



2SC4265

Silicon NPN Epitaxial

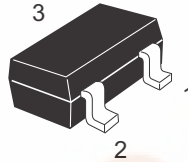
REJ03G0722-0300
(Previous ADE-208-1102A)
Rev.3.00
Aug.10.2005

Application

VHF RF amplifier, Local oscillator, Mixer

Outline

RENESAS Package code: PTSP0003ZA-A
(Package name: CMPAK®)



1. Emitter
2. Base
3. Collector

Note: Marking is "JC".

*CMPAK is a trademark of Renesas Technology Corp.

Absolute Maximum Ratings

(Ta = 25°C)

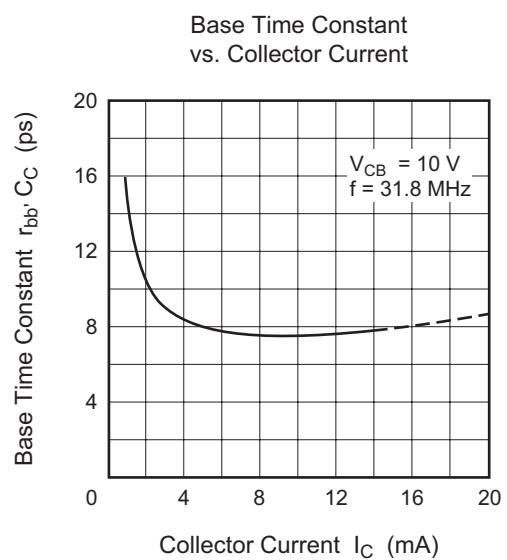
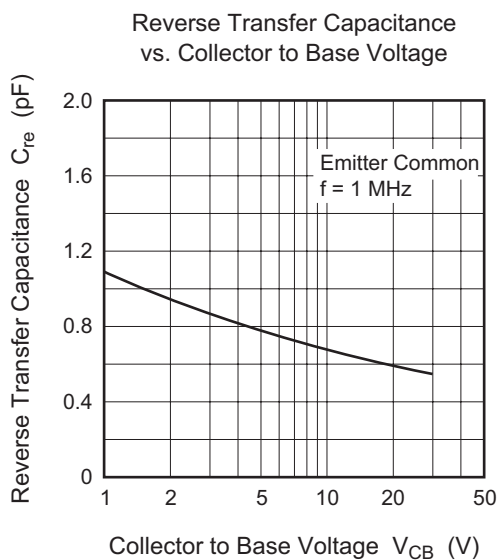
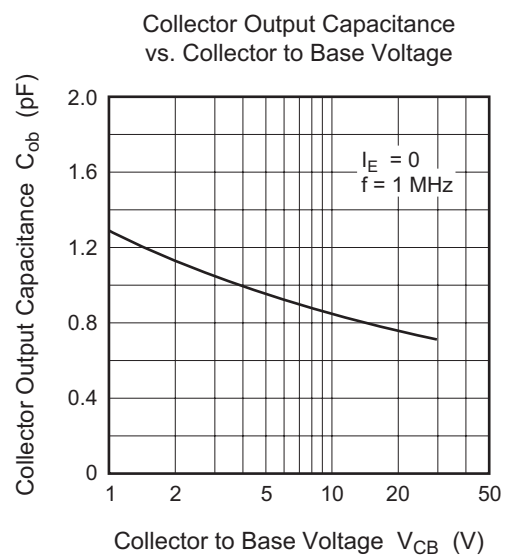
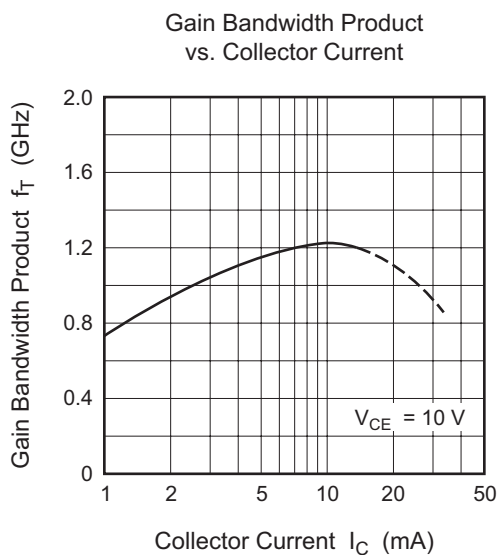
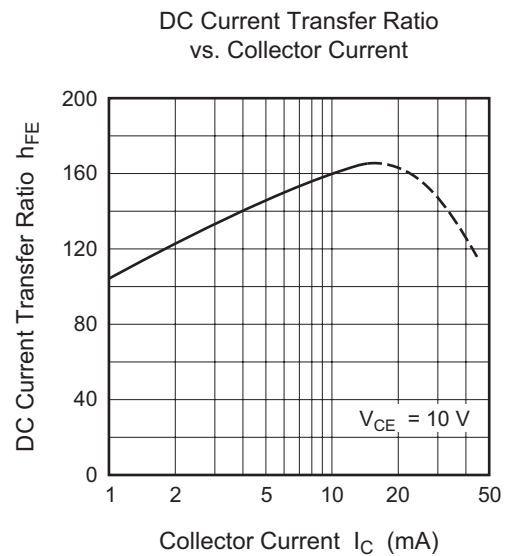
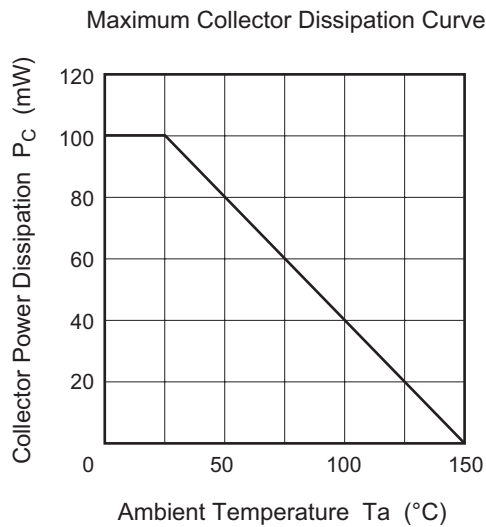
| Item | Symbol | Ratings | Unit |
|------------------------------|-----------|-------------|------|
| Collector to base voltage | V_{CBO} | 30 | V |
| Collector to emitter voltage | V_{CEO} | 20 | V |
| Emitter to base voltage | V_{EBO} | 3 | V |
| Collector current | I_C | 50 | mA |
| Collector power dissipation | P_C | 100 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

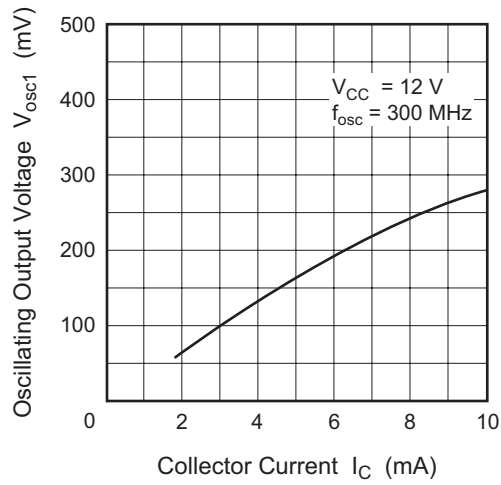
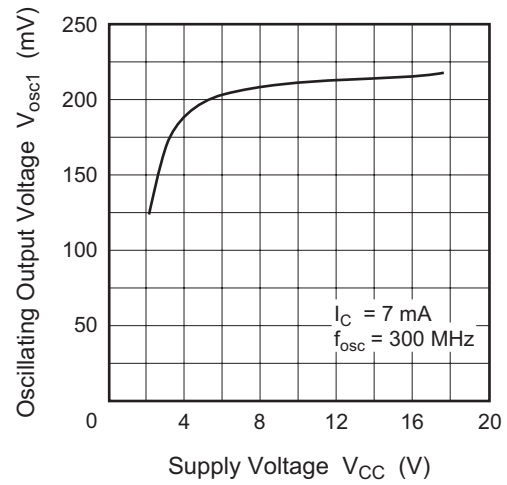
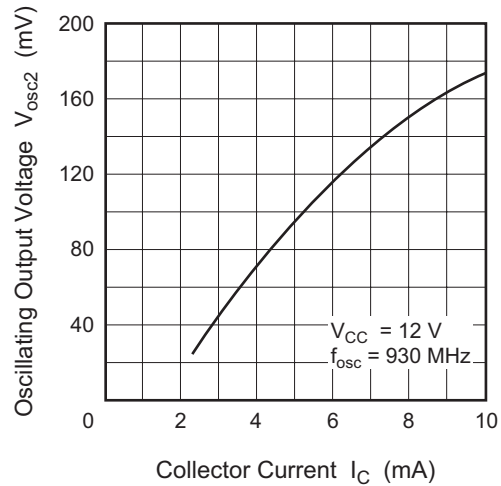
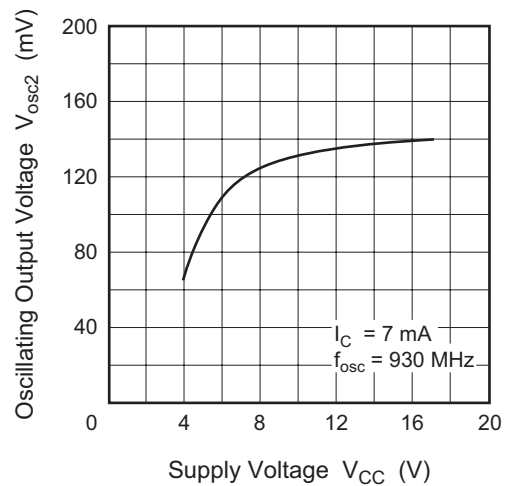
Electrical Characteristics

(Ta = 25°C)

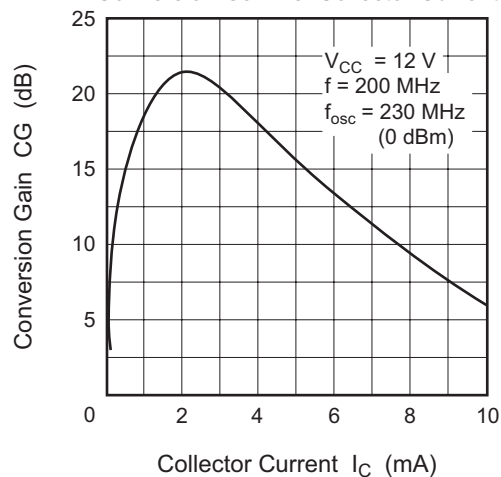
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|-----|-----|-----|---------|---------------------------------------|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 30 | — | — | V | $I_C = 10\ \mu A, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | 20 | — | — | V | $I_C = 1\ mA, R_{BE} = \infty$ |
| Collector cutoff current | I_{CBO} | — | — | 0.5 | μA | $V_{CE} = 15\ V, I_E = 0$ |
| Emitter cutoff current | I_{EBO} | — | — | 10 | μA | $V_{EB} = 3\ V, I_C = 0$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | 1.0 | V | $I_C = 20\ mA, I_B = 4\ mA$ |
| DC current transfer ratio | h_{FE} | 40 | — | — | | $V_{CE} = 10\ V, I_C = 10\ mA$ |
| Collector output capacitance | C_{ob} | — | — | 1.5 | pF | $V_{CB} = 10\ V, I_E = 0, f = 1\ MHz$ |
| Gain bandwidth product | f_T | 600 | — | — | MHz | $V_{CE} = 10\ V, I_C = 10\ mA$ |

Main Characteristics

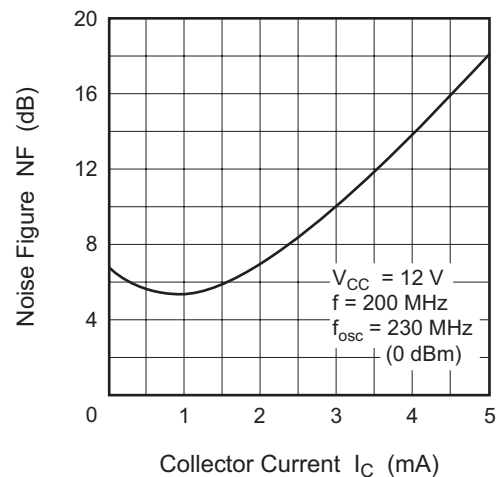


Oscillating Output Voltage
vs. Collector CurrentOscillating Output Voltage
vs. Supply VoltageOscillating Output Voltage
vs. Collector CurrentOscillating Output Voltage
vs. Supply Voltage

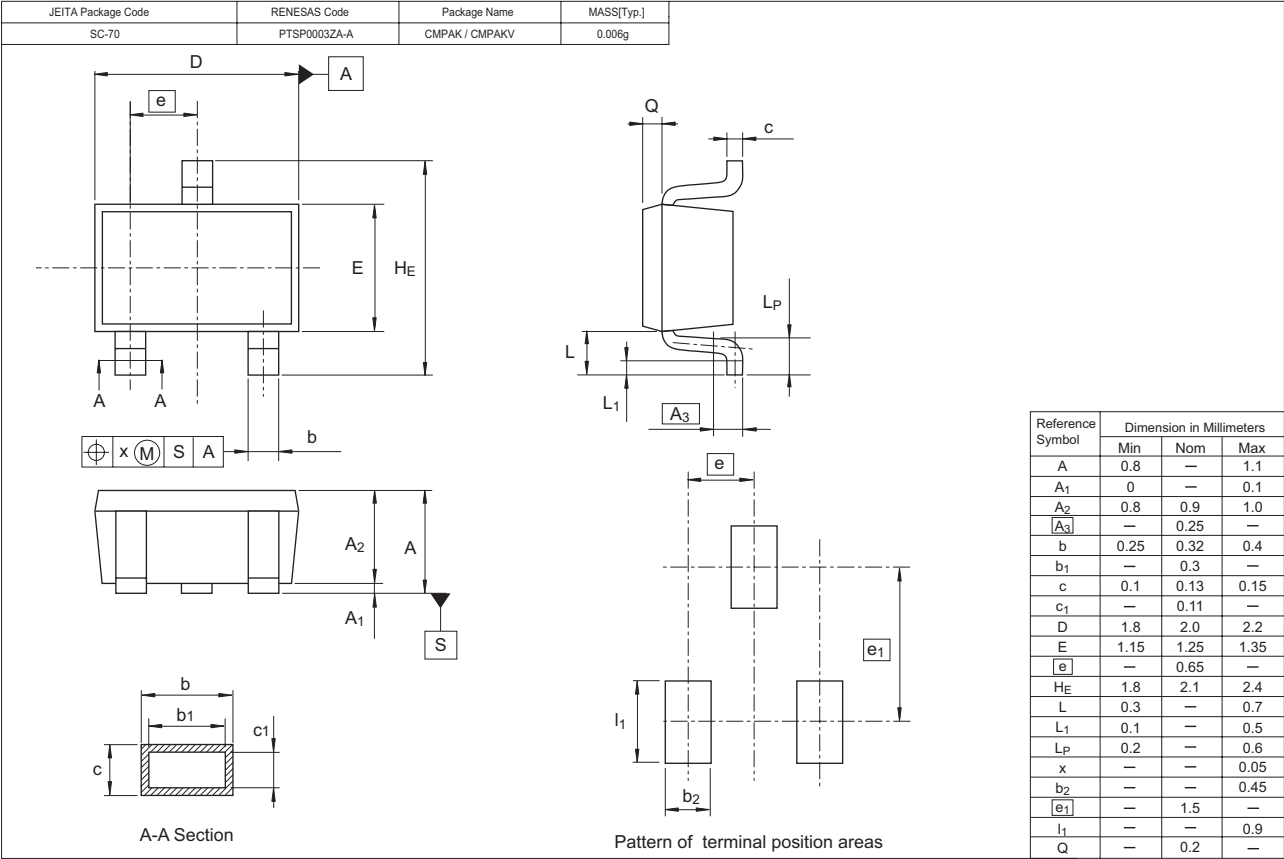
Conversion Gain vs. Collector Current



Noise Figure vs. Collector Current



Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|---------------|----------|-----------------------------------|
| 2SC4265JCTL-E | 3000 | φ 178 mm Reel, 8 mm Emboss Taping |

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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