



BC856AS

Preliminary

DUAL TRANSISTOR

DUAL PNP SURFACE MOUNT SMALL SIGNAL TRANSISTOR

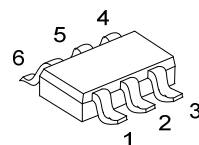
DESCRIPTION

The UTC **BC856AS** is a dual PNP surface mount small signal transistor, it uses UTC's advanced technology to provide customers with high DC current gain, etc.

The UTC **BC856AS** is suitable for switching and AF amplifier applications.

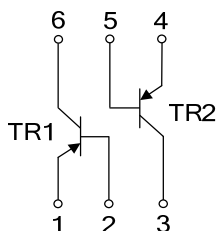
FEATURES

* High DC current gain



SOT-363

EQUIVALENT CIRCUIT



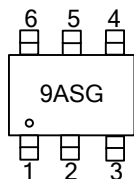
ORDERING INFORMATION

| Ordering Number | Package | Pin Assignment | | | | | | Packing |
|-----------------|---------|----------------|----|----|----|----|----|-----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| BC856ASG-AL6-R | SOT-363 | E1 | B1 | C2 | E2 | B2 | C1 | Tape Reel |

Note: Pin Assignment: E: Emitter B: Base C: Collector

| | | |
|--|--|--|
| <p>BC856ASG-AL6-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p> | | <p>(1) R: Tape Reel</p> <p>(2) AL6: SOT-363</p> <p>(3) G: Halogen Free and Lead Free</p> |
|--|--|--|

MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|-----------------------------|-----------|----------|--------------------|
| Collector-Base Voltage | V_{CBO} | -80 | V |
| Collector-Emitter Voltage | V_{CEO} | -65 | V |
| Emitter-Base Voltage | V_{EBO} | -5.0 | V |
| Collector Current | I_C | -100 | mA |
| Peak Collector Current | I_{CM} | -200 | mA |
| Peak Emitter Current | I_{EM} | -200 | mA |
| Power Dissipation | P_D | 200 | mW |
| Operating Temperature Range | T_J | -65~+150 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | -65~+150 | $^{\circ}\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---------------------|---------------|---------|----------------------|
| Junction to Ambient | θ_{JA} | 625 | $^{\circ}\text{C/W}$ |

Note: Device mounted on FR-4 PCB minimum land pad.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|-------------------------------------|------|------|------|---------|
| OFF CHARACTERISTICS | | | | | | |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_B=0$ | -80 | | | V |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=10mA, I_B=0$ | -65 | | | V |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=1\mu A, I_C=0$ | -5 | | | V |
| ON CHARACTERISTICS | | | | | | |
| DC Current Gain | h_{FE} | $V_{CE}=-5.0V, I_C=-2.0mA$ | 125 | 180 | 250 | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=-10mA, I_B=-0.5mA$ | | -75 | -300 | mV |
| | | $I_C=-100mA, I_B=-5.0mA$ | | -250 | -650 | mV |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)}$ | $I_C=-10mA, I_B=-0.5mA$ | | -700 | | mV |
| | | $I_C=-100mA, I_B=-5.0mA$ | | -850 | | mV |
| Base-Emitter Voltage | $V_{BE(ON)}$ | $V_{CE}=-5.0V, I_C=-2.0mA$ | -600 | -650 | -750 | mV |
| | | $V_{CE}=-5.0V, I_C=-10mA$ | | | -820 | mV |
| SMALL SIGNAL CHARACTERISTICS | | | | | | |
| Collector-Cutoff Current | I_{CES} | $V_{CE}=-80V$ | | | -15 | nA |
| | I_{CBO} | $V_{CB}=-30V$ | | | -15 | nA |
| | | $V_{CB}=-30V, T_A=150^{\circ}C$ | | | -4.0 | μA |
| Gain Bandwidth Product | f_T | $V_{CE}=-5.0V, I_C=-10mA, f=100MHz$ | 100 | | | MHz |
| Collector-Base Capacitance | C_{CB} | $V_{CB}=-10V, f=1.0MHz$ | | 3 | | pF |

Note: Short duration pulse test used to minimize self-heating effect.

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.