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# 2SC4965

Silicon NPN Epitaxial

# HITACHI

ADE-208-006  
1st. Edition

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## Application

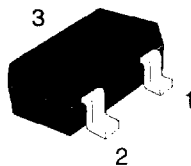
VHF / UHF RF switch

## Features

- Low Ron and high performance for RF switch.
- Capable of high density mounting.

## Outline

CMPAK



- 1. Emitter
- 2. Base
- 3. Collector

**Absolute Maximum Ratings** ( $T_a = 25^\circ\text{C}$ )

| Item                         | Symbol           | Ratings     | Unit             |
|------------------------------|------------------|-------------|------------------|
| Collector to base voltage    | $V_{\text{CBO}}$ | 12          | V                |
| Collector to emitter voltage | $V_{\text{CEO}}$ | 8           | V                |
| Emitter to base voltage      | $V_{\text{EBO}}$ | 3           | V                |
| Collector current            | $I_{\text{C}}$   | 100         | mA               |
| Collector power dissipation  | $P_{\text{C}}$   | 100         | mW               |
| Junction temperature         | $T_{\text{j}}$   | 150         | $^\circ\text{C}$ |
| Storage temperature          | $T_{\text{stg}}$ | -55 to +150 | $^\circ\text{C}$ |

**Electrical Characteristics** ( $T_a = 25^\circ\text{C}$ )

| Item                                    | Symbol                      | Min | Typ | Max | Unit          | Test conditions                                                          |
|-----------------------------------------|-----------------------------|-----|-----|-----|---------------|--------------------------------------------------------------------------|
| Collector to base breakdown voltage     | $V_{(\text{BR})\text{CBO}}$ | 12  | —   | —   | V             | $I_{\text{C}} = 10\ \mu\text{A}$ , $I_{\text{E}} = 0$                    |
| Collector cutoff current                | $I_{\text{CBO}}$            | —   | —   | 10  | $\mu\text{A}$ | $V_{\text{CB}} = 10\ \text{V}$ , $I_{\text{E}} = 0$                      |
|                                         | $I_{\text{CEO}}$            | —   | —   | 1   | mA            | $V_{\text{CE}} = 8\ \text{V}$ , $R_{\text{BE}} = \infty$                 |
| Emitter cutoff current                  | $I_{\text{EBO}}$            | —   | —   | 10  | $\mu\text{A}$ | $V_{\text{EB}} = 3\ \text{V}$ , $I_{\text{C}} = 0$                       |
| DC current transfer ratio               | $h_{\text{FE}}$             | 100 | 250 | 600 |               | $V_{\text{CE}} = 5\ \text{V}$ , $I_{\text{C}} = 5\ \text{mA}$            |
| Collector to emitter saturation voltage | $V_{\text{CE(sat)}}$        | —   | 150 | 300 | mV            | $I_{\text{C}} = 80\ \text{mA}$ , $I_{\text{B}} = 5\ \text{mA}$           |
| Collector output capacitance            | $C_{\text{ob}}$             | —   | 1.9 | 1.6 | pF            | $V_{\text{CB}} = 5\ \text{V}$ , $I_{\text{E}} = 0$ , $f = 1\ \text{MHz}$ |
| On resistance                           | $R_{\text{on}}$             | —   | 1.2 | —   | $\Omega$      | $I_{\text{B}} = 2.5\ \text{mA}$ , $f = 1\ \text{kHz}$                    |

Note: Marking is "YV—".

See characteristic curves of 2SC4964.

