

Low frequency amplifier, strobe

2SD2687S

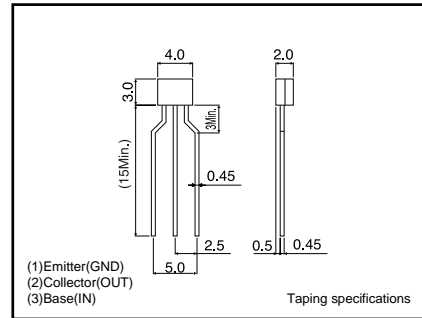
●Application

Low frequency amplifier
Storobo

●Features

- 1) A collector current is large.
- 2) $V_{CE(sat)} \leq 250\text{mV}$
At $I_C=1.5\text{A} / I_B=30\text{mA}$

●Dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|------------------------------|-----------|-------------|------|
| Collector-base voltage | V_{CB0} | 15 | V |
| Collector-emitter voltage | V_{CE0} | 12 | V |
| Emitter-base voltage | V_{EB0} | 6 | V |
| Collector current | I_C | 5 | A |
| | I_{CP} | 8 | A * |
| Power dissipation | P_C | 400 | mW |
| Junction temperature | t_j | 150 | °C |
| Range of storage temperature | t_{stg} | -55 to +150 | °C |

* Single pulse, $P_w=10\text{ms}$

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|---------------|------|------|------|------|--|
| Collector-base breakdown voltage | BV_{CB0} | 15 | - | - | V | $I_C=10\mu\text{A}$ |
| Collector-emitter breakdown voltage | BV_{CE0} | 12 | - | - | V | $I_C=1\text{mA}$ |
| Emitter-base breakdown voltage | BV_{EB0} | 6 | - | - | V | $I_E=10\mu\text{A}$ |
| Collector cutoff current | I_{CB0} | - | - | 100 | nA | $V_{CB}=15\text{V}$ |
| Emitter cutoff current | I_{EB0} | - | - | 100 | nA | $V_{EB}=6\text{V}$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | - | 120 | 250 | mV | $I_C=1.5\text{A}, I_B=30\text{mA}$ |
| DC current gain | h_{FE} | 350 | - | 680 | - | $V_{CE}=2\text{V}, I_C=500\text{mA}^*$ |
| Transition frequency | f_T | - | 360 | - | MHz | $V_{CE}=2\text{V}, I_E=-500\text{mA}, f=100\text{MHz}^*$ |
| Collector output capacitance | C_{ob} | - | 30 | - | pF | $V_{CB}=10\text{V}, I_E=0\text{A}, f=1\text{MHz}$ |

* Pulse

Transistors

●Packaging specifications

| | | |
|----------|------------------------------|--------|
| Type | package | Taping |
| | Code | TP |
| | Basic ordering unit (pieces) | 5000 |
| 2SD2687S | | ○ |

●Electrical characteristic curves

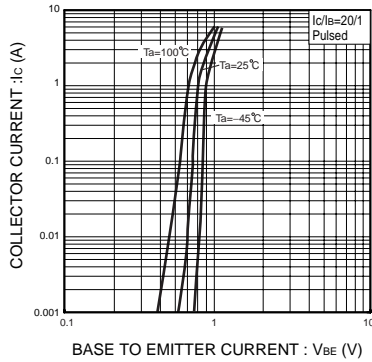


Fig.1 Grounded emitter propagation characteristics

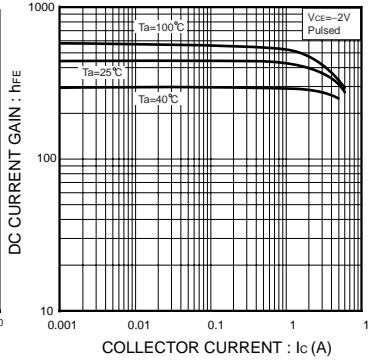


Fig.2 DC current gain vs. collector current

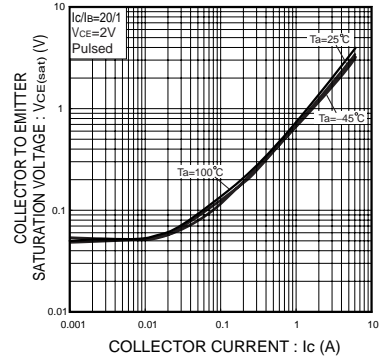


Fig.3 Collector-emitter saturation voltage vs. collector current

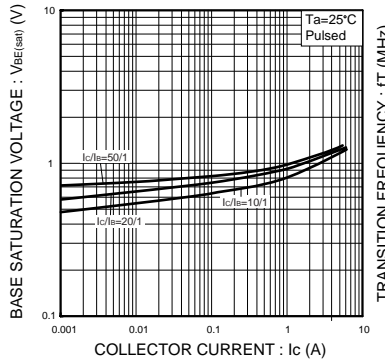


Fig.4 Base-emitter saturation voltage vs. collector current

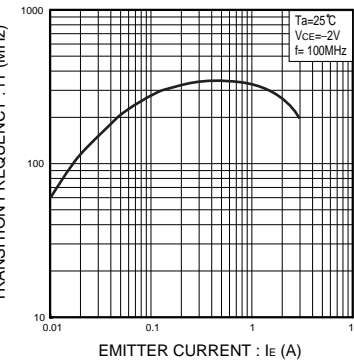


Fig.5 Gain bandwidth product vs. emitter current

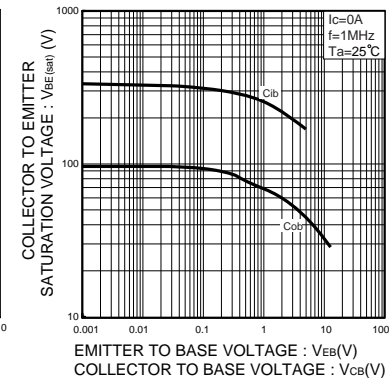


Fig.6 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

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