saturation voltage              | J             |      |        |
| $I_C = 2 A$ ; $I_B = 0.2 A$                       | $V_{CEsat}$   | max. | 1.0 V  |
| D.C. current gain                                 |               |      |        |
| $I_C = 0.5 \text{ A}; V_{CE} = 2 \text{ V}$       | $h_{\!F\!E}$  | min. | 60     |
|   |               | max. | 320    |
|   | 10 B          |      |        |

### **RATINGS** (at $T_A$ =25°C unless otherwise specified)

| Limiting values                       |               |      |       |
|---------------------------------------|---------------|------|-------|
| Collector-base voltage (open emitter) | $V_{CBO}$     | max. | 35 V  |
| Collector-emitter voltage (open base) | $V_{C\!E\!O}$ | max. | 35 V  |
| Emitter-base voltage (open collector) | $V_{EBO}$     | max. | 5.0 V |
| Collector current                     | $I_C$         | max. | 2.5 A |

| Collector current (Peak value)                    | $I_C$         | max.   | 3          | $\boldsymbol{A}$ |
|---|---------------|--------|------------|------------------|
| Total power dissipation up to $T_A = 25^{\circ}C$ | $P_{tot}$     | max.   | 0.75       | W                |
| Total power dissipation up to $T_C = 25^{\circ}C$ | $P_{tot}$     | max.   | 10         | W                |
| Junction temperature                              | $T_{j}$       | max.   | <i>150</i> | ${}^{o}C$        |
| Storage temperature                               | $T_{stg}$     | -65 to | +150       | °C               |
| CHARACTERISTICS                                   |               |        |            |                  |
| $T_{amb} = 25$ °C unless otherwise specified      |               |        |            |                  |
| Collector cutoff current                          |               |        |            |                  |
| $I_E = 0$ ; $V_{CB} = 35 V$                       | $I_{CBO}$     | max.   | 20         | $\mu A$          |
| Breakdown voltages                                |               |        |            |                  |
| $I_C = 10 \text{ mA}; I_B = 0$                    | $V_{C\!E\!O}$ | min.   | 35         | V                |
| $I_C = 1 \text{ mA}; I_E = 0$                     | $V_{C\!BO}$   | min.   | 35         | V                |
| $I_E = 1 \text{ mA}; I_C = 0$                     | $V_{EBO}$     | min.   | 5          | V                |
| Saturation voltage                                |               |        |            |                  |
| $I_C = 2 A$ ; $I_B = 0.2 A$                       | $V_{CEsat}$   | max.   | 1.0        | V                |
| Base-emitter on voltage                           |               |        |            |                  |
| $I_C = 1.5 A; V_{CE} = 2 V$                       | $V_{BE(on)}$  | max.   | 1.5        | V                |
| D.C. current gain                                 | 22(01)        |        |            |                  |
| $I_C = 0.5 \text{ A}; V_{CF} = 2 V^{**}$          | $h_{\!F\!E}$  | min.   | 60         |                  |
| , 62  | 12            | max.   | 320        |                  |
| $I_C = 1.5 A; V_{CE} = 2 V (Pulse)$               | $h_{FE}$      | min.   | 20         |                  |
| Transition frequency                              | 11            |        |            |                  |
| $I_C = 0.2 \text{ A}; V_{CE} = 2 \text{ V}$       | $f_T$         | typ.   | 160        | MHz              |

<sup>\*\*</sup> hfe classification: B: 60-120 C: 100-200 D: 160-320

### **Customer Notes**

#### **Disclaimer**

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