



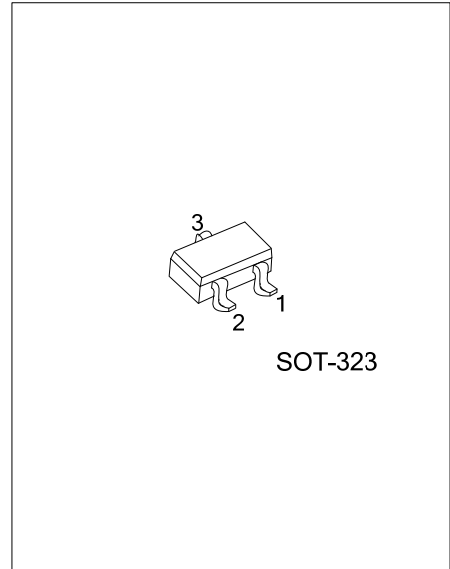
2SC4774

NPN SILICON TRANSISTOR

HIGH FREQUENCY AMPLIFIER
TRANSISTOR, RF SWITCHING
(6V, 50mA)

■ FEATURES

- * Very low output-on resistance (R_{ON}).
- * Low capacitance.



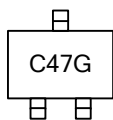
■ ORDERING INFORMATION

| Order Number | Package | Pin Assignment | | | Packing |
|----------------|---------|----------------|---|---|-----------|
| | | 1 | 2 | 3 | |
| 2SC4774G-AB3-R | SOT-323 | E | B | C | Tape Reel |

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

| | |
|--|---|
| <p>2SC4774G-AB3-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) AB3: SOT-89</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} | 12 | V |
| Collector-Emitter Voltage | V_{CEO} | 6 | V |
| Emitter-Base Voltage | V_{EBO} | 3 | V |
| Collector Current | I_C | 50 | mA |
| Collector Power Dissipation | P_D | 0.2 | W |
| Junction Temperature | T_J | +150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -40 ~ +150 | $^\circ\text{C}$ |

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

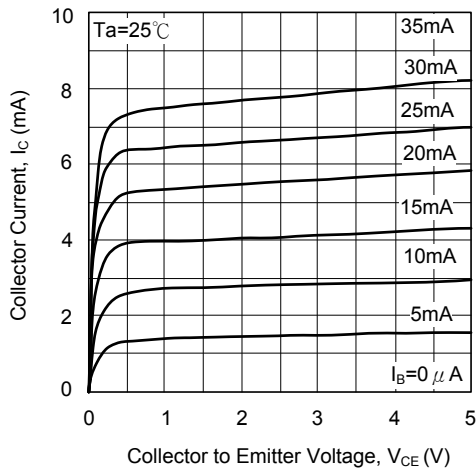
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

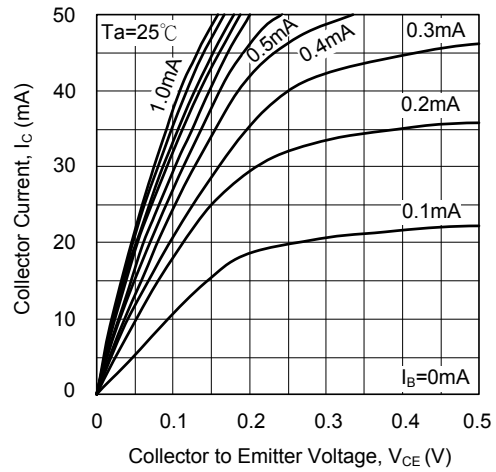
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C = 10\mu\text{A}$ | 12 | | | V |
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C = 1\text{mA}$ | 6 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E = 10\mu\text{A}$ | 3 | | | V |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C/I_B = 10\text{mA}/1\text{mA}$ | | | 0.3 | V |
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 10\text{V}$ | | | 0.5 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 2\text{V}$ | | | 0.5 | μA |
| DC Current Transfer Ratio | h_{FE} | $V_{CE}/I_C = 5\text{V}/5\text{mA}$ | 270 | | 560 | |
| Transition Frequency | f_T | $V_{CE} = 5\text{V}$, $I_E = -10\text{mA}$, $f = 200\text{MHz}$ | 300 | 800 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB} = 10\text{V}$, $I_E = 0\text{A}$, $f = 1\text{MHz}$ | | 1 | 1.7 | pF |
| Output-On Resistance | R_{ON} | $I_B = 3\text{mA}$, $V_{IN} = 100\text{mVrms}$, $f = 500\text{kHz}$ | | 2 | | Ω |

TYPICAL CHARACTERISTIC

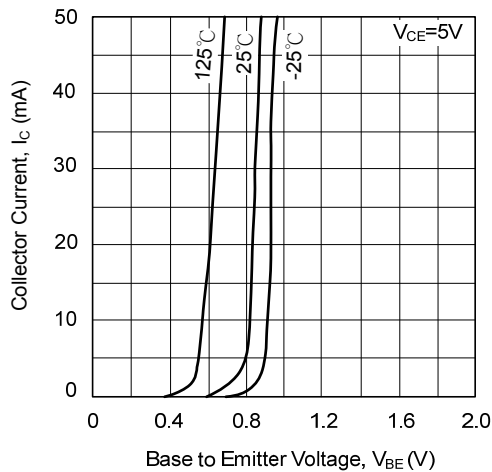
Grounded Emitter Output Characteristics (I)



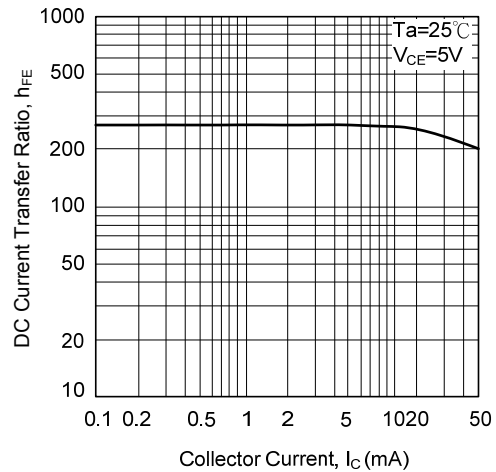
Grounded Emitter Output Characteristics (II)



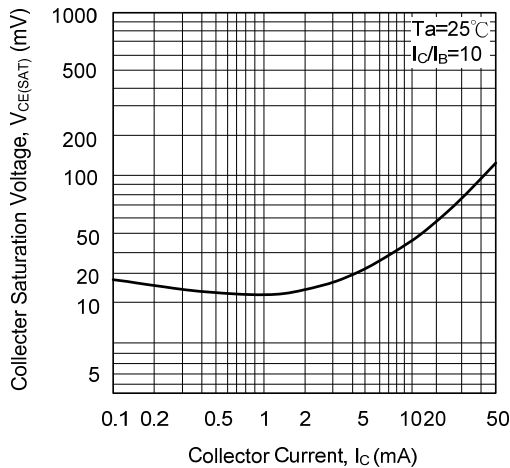
Grounded Emitter Propagation Characteristics



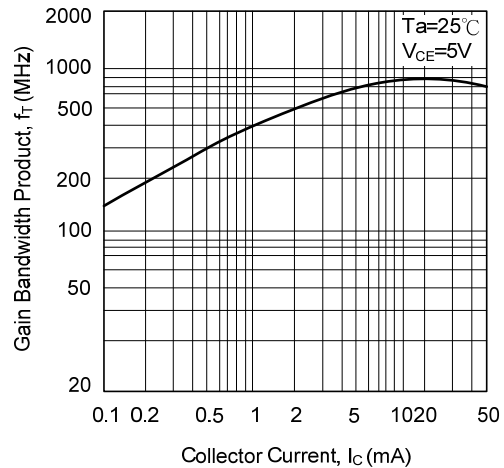
DC Current Gain vs. Collector Current



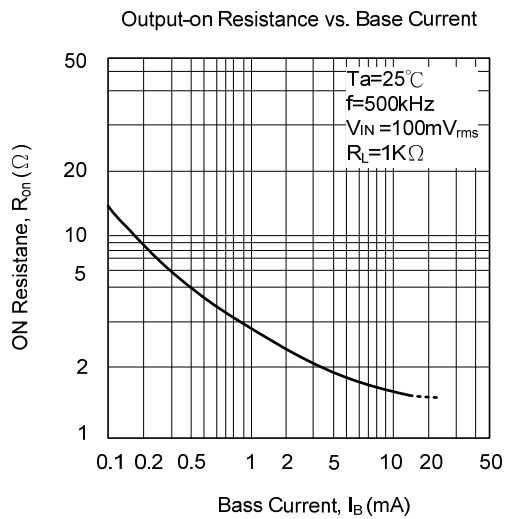
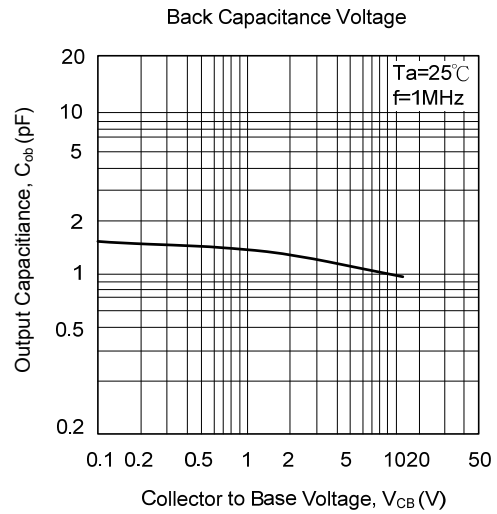
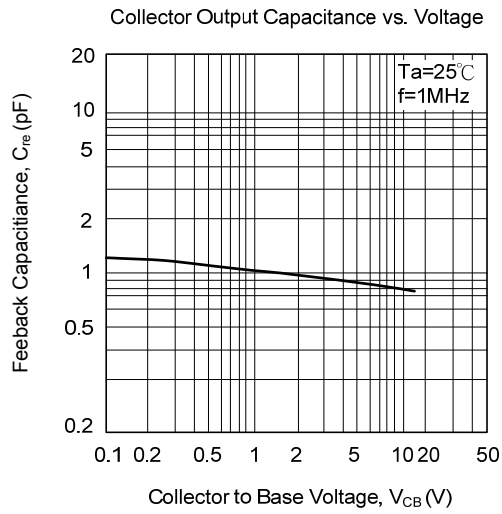
Collector-Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current



■ TYPICAL CHARACTERISTIC(Cont.)



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