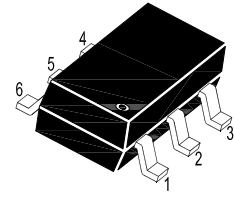
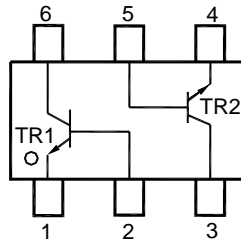


MMBT5551DW

NPN Silicon Epitaxial Planar Transistors

for high voltage amplifier applications.



1. Emitter 2. Base 3. Collector
4. Emitter 5. Base 6. Collector
SOT-363 Plastic Package

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

| Parameter | Symbol | Value | Unit |
|---------------------------|-----------|---------------|------------------|
| Collector Base Voltage | V_{CBO} | 180 | V |
| Collector Emitter Voltage | V_{CEO} | 160 | V |
| Emitter Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 600 | mA |
| Power Dissipation | P_{tot} | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 55 to + 150 | $^\circ\text{C}$ |

Characteristics at $T_{amb}=25^\circ\text{C}$

| Parameter | Symbol | Min. | Max. | Unit |
|---|----------------------------------|----------------|---------------|-------------|
| DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$ at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$ at $V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$ | h_{FE} h_{FE} h_{FE} | 80 80 30 | - 250 - | - - - |
| Collector Base Cutoff Current at $V_{CB} = 120\text{ V}$ | I_{CBO} | - | 50 | nA |
| Emitter Base Cutoff Current at $V_{EB} = 4\text{ V}$ | I_{EBO} | - | 50 | nA |
| Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$ | $V_{(BR)CBO}$ | 180 | - | V |
| Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$ | $V_{(BR)CEO}$ | 160 | - | V |
| Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$ | $V_{(BR)EBO}$ | 6 | - | V |
| Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$ at $I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$ | $V_{CE(sat)}$ | - - | 0.15 0.2 | V |
| Base Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$ at $I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$ | $V_{BE(sat)}$ | - - | 1 1 | V |
| Gain Bandwidth Product at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$ | f_T | 100 | 300 | MHz |
| Collector Base Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$ | C_{cbo} | - | 6 | pF |

TOP DYNAMIC

Fig. 1 $h_{FE} - I_C$

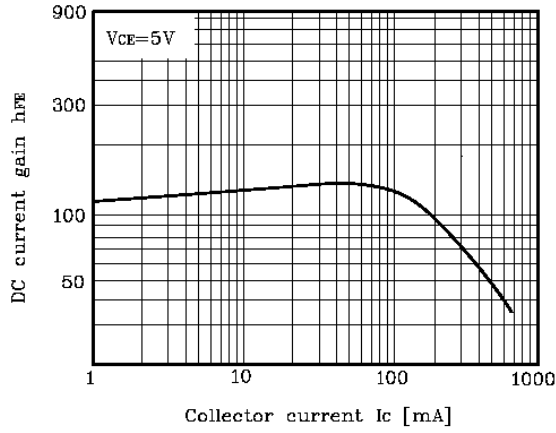


Fig. 2 $I_C - V_{BE}$

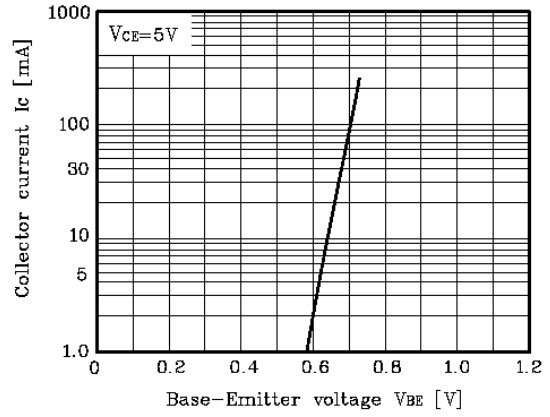


Fig. 3 $f_T - I_C$

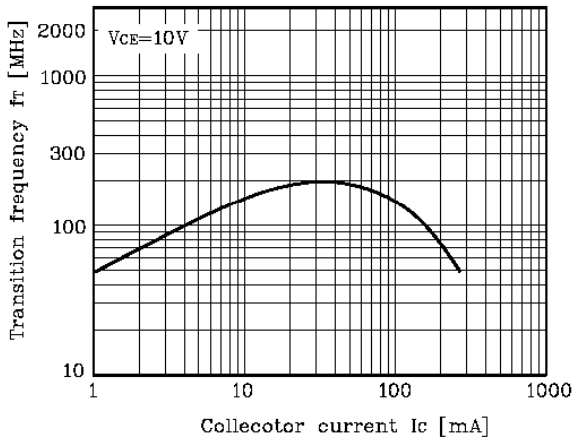


Fig. 4 $V_{CE(sat)}, V_{BE(sat)} - I_C$

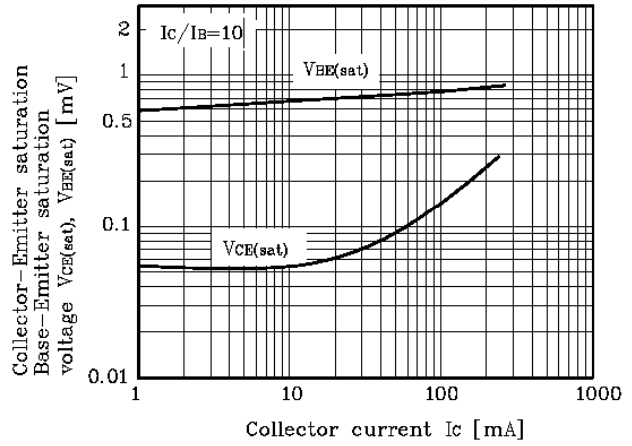


Fig. 5 $C_{ob} - V_{CB}$

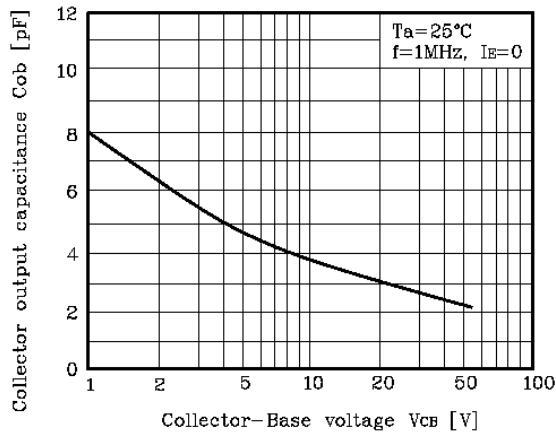


Fig. 6 $P_{tot} - T_a$

