



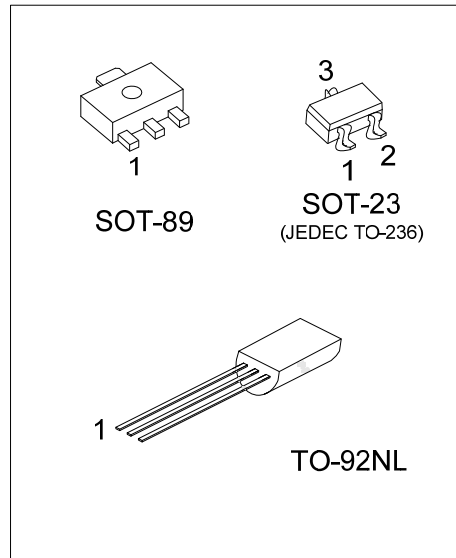
2SC2655

NPN SILICON TRANSISTOR

POWER AMPLIFIER
 APPLICATIONS POWER
 SWITCHING APPLICATIONS

■ FEATURES

- * Low saturation voltage: $V_{CE(SAT)} = 0.5V$ (Max.)
- * High speed switching time: $T_{STG} = 1.0\mu s$ (Typ.)



■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|------------------|------------------|---------|----------------|---|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| 2SC2655G-x-AB3-R | 2SC2655G-x-AB3-R | SOT-89 | B | C | E | Tape Reel |
| 2SC2655G-x-AE3-R | 2SC2655G-x-AE3-R | SOT-23 | B | E | C | Tape Reel |
| 2SC2655L-x-T9N-B | 2SC2655G-x-T9N-B | TO-92NL | E | C | B | Tape Box |
| 2SC2655L-x-T9N-K | 2SC2655G-x-T9N-K | TO-92NL | E | C | B | Bulk |

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

| | |
|---|---|
| <p>2C2655G-x-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p> | <p>(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AB3: SOT-89, AE3: SOT-23, T9N: TO-92NL (3) refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free</p> |
|---|---|

■ MARKING

| SOT-23 | SOT-89 | TO-92NL |
|--|--|--|
| <p>L: Lead Free G: Halogen Free</p> | <p>□□□□ → Date Code 2SC2655 □ → L: Lead Free G: Halogen Free</p> | <p>UTC 2SC2655 □ □□□□</p> <p>L: Lead Free G: Halogen Free □□□□ → Date Code</p> |

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

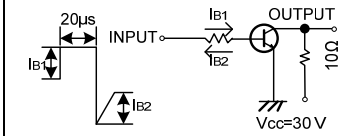
| PARAMETER | | SYMBOL | RATING | UNIT |
|------------------------------------|---------|-----------|------------|------------------|
| Collector-Base Voltage | | V_{CBO} | 50 | V |
| Collector-Emitter Voltage | | V_{CEO} | 50 | V |
| Emitter-Base Voltage | | V_{EBO} | 5 | V |
| Collector Current | | I_C | 2 | A |
| Collector Current (Pulse) (Note 2) | | I_{CP} | 3 | A |
| Base Current | | I_B | 0.5 | A |
| Collector Power Dissipation | SOT-23 | P_C | 350 | mW |
| | SOT-89 | | 500 | |
| | TO-92NL | | 900 | |
| Junction Temperature | | T_J | +150 | $^\circ\text{C}$ |
| Storage Temperature | | T_{STG} | -55 ~ +150 | $^\circ\text{C}$ |

Notes: 1. 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.

2. $P_W \leq 16\text{ms}$, Duty Cycle $\leq 50\%$.

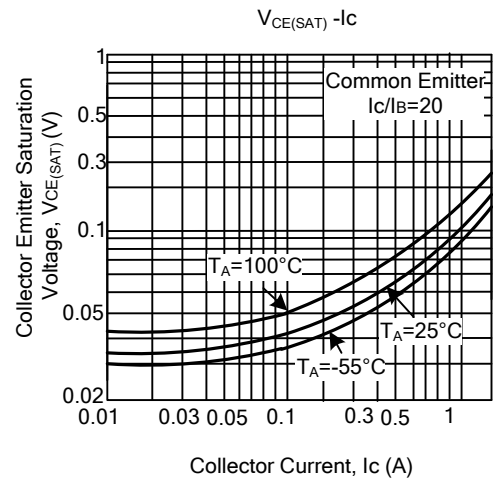
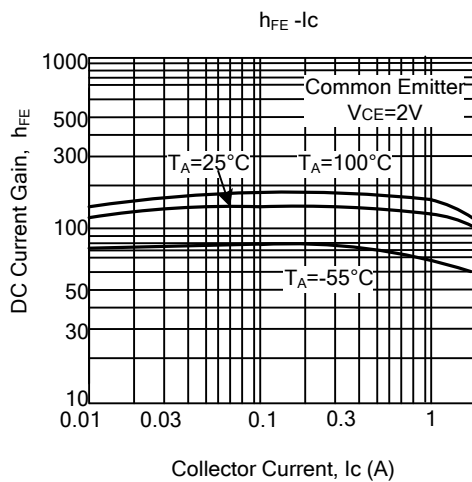
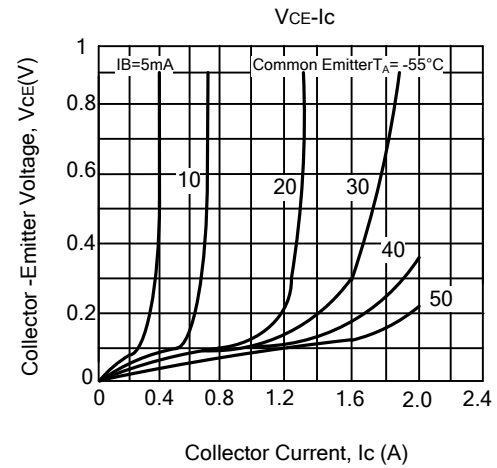
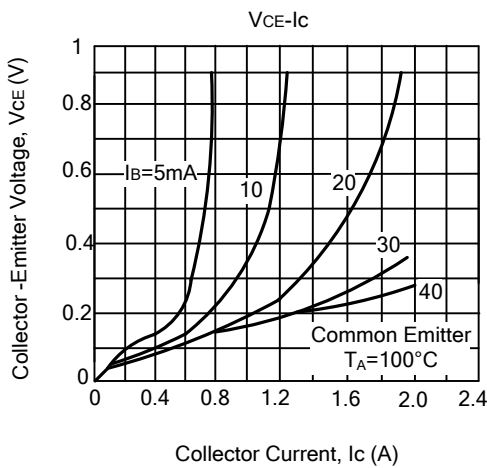
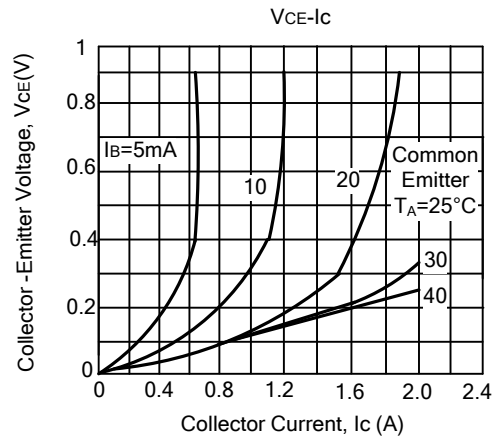
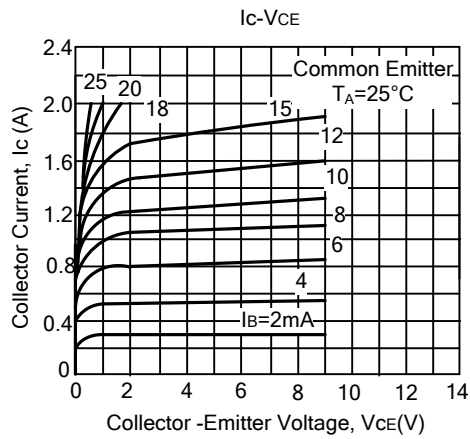
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--|---------------|---|-----|-----|-----|---------------|
| Collector to Base Breakdown Voltage | BV_{CBO} | $I_C=10\mu\text{A}$, $I_E=0$ | 50 | | | V |
| Collector to Emitter Breakdown Voltage | BV_{CEO} | $I_C=10\text{mA}$, $I_B=0$ | 50 | | | V |
| Emitter to Base Breakdown Voltage | BV_{EBO} | $I_E=10\mu\text{A}$, $I_C=0$ | 5 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB}=50\text{V}$, $I_E=0$ | | | 1.0 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=5\text{V}$, $I_C=0$ | | | 1.0 | μA |
| DC Current Gain | h_{FE1} | $V_{CE}=2\text{V}$, $I_C=0.5\text{A}$ | 70 | | 240 | |
| | h_{FE2} | $V_{CE}=2\text{V}$, $I_C=1.5\text{A}$ | 40 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=1\text{A}$, $I_B=0.05\text{A}$ | | | 0.5 | V |
| Base- Emitter Saturation Voltage | $V_{BE(SAT)}$ | $I_C=1\text{A}$, $I_B=0.05\text{A}$ | | | 1.2 | V |
| Transition Frequency | f_T | $V_{CE}=2\text{V}$, $I_C=0.5\text{A}$ | | 100 | | MHz |
| Collector Output Capacitance | C_{OB} | $V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$ | | 30 | | pF |
| Switching Time(Turn-on Time) | t_{ON} |  <p>$I_{B1} = -I_{B2} = 0.05\text{A}$ DUTY CYCLE $\leq 1\%$</p> | | 0.1 | | μs |

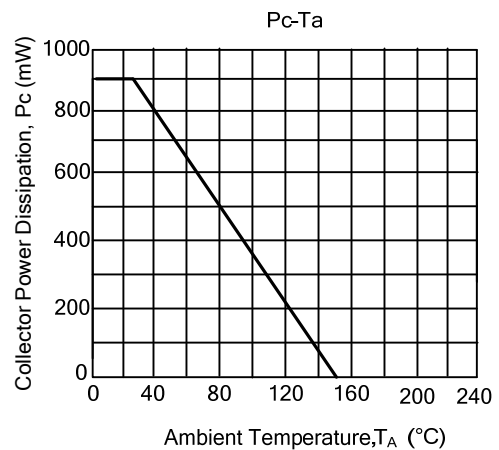
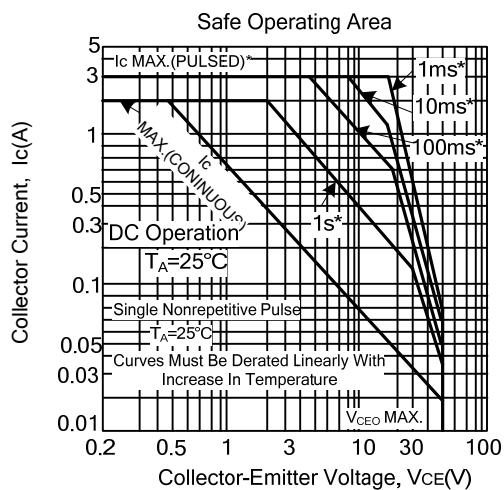
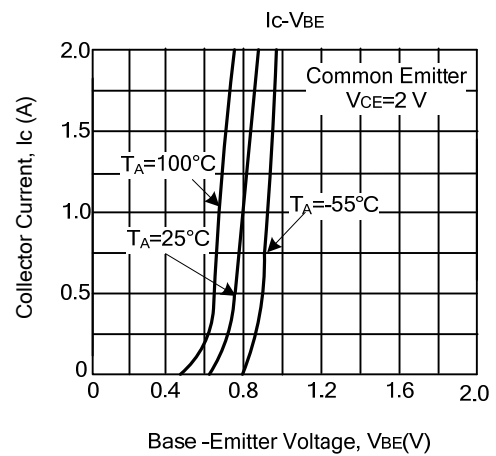
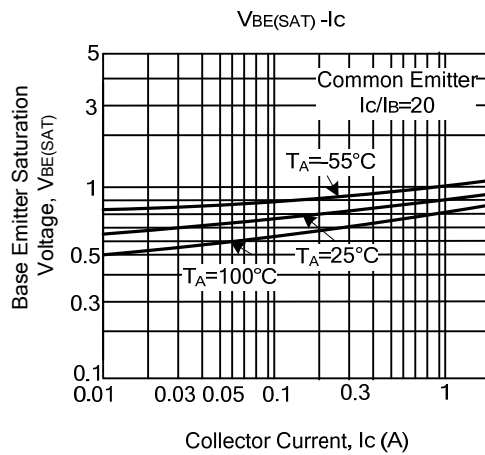
■ CLASSIFICATION OF h_{FE1}

| RANK | O | Y |
|-------|--------|---------|
| RANGE | 70-140 | 120-240 |

TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS (Cont.)



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