

2SA1614

Silicon PNP triple diffusion planar type

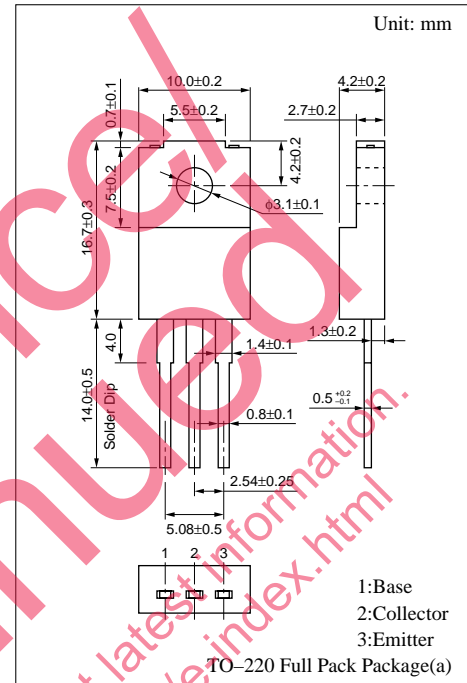
For high-speed switching

Features

- High-speed switching
- High collector to base voltage V_{CBO}
- Wide area of safe operation (ASO)
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Full-pack package which can be installed to the heat sink with one screw

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

| Parameter | Symbol | Ratings | Unit |
|------------------------------|-----------|------------------------|------------------|
| Collector to base voltage | V_{CBO} | -400 | V |
| Collector to emitter voltage | V_{CEO} | -400 | V |
| Emitter to base voltage | V_{EBO} | -7 | V |
| Peak collector current | I_{CP} | -1 | A |
| Collector current | I_C | -0.5 | A |
| Collector power dissipation | P_C | $T_C=25^\circ\text{C}$ | 25 |
| | | $T_a=25^\circ\text{C}$ | 2 |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

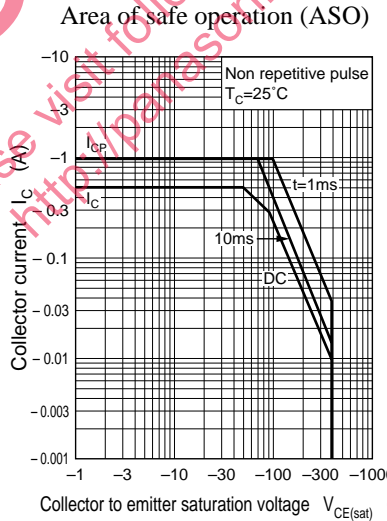
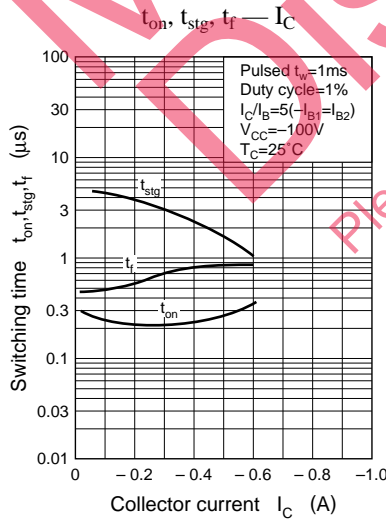
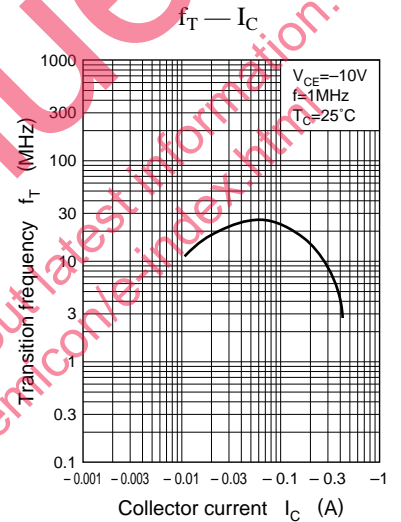
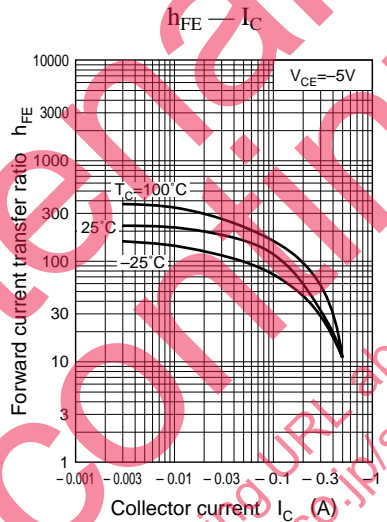
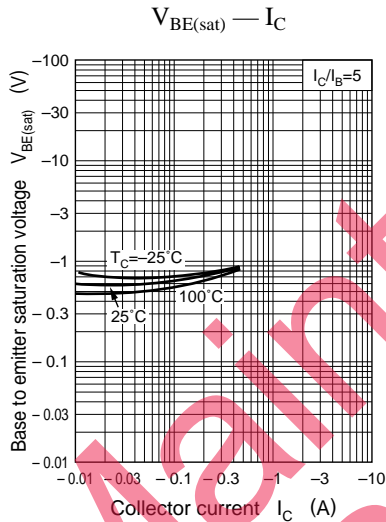
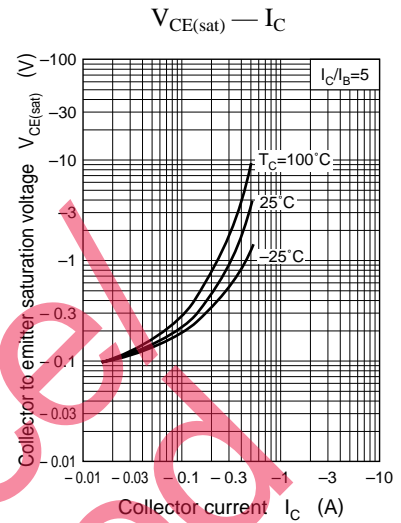
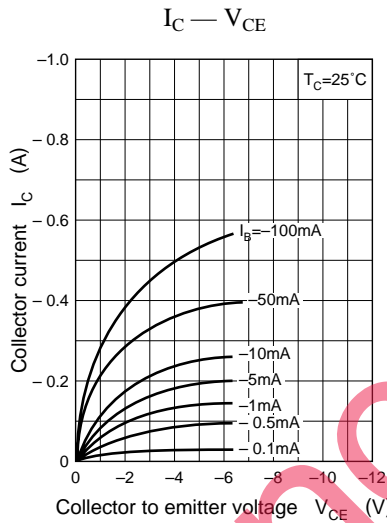
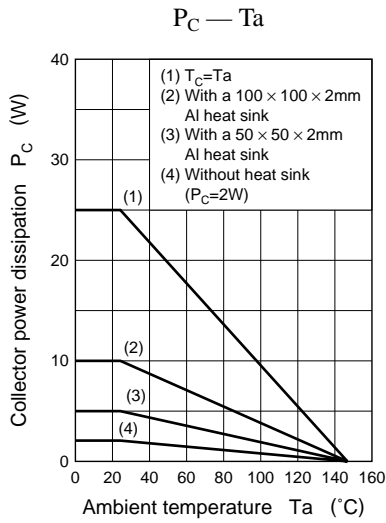


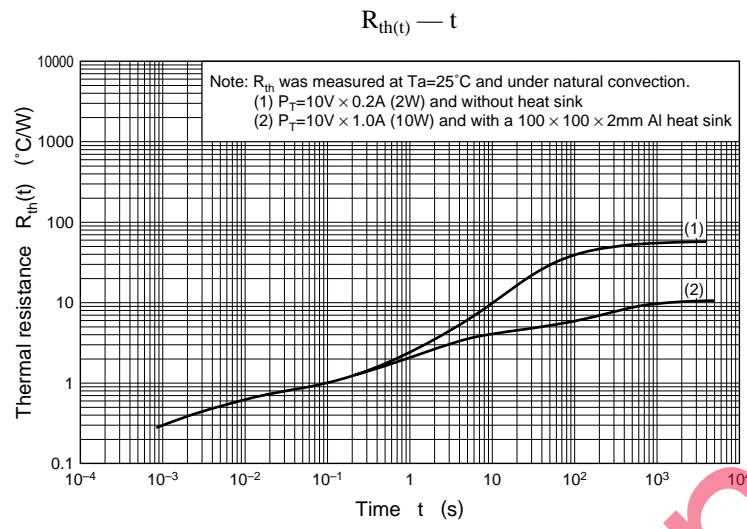
Electrical Characteristics ($T_C=25^\circ\text{C}$)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|---------------|---|------|------|------|---------------|
| Collector cutoff current | I_{CBO} | $V_{CB} = -400\text{V}, I_E = 0$ | | | -100 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = -7\text{V}, I_C = 0$ | | | -100 | μA |
| Collector to emitter voltage | V_{CEO} | $I_C = -10\text{mA}, I_B = 0$ | -400 | | | V |
| Forward current transfer ratio | h_{FE1}^* | $V_{CE} = -5\text{V}, I_C = -50\text{mA}$ | 80 | | 280 | |
| | h_{FE2} | $V_{CE} = -5\text{V}, I_C = -0.3\text{A}$ | 10 | | | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -0.2\text{A}, I_B = -40\text{mA}$ | | | -1.5 | V |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -0.2\text{A}, I_B = -40\text{mA}$ | | | -1.5 | V |
| Transition frequency | f_T | $V_{CE} = -10\text{V}, I_C = -0.1\text{A}, f = 1\text{MHz}$ | | 20 | | MHz |
| Turn-on time | t_{on} | $I_C = -0.3\text{A}$ | | 0.25 | | μs |
| Storage time | t_{stg} | $I_{B1} = -60\text{mA}, I_{B2} = 60\text{mA}$ | | 2.0 | | μs |
| Fall time | t_f | $V_{CC} = -200\text{V}$ | | 0.5 | | μs |

* h_{FE1} Rank classification

| Rank | Q | P |
|-----------|-----------|------------|
| h_{FE1} | 80 to 160 | 130 to 280 |





Maintenance/Discontinued

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