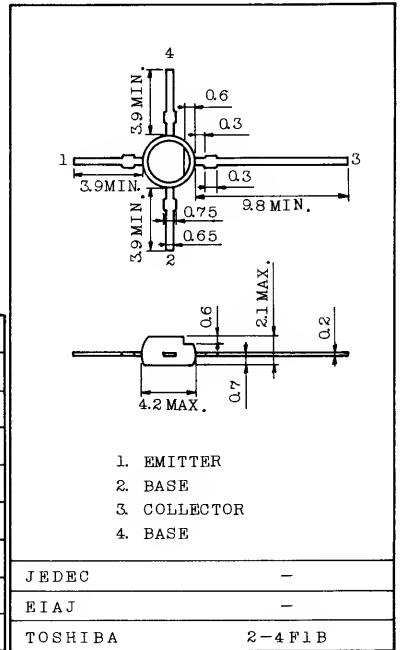


# 2SC3137

## SILICON NPN EPITAXIAL PLANAR TYPE

TV TUNER, UHF MIXER APPLICATIONS.  
 VHF~UHF BAND RF AMPLIFIER APPLICATIONS.

Unit in mm



### MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC              | SYMBOL           | RATING    | UNIT |
|-----------------------------|------------------|-----------|------|
| Collector-Base Voltage      | V <sub>CB0</sub> | 30        | V    |
| Collector-Emitter Voltage   | V <sub>CE0</sub> | 15        | V    |
| Emitter-Base Voltage        | V <sub>EB0</sub> | 3         | V    |
| Collector Current           | I <sub>C</sub>   | 50        | mA   |
| Base Current                | I <sub>B</sub>   | 25        | mA   |
| Collector Power Dissipation | P <sub>C</sub>   | 200       | mW   |
| Junction Temperature        | T <sub>j</sub>   | 125       | °C   |
| Storage Temperature Range   | T <sub>stg</sub> | -55 ~ 125 | °C   |

Weight : 0.08g

### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                      | SYMBOL               | TEST CONDITION                                      | MIN. | TYP. | MAX. | UNIT |
|-------------------------------------|----------------------|---|------|------|------|------|
| Collector Cut-off Current           | I <sub>CBO</sub>     | V <sub>CB</sub> =30V, I <sub>E</sub> =0             | -    | -    | 0.1  | μA   |
| Emitter Cut-off Current             | I <sub>EBO</sub>     | V <sub>EB</sub> =2V, I <sub>C</sub> =0              | -    | -    | 1.0  | μA   |
| Collector-Emitter Breakdown Voltage | V <sub>(BR)CEO</sub> | I <sub>C</sub> =1mA, I <sub>B</sub> =0              | 15   | -    | -    | V    |
| DC Current Gain                     | h <sub>FE</sub>      | V <sub>CE</sub> =10V, I <sub>C</sub> =5mA           | 40   | 100  | 200  | -    |
| Reverse Transfer Capacitance        | C <sub>re</sub>      | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz     | -    | 0.65 | 0.9  | pF   |
| Transition Frequency                | f <sub>T</sub>       | V <sub>CE</sub> =10V, I <sub>C</sub> =2mA           | 1500 | 2400 | -    | MHz  |
| Conversion Gain                     | G <sub>ce</sub>      | V <sub>CC</sub> =10V, I <sub>C</sub> =2mA, f=800MHz | 12   | 17   | -    | dB   |
| Noise Figure                        | NF                   | f <sub>T</sub> =830MHz (0dBm) (Fig.1)               | -    | 8    | -    | dB   |

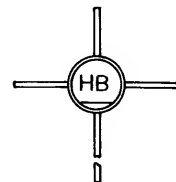
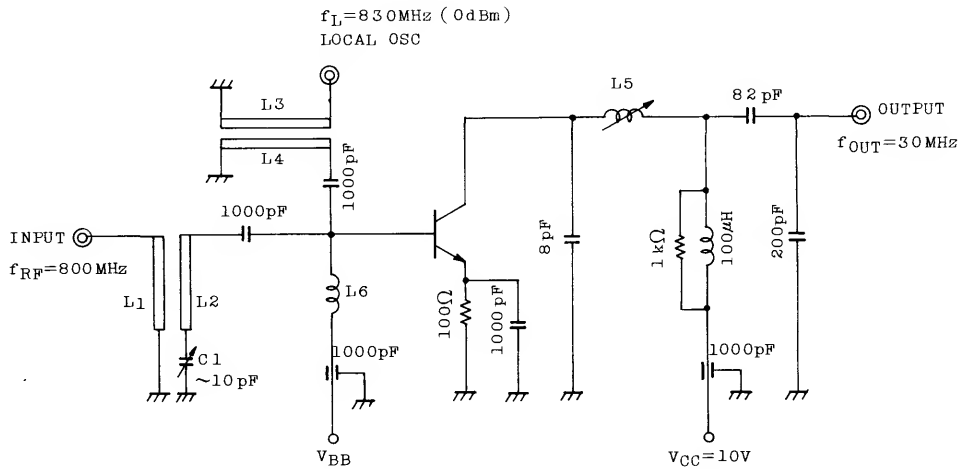


Fig. 1 800MHz  $G_{ce}$ , NF TEST CIRCUIT

L1 ~ L4 :  $\phi 0.8\text{mm}$  SILVER PLATED COPPER WIRE

L5 : AIR COIL SCN-5948 ① - ③ TOKO OR EQUIVALENT

L6 :  $\phi 0.2\text{mm}$  COPPER WIRE 10T 5mm ID

C1 : AIR TRIMMER TTA23A100 MURATA MFC. CO., LTD. OR EQUIVALENT

