

**Application**

- Micom Direct drive and switching Application

**Features**

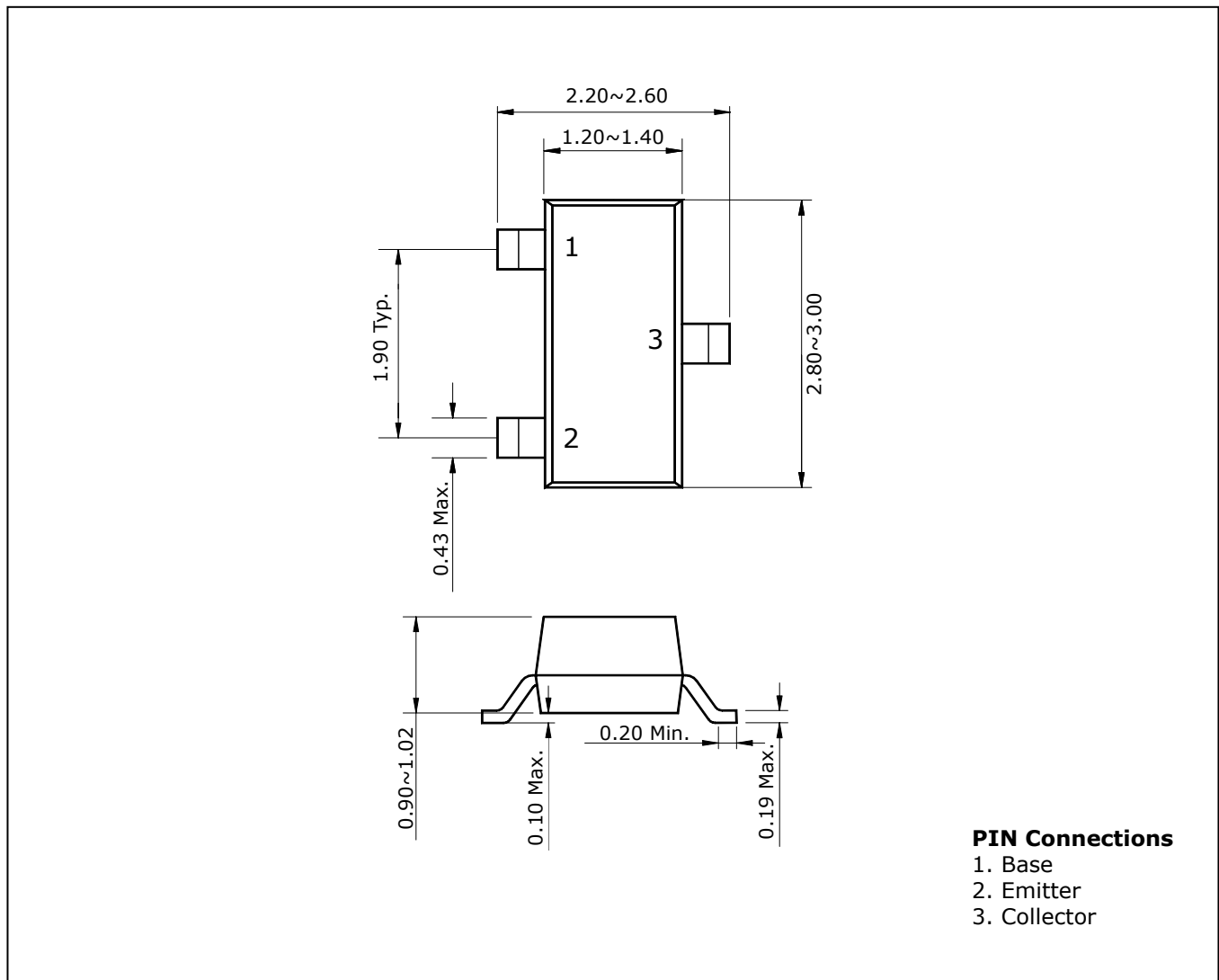
- Very low saturation voltage:  $V_{CE(sat)}=0.2V$  (Max.) @  $I_C=50mA$ ,  $I_B=5mA$
- High DC current gain:  $h_{FE}=1000\sim 2500$

**Ordering Information**

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| STD6528S | ZA      | SOT-23       |

**Outline Dimensions**

unit : mm



## Absolute Maximum Ratings

Ta=25°C

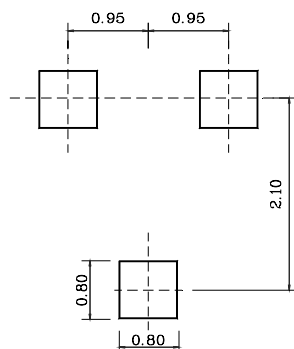
| Characteristic              | Symbol    | Rating  | Unit |
|-----------------------------|-----------|---------|------|
| Collector-base voltage      | $V_{CBO}$ | 25      | V    |
| Collector-emitter voltage   | $V_{CEO}$ | 20      | V    |
| Emitter-base voltage        | $V_{EBO}$ | 5       | V    |
| Collector current           | $I_C$     | 150     | mA   |
| Collector power dissipation | $P_C$     | 200     | mW   |
| Junction temperature        | $T_J$     | 150     | °C   |
| Storage temperature range   | $T_{stg}$ | -55~150 | °C   |

## Electrical Characteristics

Ta=25°C

| Characteristic                       | Symbol        | Test Condition                  | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|---------------------------------|------|------|------|------|
| Collector-emitter breakdown voltage  | $BV_{CEO}$    | $I_C=1mA, I_B=0$                | 20   | -    | -    | V    |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=25V, I_E=0$             | -    | -    | 0.1  | μA   |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5V, I_C=0$              | -    | -    | 0.1  | μA   |
| DC current gain                      | $h_{FE}$      | $V_{CE}=2V, I_C=4mA$            | 1000 | -    | 2500 | -    |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100\ \mu A, I_B=10\ \mu A$ | -    | 0.03 | -    | V    |
|                                      |               | $I_C=50mA, I_B=5mA$             | -    | -    | 0.2  |      |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE}=2V, I_C=4mA$            | -    | 0.6  | -    | V    |
| Transition frequency                 | $f_T$         | $V_{CE}=10V, I_C=1mA$           | -    | 150  | -    | MHz  |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1MHz$     | -    | 1.5  | -    | pF   |

※ Recommend PCB solder land [Unit: mm]



Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

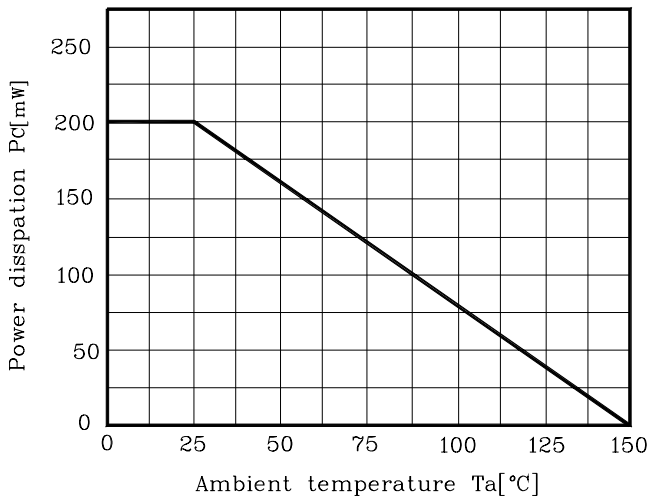


Fig. 2  $I_C - V_{BE}$

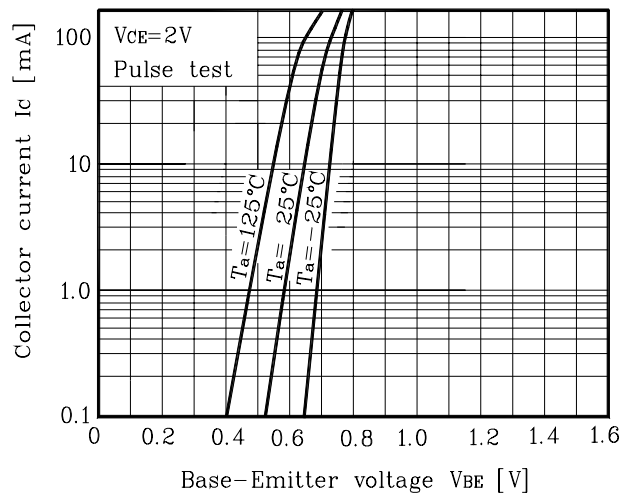


Fig. 3  $I_C - V_{CE}$

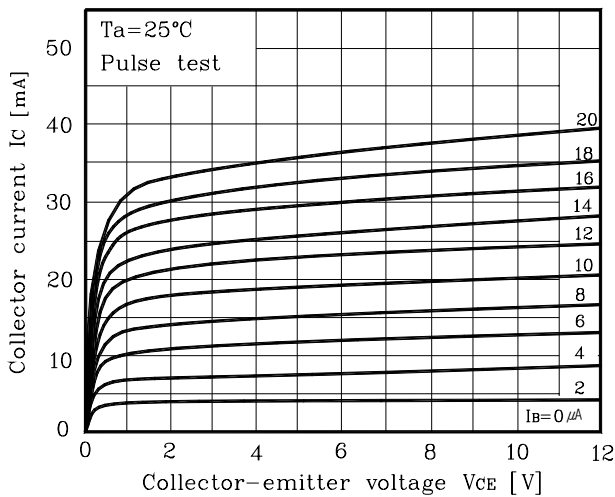


Fig. 4  $h_{FE} - I_C$

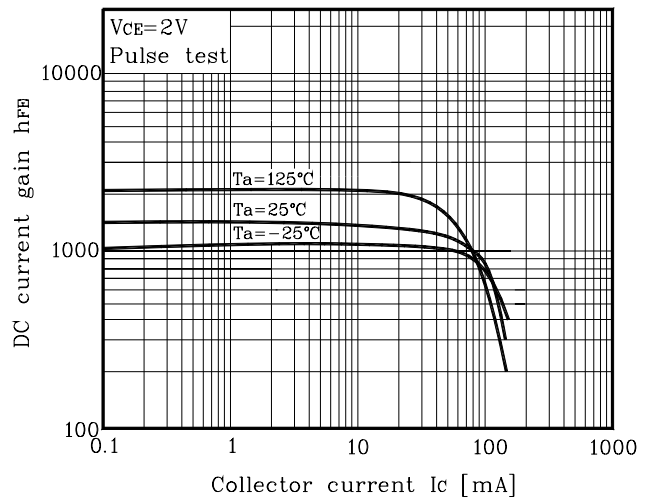


Fig. 5  $h_{FE} - I_C$

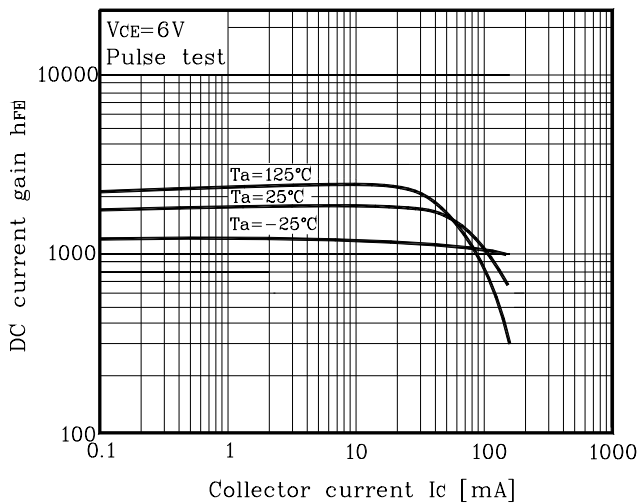
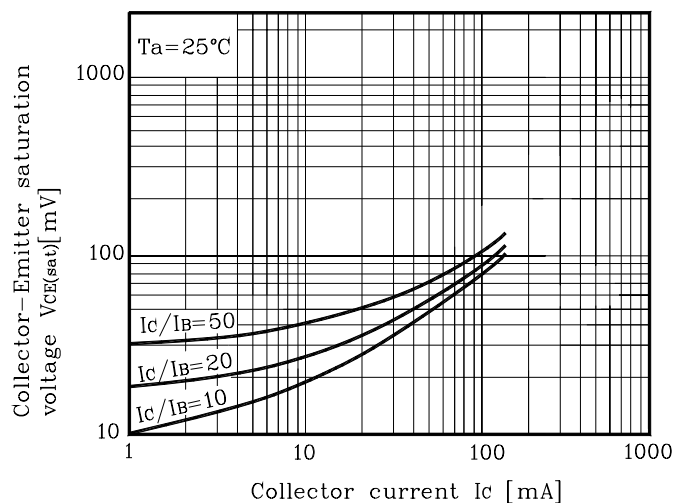


Fig. 6  $V_{CE(sat)} - I_C$



Electrical Characteristic Curves

Fig. 7  $C_{ob} - V_{CB}$

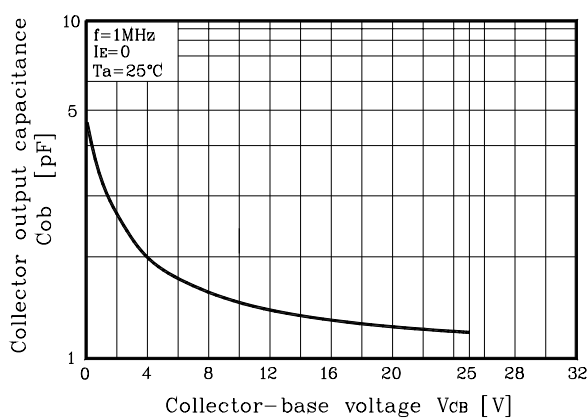
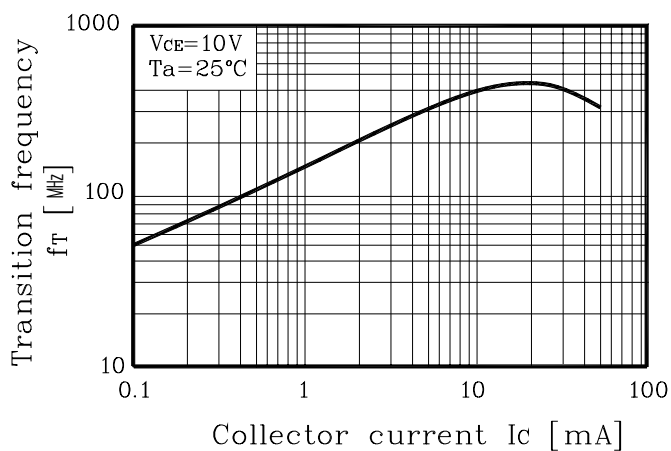


Fig. 8  $f_T - I_C$



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