

For Audio Amplifier output - TV Velocity Modulation (160V, 1.5A)

2SC5511

●Structure

NPN Silicon Epitaxial Planar Transistor

●Features

- 1) Electrical characteristics of DC current gain h_{FE} is flat.
- 2) High breakdown voltage. ($BV_{CEO}=160V$ (Min.), at $I_C=1mA$)
- 3) High f_t . (Typ. 150MHz, at $V_{CE}=10V$, $I_E=-0.2A$, $f=100MHz$)
- 4) Wide SOA.

●Applications

Power amplifier
Velocity modulation

●Absolute maximum ratings ($T_a=25^\circ C$)

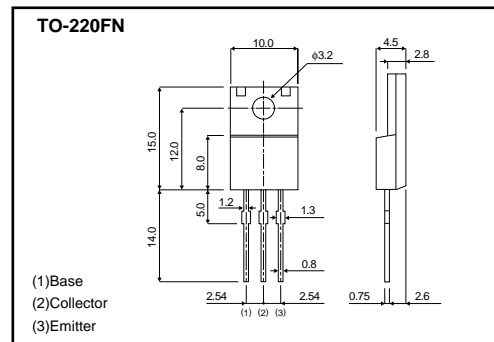
| Parameter | Symbol | Limits | Unit |
|-----------------------------|-----------|-------------|-----------------------|
| Collector-base voltage | V_{CBO} | 160 | V |
| Collector-emitter voltage | V_{CEO} | 160 | V |
| Emitter-base voltage | V_{EBO} | 5 | V |
| Collector current | DC | I_C | 1.5 A |
| | Pulse | I_{CP} | 3 A *1 |
| Collector power dissipation | P_C | 2 | W($T_a=25^\circ C$) |
| | | 20 | W($T_c=25^\circ C$) |
| Junction temperature | T_j | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ C$ |

*1 $t=100ms$

●Electrical characteristics ($T_a=25^\circ C$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|---------------|------|------|------|---------|---|
| Collector-emitter breakdown voltage | BV_{CEO} | 160 | - | - | V | $I_C=1mA$ |
| Collector-base breakdown voltage | BV_{CBO} | 160 | - | - | V | $I_C=50\mu A$ |
| Emitter-base breakdown voltage | BV_{EBO} | 5 | - | - | V | $I_E=50\mu A$ |
| Collector cutoff current | I_{CBO} | - | - | 1.0 | μA | $V_{CB}=160V$ |
| Emitter cutoff current | I_{EBO} | - | - | 1.0 | μA | $V_{EB}=4V$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | - | - | 1.0 | V | $I_C/I_B=1A/0.1A$ |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | - | - | 1.5 | V | $I_C/I_B=1A/0.1A$ |
| DC current gain | h_{FE} | 100 | - | 200 | - | $V_{CE}=5V$, $I_C=0.1A$ |
| Transition frequency | f_t | - | 150 | - | MHz | $V_{CE}=10V$, $I_E=-0.2A$, $f=100MHz$ |
| Collector output capacitance | C_{ob} | - | 20 | - | pF | $V_{CB}=10V$, $I_E=0A$, $f=1MHz$ |

●External dimensions (Unit : mm)



●Complements

| PNP | NPN |
|---------|---------|
| 2SA2005 | 2SC5511 |

●Packaging specifications and h_{FE}

| Type | h_{FE} | Package | Taping |
|---------|----------|------------------------------|--------|
| | | Code | - |
| | | Basic ordering unit (pieces) | 500 |
| 2SC5511 | E | | ○ |

h_{FE} values are classified as follows:

| Item | E |
|----------|------------|
| h_{FE} | 100 to 200 |

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