

2SC5379

Silicon NPN epitaxial planer type

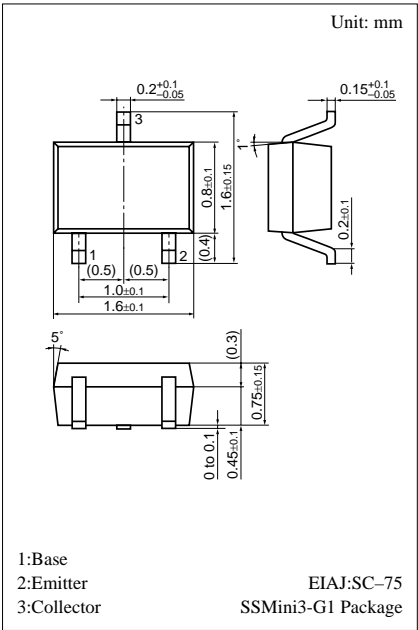
For low-voltage low-noise high-frequency oscillation

Features

- Low noise figure NF.
- High gain.
- High transition frequency f_T .
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Ratings | Unit |
|------------------------------|-----------|------------|------|
| Collector to base voltage | V_{CBO} | 15 | V |
| Collector to emitter voltage | V_{CEO} | 8 | V |
| Emitter to base voltage | V_{EBO} | 2 | V |
| Collector current | I_C | 80 | mA |
| Collector power dissipation | P_C | 125 | mW |
| Junction temperature | T_j | 125 | °C |
| Storage temperature | T_{stg} | -55 ~ +125 | °C |



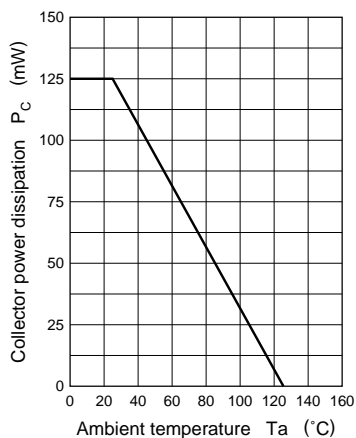
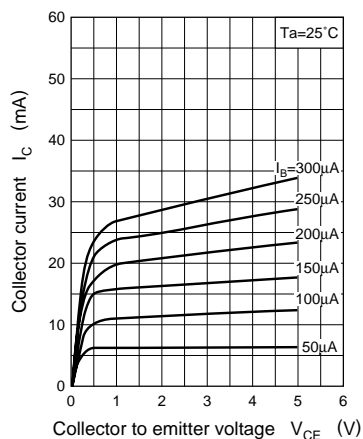
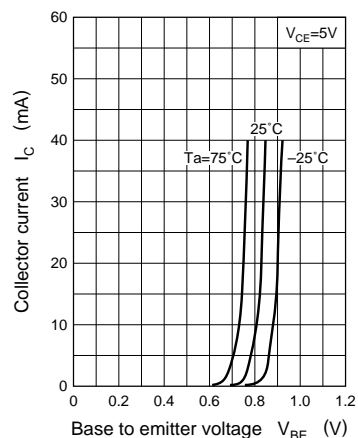
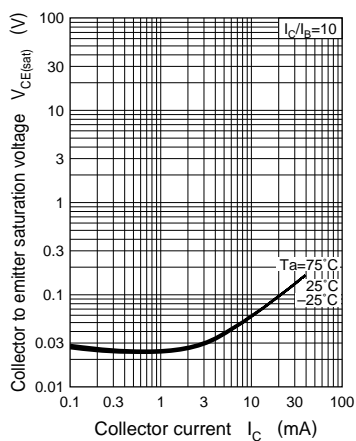
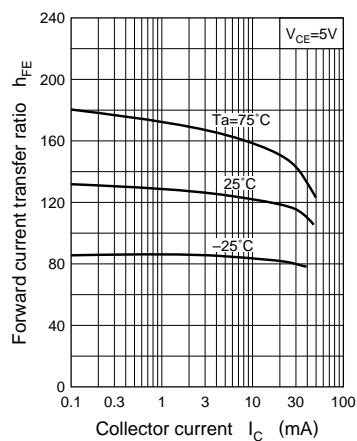
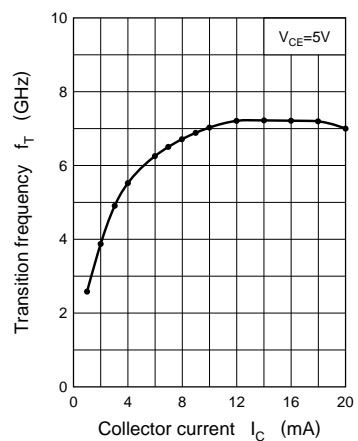
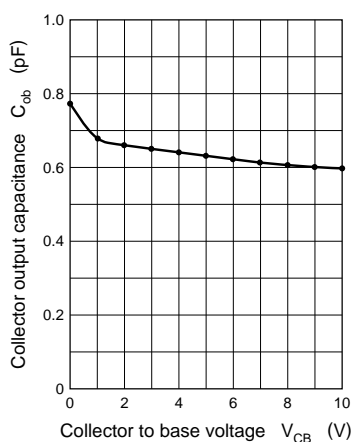
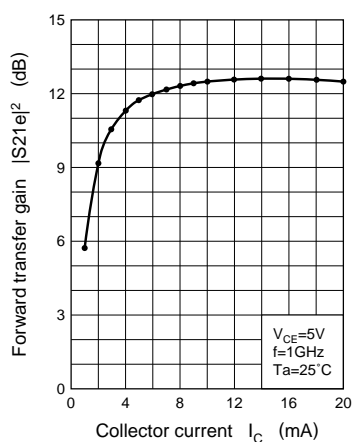
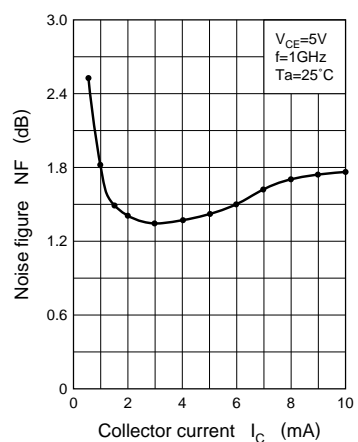
Marking symbol : HT

Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|--------------------------------|---------------|-------------------------------------|-----|------|-----|---------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 10V, I_E = 0$ | | | 1 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 1V, I_C = 0$ | | | 1 | μA |
| Forward current transfer ratio | h_{FE}^* | $V_{CE} = 5V, I_C = 10mA$ | 80 | | 200 | |
| Transition frequency | f_T | $V_{CE} = 5V, I_C = 10mA, f = 2GHz$ | | 7.0 | | GHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 5V, I_E = 0, f = 1MHz$ | | 0.6 | 1.0 | pF |
| Foward transfer gain | $ S_{21e} ^2$ | $V_{CE} = 5V, I_C = 10mA, f = 1GHz$ | 8.5 | 11.0 | | dB |
| Noise figure | NF | $V_{CE} = 5V, I_C = 3mA, f = 1GHz$ | | 1.6 | 2 | dB |

* h_{FE} Rank classification

| Rank | Q | R | S |
|----------------|----------|----------|-----------|
| h_{FE} | 80 ~ 115 | 95 ~ 155 | 135 ~ 200 |
| Marking Symbol | HTQ | HTR | HTS |

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $C_{ob} - V_{CB}$  $|S_{21e}|^2 - I_C$  $NF - I_C$ 

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