



MMBTA92

PNP SILICON TRANSISTOR

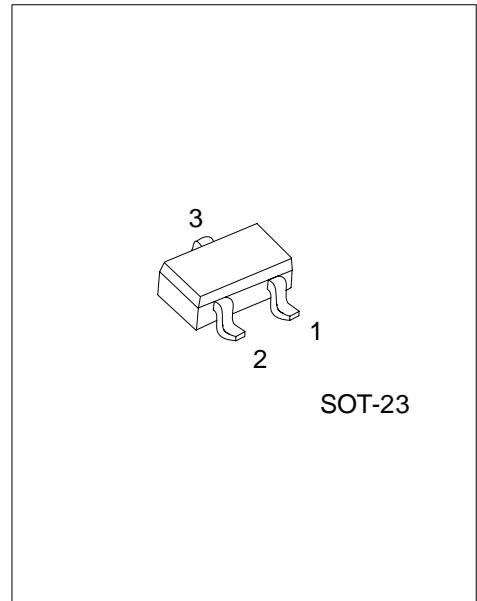
HIGH VOLTAGE PNP TRANSISTOR

DESCRIPTION

The UTC **MMBTA92** are high voltage PNP transistors, designed for telephone signal switching and for high voltage amplifier.

FEATURES

- * High Collector-Emitter voltage: $V_{CE0}=-300V$
- * Collector Dissipation: $P_{C(MAX)}=350mW$



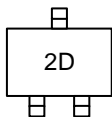
*Pb-free plating product number: MMBTA92L

ORDERING INFORMATION

| Order Number | | Package | Pin Assignment | | | Packing |
|---------------|-------------------|---------|----------------|---|---|-----------|
| Normal | Lead Free Plating | | 1 | 2 | 3 | |
| MMBTA92-AE3-R | MMBTA92L-AE3-R | SOT-23 | E | B | C | Tape Reel |

| | |
|---|--|
| <p>MMBTA92L-AE3-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Plating</p> | <p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p> |
|---|--|

MARKING



■ ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|---------------------------|-----------------|-----------|------------|------|
| Collector-Base Voltage | | V_{CBO} | -300 | V |
| Collector-Emitter Voltage | | V_{CEO} | -300 | V |
| Emitter-Base Voltage | | V_{EBO} | -5 | V |
| Collector Current | | I_C | -500 | mA |
| Collector Dissipation | $T_a=25$ | P_C | 350 | mW |
| | $T_C=25$ | | 1.5 | W |
| | Derate Above 25 | | 12 | mW/ |
| Junction Temperature | | T_J | +150 | |
| Storage Temperature | | T_{STG} | -40 ~ +150 | |

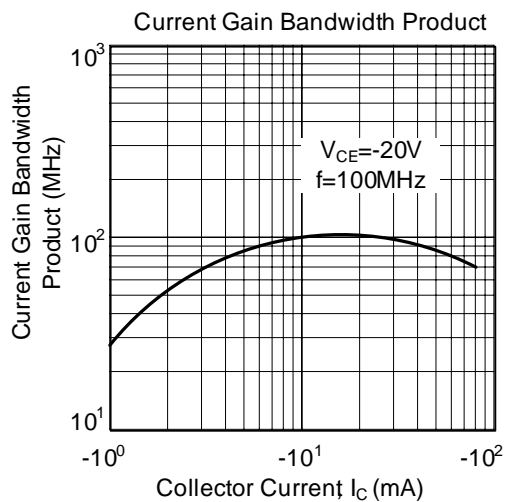
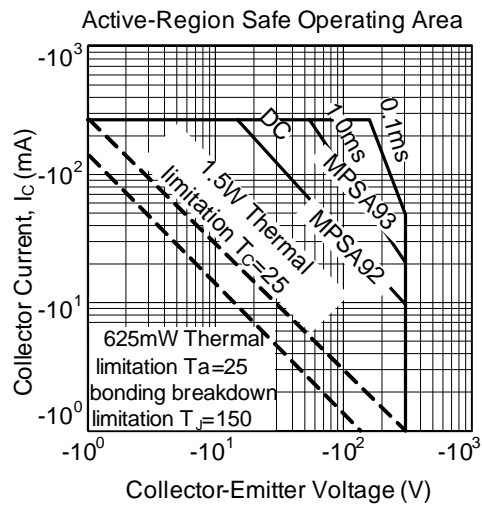
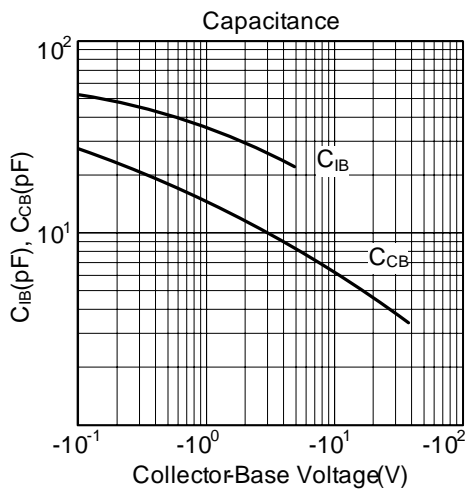
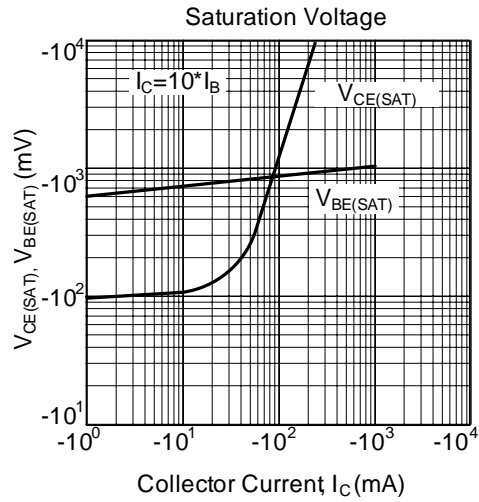
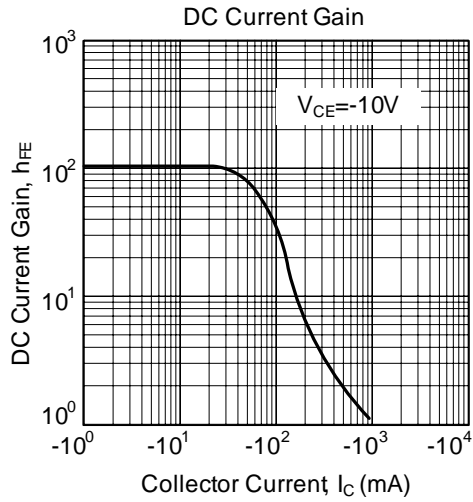
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_J=25$, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|----------------|------------------------------------|------|-----|-------|---------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C=-100\mu A, I_E=0$ | -300 | | | V |
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C=-1mA, I_B=0$ | -300 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E=-100\mu A, I_C=0$ | -5 | | | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-200V, I_E=0$ | | | -0.25 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=-3V, I_C=0$ | | | -0.10 | μA |
| DC Current Gain (Note) | h_{FE} | $V_{CE}=-10V, I_C=-1mA$ | 60 | | | |
| | | $V_{CE}=-10V, I_C=-10mA$ | 80 | | | |
| | | $V_{CE}=-10V, I_C=-30mA$ | 80 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)1}$ | $I_C=-20mA, I_B=-2mA$ | | | -0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)1}$ | $I_C=-20mA, I_B=-2mA$ | | | -0.90 | V |
| Current Gain Bandwidth Product | f_T | $V_{CE}=-20V, I_C=-10mA, f=100MHz$ | 50 | | | MHz |
| Collector Base Capacitance | C_{cb} | $V_{CB}=-20V, I_E=0, f=1MHz$ | | | 6 | pF |

Note: Pulse test: $PW < 300\mu s$, Duty Cycle $< 2\%$, $V_{CE(sat)1} < 200mV$ (Class SIN)

TYPICAL CHARACTERISTICS



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