

2SD1819A

Silicon NPN epitaxial planer type

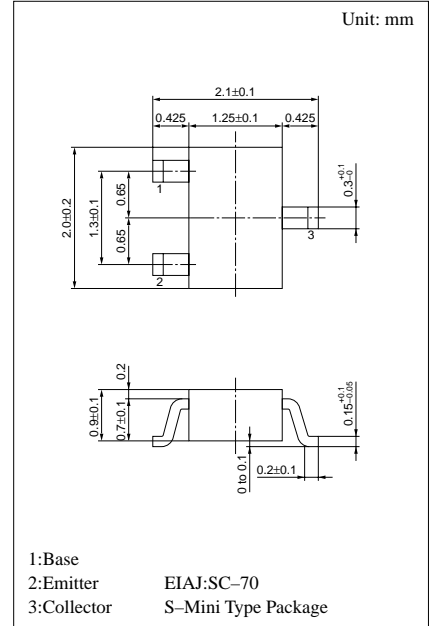
For general amplification
Complementary to 2SB1218A

■ Features

- High forward current transfer ratio h_{FE} .
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Ratings | Unit |
|------------------------------|-----------|------------|------|
| Collector to base voltage | V_{CBO} | 60 | V |
| Collector to emitter voltage | V_{CEO} | 50 | V |
| Emitter to base voltage | V_{EBO} | 7 | V |
| Peak collector current | I_{CP} | 200 | mA |
| Collector current | I_C | 100 | mA |
| Collector power dissipation | P_C | 150 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 ~ +150 | °C |



Marking symbol : Z

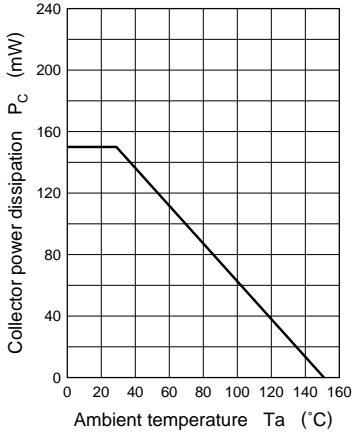
■ Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|---------------|--|-----|-----|-----|---------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 20V, I_E = 0$ | | | 0.1 | μA |
| | I_{CEO} | $V_{CE} = 10V, I_B = 0$ | | | 100 | μA |
| Collector to base voltage | V_{CBO} | $I_C = 10\mu A, I_E = 0$ | 60 | | | V |
| Collector to emitter voltage | V_{CEO} | $I_C = 2mA, I_B = 0$ | 50 | | | V |
| Emitter to base voltage | V_{EBO} | $I_E = 10\mu A, I_C = 0$ | 7 | | | V |
| Forward current transfer ratio | h_{FE1}^* | $V_{CE} = 10V, I_C = 2mA$ | 160 | | 460 | |
| | h_{FE2} | $V_{CE} = 2V, I_C = 100mA$ | 90 | | | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 100mA, I_B = 10mA$ | | 0.1 | 0.3 | V |
| Transition frequency | f_T | $V_{CB} = 10V, I_E = -2mA, f = 200MHz$ | | 150 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10V, I_E = 0, f = 1MHz$ | | 3.5 | | pF |

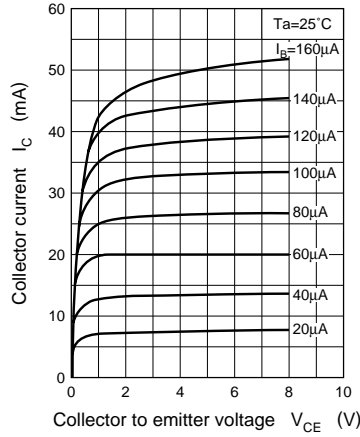
* h_{FE1} Rank classification

| Rank | Q | R | S |
|----------------|-----------|-----------|-----------|
| h_{FE1} | 160 ~ 260 | 210 ~ 340 | 290 ~ 460 |
| Marking Symbol | ZQ | ZR | ZS |

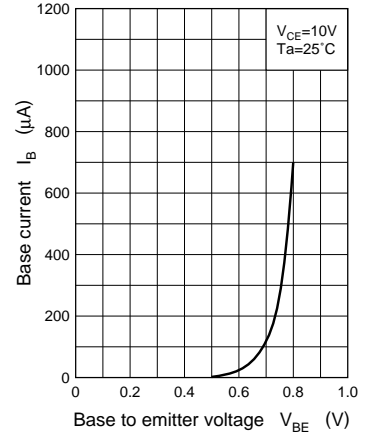
$P_C - T_a$



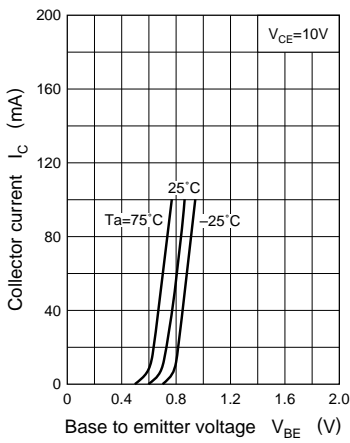
$I_C - V_{CE}$



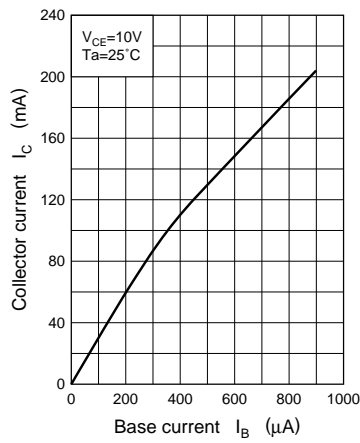
$I_B - V_{BE}$



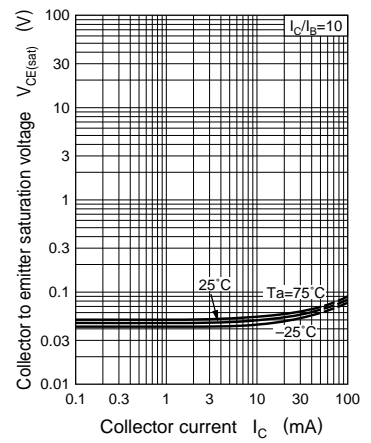
$I_C - V_{BE}$



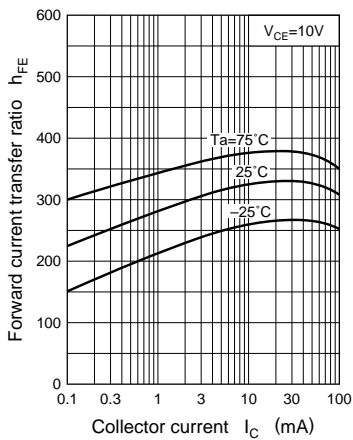
$I_C - I_B$



$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$

