

UNR2225 (UN2225), UNR2226 (UN2226), UNR2227 (UN2227)

Silicon NPN epitaxial planar type

For muting

■ Features

- Costs can be reduced through downsizing of the equipment and reduction of the number of parts
- Mini type package allowing easy automatic insertion through tape packing and magazine packing

■ Resistance by Part Number

| | | Marking Symbol (R ₁) | (R ₂) |
|--------------------|----|----------------------------------|-------------------|
| • UNR2225 (UN2225) | FZ | 10 kΩ | — |
| • UNR2226 (UN2226) | FY | 4.7 kΩ | — |
| • UNR2227 (UN2227) | FW | 6.8 kΩ | 6.8 kΩ |

■ Absolute Maximum Ratings T_a = 25°C

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|------------------|-------------|------|
| Collector-base voltage (Emitter open) | V _{CBO} | 30 | V |
| Collector-emitter voltage (Base open) | V _{CEO} | 20 | V |
| Emitter-base voltage (Collector open) | V _{EBO} | 5 | V |
| Collector current | I _C | 600 | mA |
| Total power dissipation | P _T | 200 | mW |
| Junction temperature | T _j | 150 | °C |
| Storage temperature | T _{stg} | -55 to +150 | °C |

■ Electrical Characteristics T_a = 25°C ± 3°C

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit | |
|--|----------------------|---|------|-----|------|------|---|
| Collector-base voltage (Emitter open) | V _{CBO} | I _C = 1 μA, I _E = 0 | 30 | | | V | |
| Collector-emitter voltage (Base open) | V _{CEO} | I _C = 2 mA, I _B = 0 | 20 | | | V | |
| Emitter-base voltage (Collector open) | V _{EBO} | I _E = 1 μA, I _C = 0 | 5 | | | V | |
| Collector-base cutoff current (Emitter open) | I _{CBO} | V _{CB} = 30 V, I _E = 0 | | | 1 | μA | |
| Emitter-base cutoff current (Collector open) | I _{EBO} | V _{EB} = 5 V, I _C = 0 | | | 1 | μA | |
| Forward current transfer ratio | h _{FE} | V _{CE} = 10 V, I _C = 100 mA | 70 | | | — | |
| | | | 100 | | 600 | | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = 50 mA, I _B = 2.5 mA | | | 80 | mV | |
| Input resistance | UNR2226 | R ₁ | -30% | 4.7 | +30% | kΩ | |
| | UNR2227 | | | 6.8 | | | |
| | UNR2225 | | | 10 | | | |
| Resistance ratio | UNR2227 | R ₁ /R ₂ | | 0.8 | 1.0 | 1.2 | — |

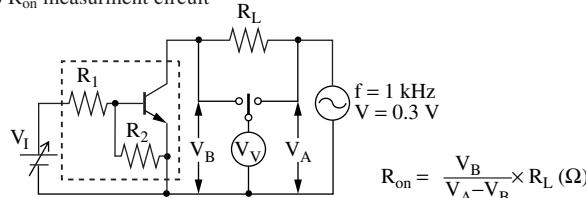
Note) The part numbers in the parenthesis show conventional part number.

■ Electrical Characteristics (continued) $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

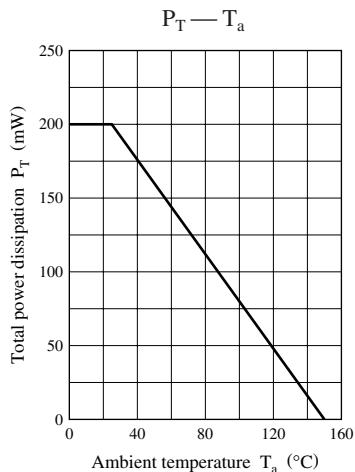
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|----------------------|-----------------|---|-----|------|-----|----------|
| Resistance ratio | R_{on} | $V_I = 7 \text{ V}$, $R_L = 1 \text{ k}\Omega$, $f = 1 \text{ kHz}$ | | 0.95 | | Ω |
| | | | | 1.1 | | |
| | | | | 1.5 | | |
| Transition frequency | f_T | $V_{\text{CB}} = 10 \text{ V}$, $I_E = -50 \text{ mA}$, $f = 200 \text{ MHz}$ | | 200 | | MHz |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

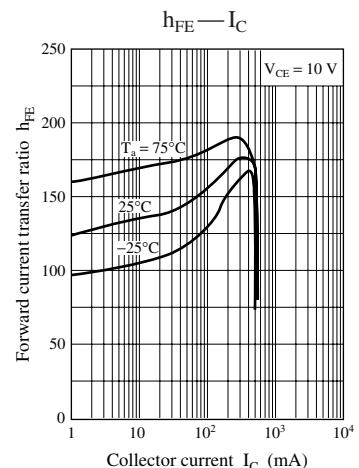
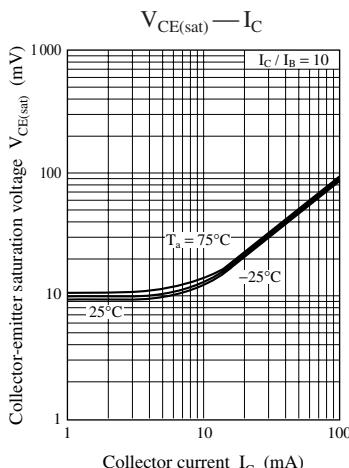
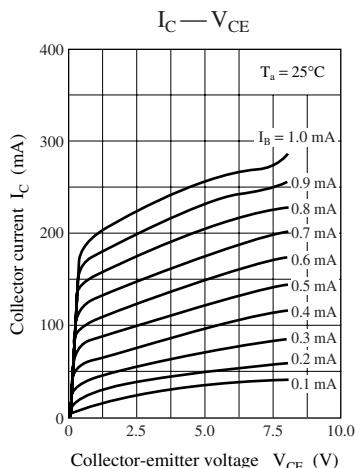
2. *: Refer to R_{on} measurement circuit

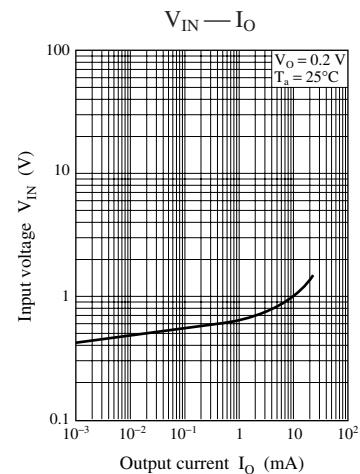
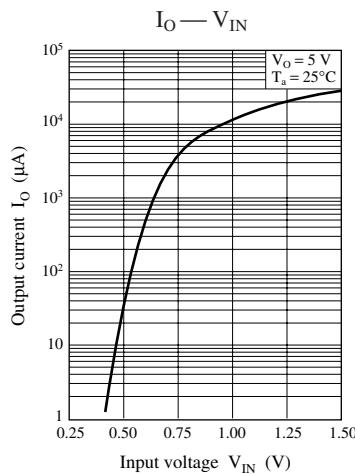
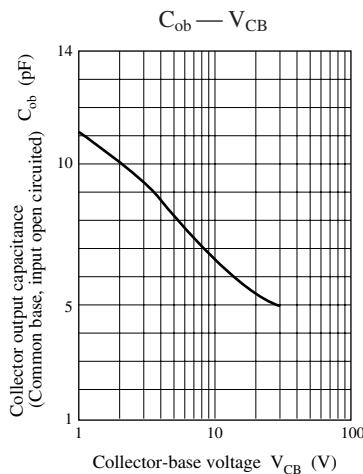


Common characteristics chart

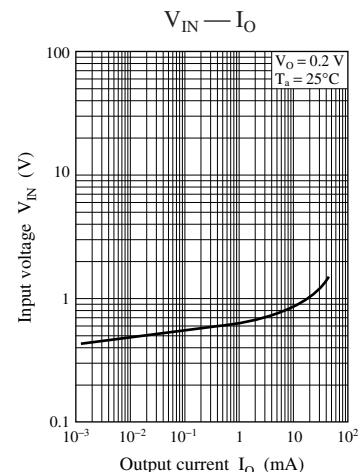
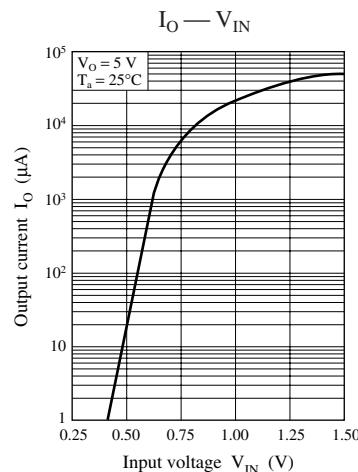
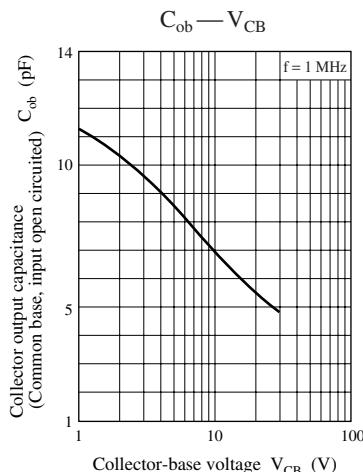
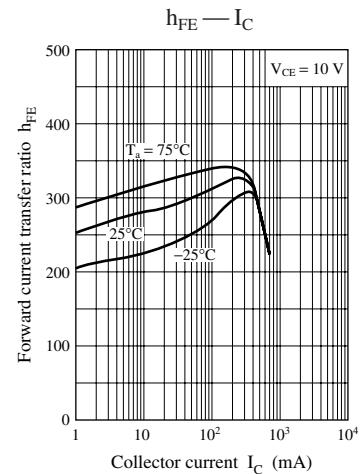
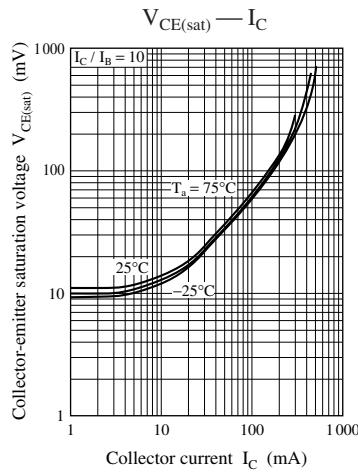
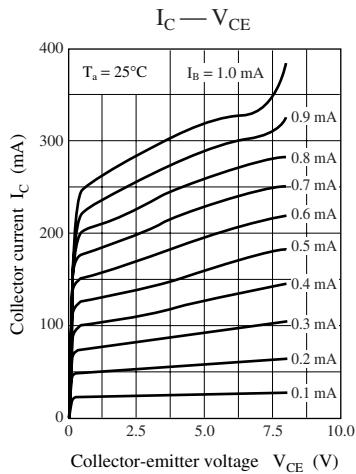


Characteristics charts of UNR2225

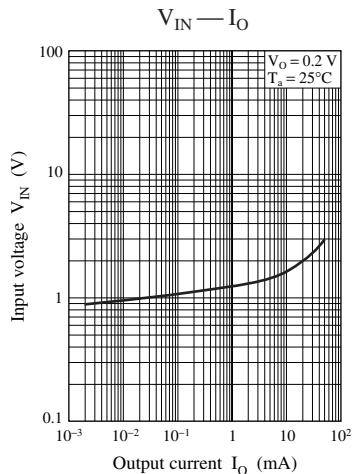
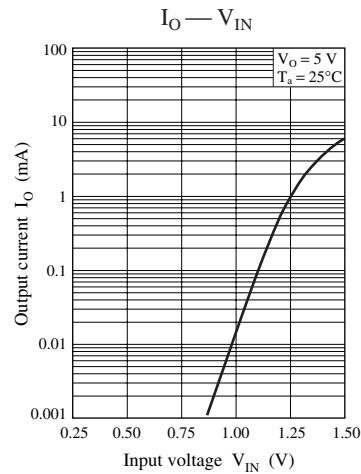
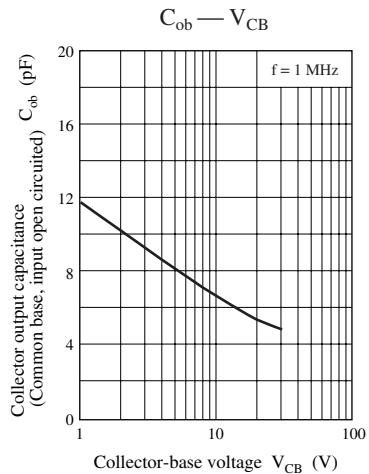
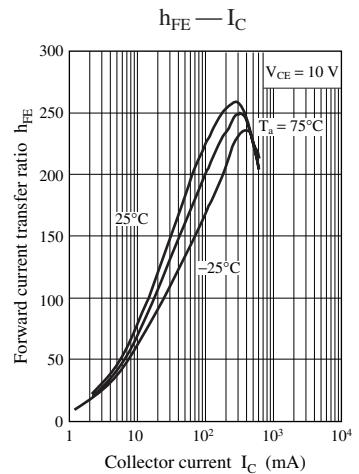
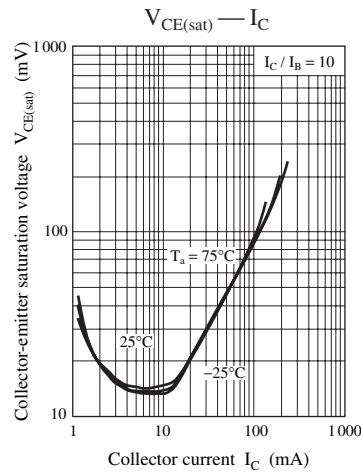
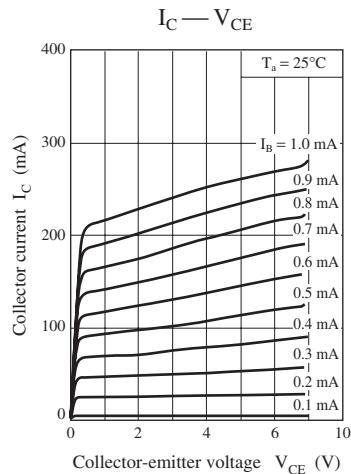




Characteristics charts of UNR2226



Characteristics charts of UNR2227



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