

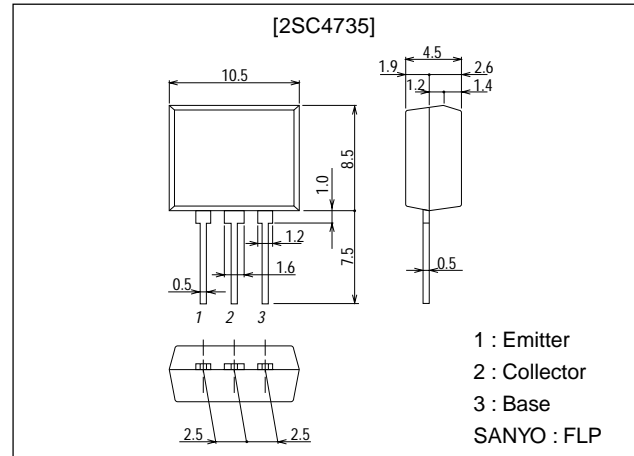
**2SC4735****27MHz CB Transceiver Driver Applications****Features**

- Large power type such as $P_C=1.5W$ when used without heatsink.
- It is possible to make appliances more compact because its height on board is 9.5mm.
- Effective in automatic inserting and counting stocked amount because of being provided for radial taping.

Package Dimensions

unit:mm

2084B

**Specifications****Absolute Maximum Ratings at $T_a = 25^\circ C$**

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|--------------------|-------------|------------|
| Collector-to-Base Voltage | V_{CBO} | | 75 | V |
| Collector-to-Emitter Voltage | V_{CER} | $R_{BE}=150\Omega$ | 75 | V |
| | V_{CEO} | | 45 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 5 | V |
| Collector Current | I_C | | 1.0 | A |
| Collector Current (Pulse) | I_{CP} | | 1.5 | A |
| Base Current | I_B | | 200 | mA |
| Collector Dissipation | P_C | | 1.5 | W |
| Junction Temperature | T_j | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

Electrical Characteristics at $T_a = 25^\circ C$

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------|-----------|------------------------|---------|-----|------|---------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=40V, I_E=0$ | | | 1.0 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=4V, I_C=0$ | | | 1.0 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=5V, I_C=500mA$ | 60* | | 320* | |
| Gain-Bandwidth Product | f_T | $V_{CE}=10V, I_C=50mA$ | 180 | 250 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB}=10V, f=1MHz$ | | 10 | 20 | pF |

* : The 2SC4735 are classified by 500mA h_{FE} as follows :

| | | | | | | | | |
|----|---|-----|-----|---|-----|-----|---|-----|
| 60 | D | 120 | 100 | E | 200 | 160 | F | 320 |
|----|---|-----|-----|---|-----|-----|---|-----|

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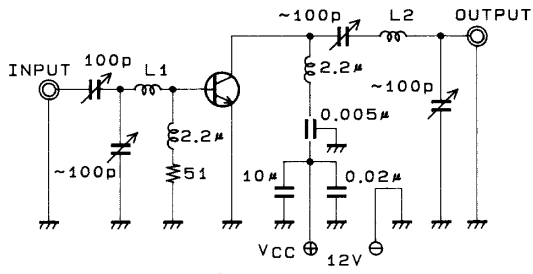
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12099HA (KT)/5132MH (KOTO) No.3974-1/4

2SC4735

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|---------------------------------|---------|-----|-----|------|
| | | | min | typ | max | |
| Output Power | P_O | $V_{CC}=12V, f=27MHz, P_i=35mW$ | 1.0 | 1.8 | | W |
| Collector Efficiency | η_c | See specified test circuit. | 60 | | | % |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$ | | 0.2 | 0.6 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=500mA, I_B=50mA$ | | 0.9 | 1.2 | V |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$ | 75 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CER}$ | $I_C=1mA, R_{BE}=150\Omega$ | 75 | | | V |
| | $V_{(BR)CEO}$ | $I_C=1mA, R_{BE}=\infty$ | 45 | | | V |
| Emitter-to-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$ | 5 | | | V |

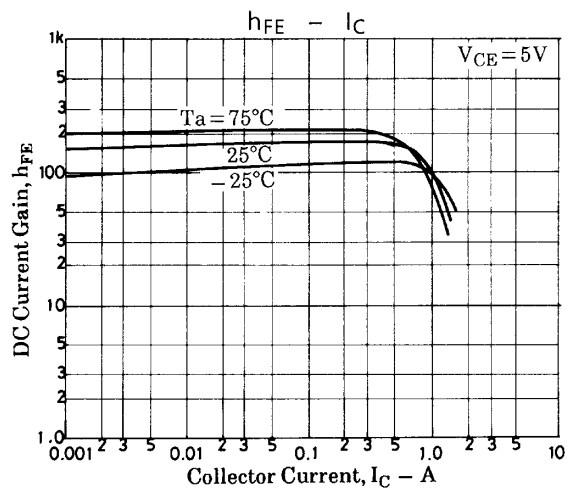
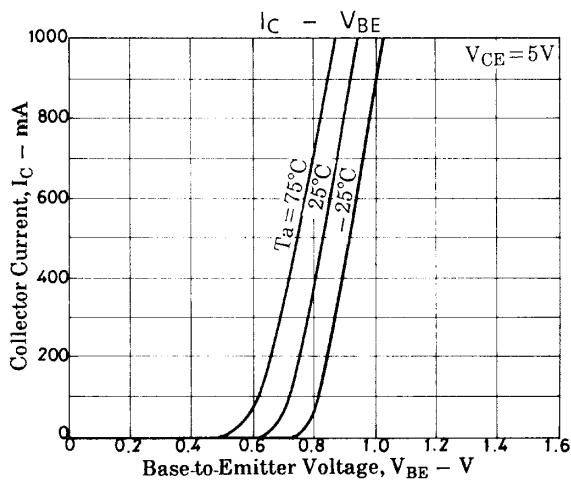
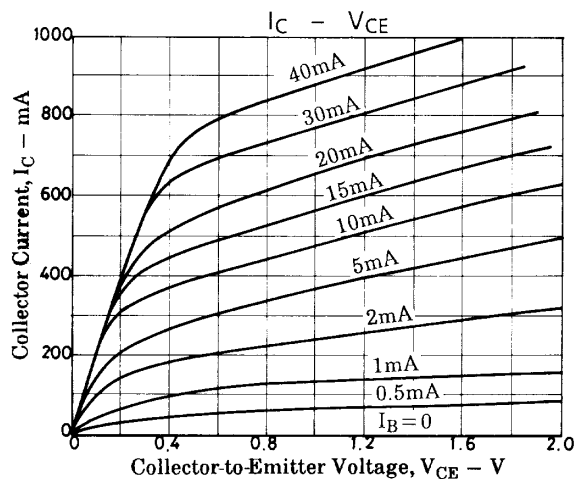
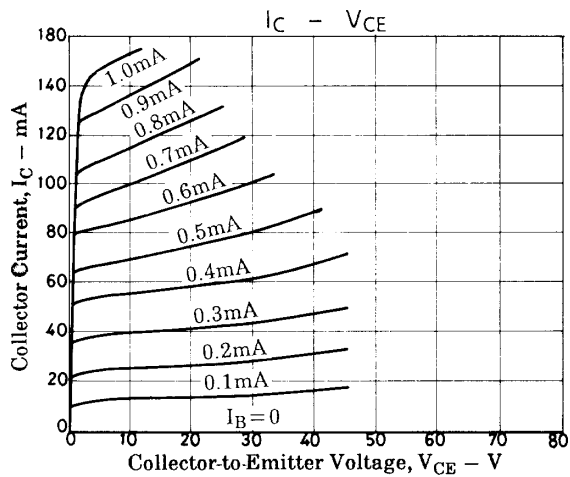
Collector Efficiency Test Circuit



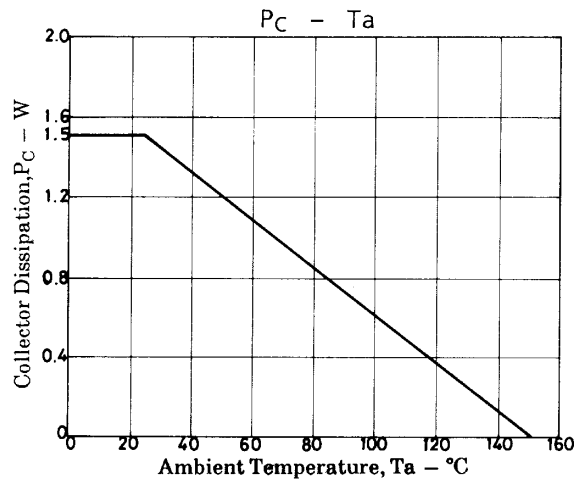
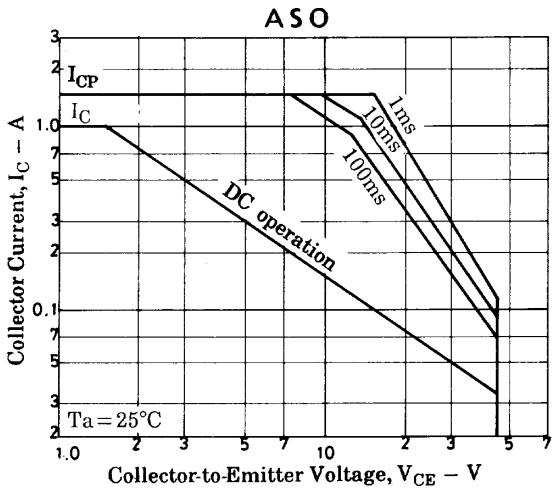
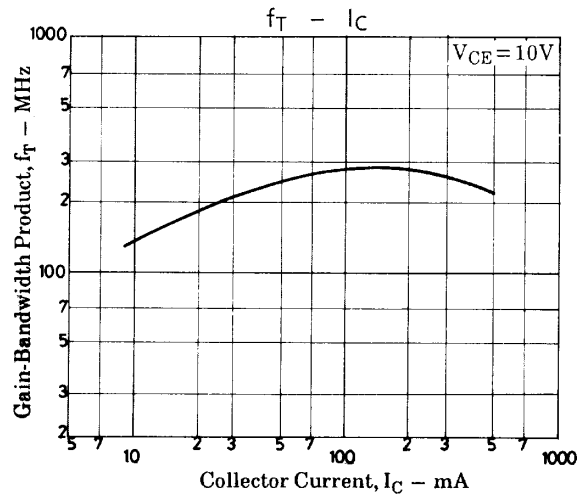
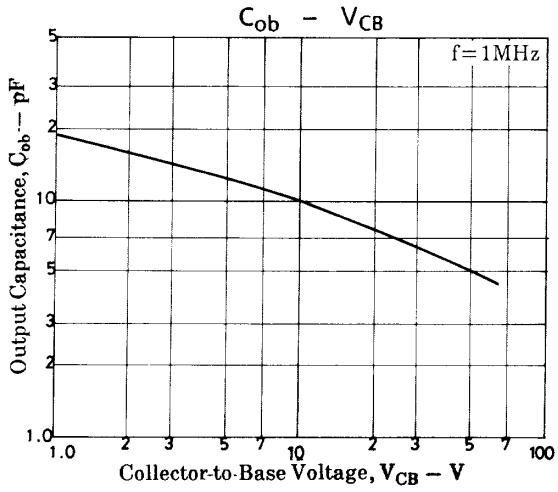
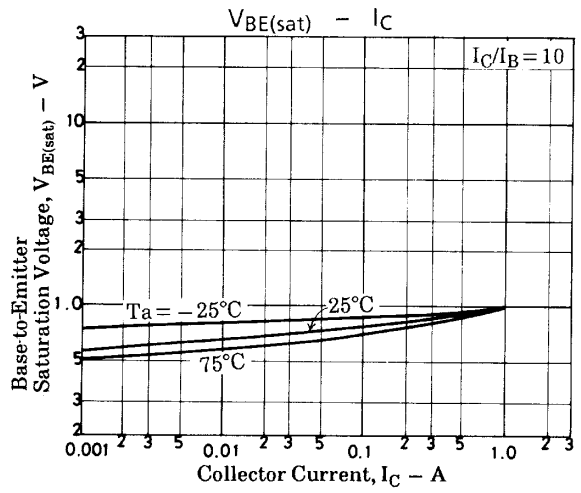
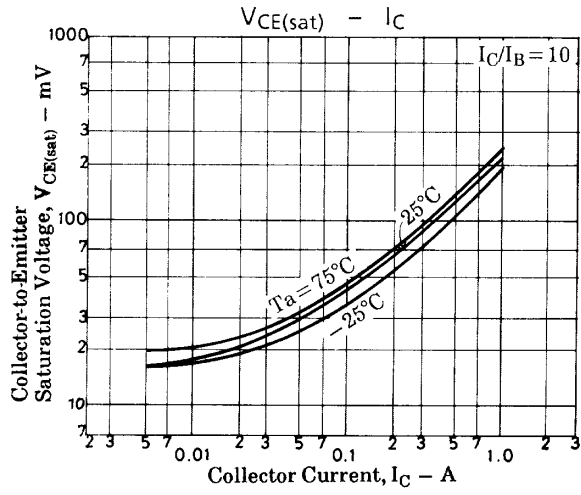
L1 : 10φ 0.6φ EC 6T
L2 : 10φ 0.6φ EC 12T

A0046B

Unit (resistance : Ω, capacitance : F)



2SC4735



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