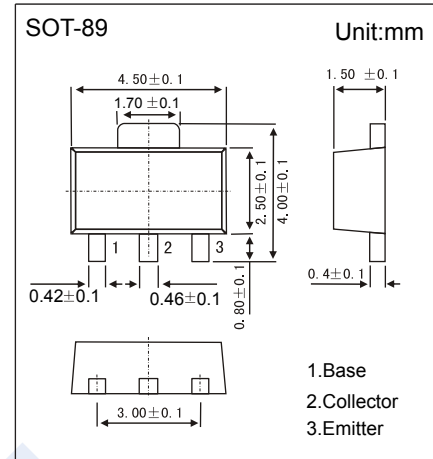


## NPN Transistors

### 2SD1420

#### ■ Features

- Collector Current Capability  $I_C=1.5A$
- Collector Emitter Voltage  $V_{CEO}=120V$



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

| Parameter                            | Symbol    | Rating     | Unit       |
|--------------------------------------|-----------|------------|------------|
| Collector - Base Voltage             | $V_{CBO}$ | 180        | V          |
| Collector - Emitter Voltage          | $V_{CEO}$ | 120        |            |
| Emitter - Base Voltage               | $V_{EBO}$ | 5          |            |
| Collector Current - Continuous       | $I_C$     | 1.5        | A          |
| Collector Current - Pulse            | $I_{CP}$  | 3          |            |
| Collector Power Dissipation (Note.1) | $P_C$     | 1          | W          |
| Junction Temperature                 | $T_J$     | 150        | $^\circ C$ |
| Storage Temperature Range            | $T_{stg}$ | -55 to 150 |            |

Note.1 :Value on the alumina ceramic board (12.5 x 20 x 0.7 mm)

#### ■ Electrical Characteristics $T_a = 25^\circ C$

| Parameter                            | Symbol        | Test Conditions             | Min | Typ | Max | Unit    |
|--------------------------------------|---------------|-----------------------------|-----|-----|-----|---------|
| Collector- base breakdown voltage    | $V_{CBO}$     | $I_C= 100 \mu A, I_E= 0$    | 180 |     |     | V       |
| Collector- emitter breakdown voltage | $V_{CEO}$     | $I_C= 1 mA, R_{BE}= \infty$ | 120 |     |     |         |
| Emitter - base breakdown voltage     | $V_{EBO}$     | $I_E= 100 \mu A, I_C= 0$    | 5   |     |     |         |
| Collector-base cut-off current       | $I_{CBO}$     | $V_{CB}= 160 V, I_E= 0$     |     |     | 1   | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}= 5V, I_C=0$         |     |     | 0.1 |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$       |     |     | 1   | V       |
| Base - emitter saturation voltage    | $V_{BE(sat)}$ | $I_C=500mA, I_B=50mA$       |     |     | 1.2 |         |
| Base - emitter voltage               | $V_{BE}$      | $V_{CE}= 5V, I_C=150mA$     |     |     | 0.9 |         |
| DC current gain                      | $h_{FE}$      | $V_{CE}= 5V, I_C=150mA$     | 60  |     | 320 |         |
|                                      |               | $V_{CE}= 5V, I_C=500mA$     | 30  |     |     |         |

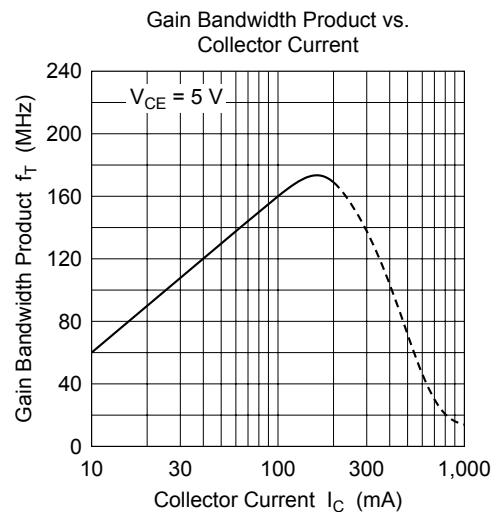
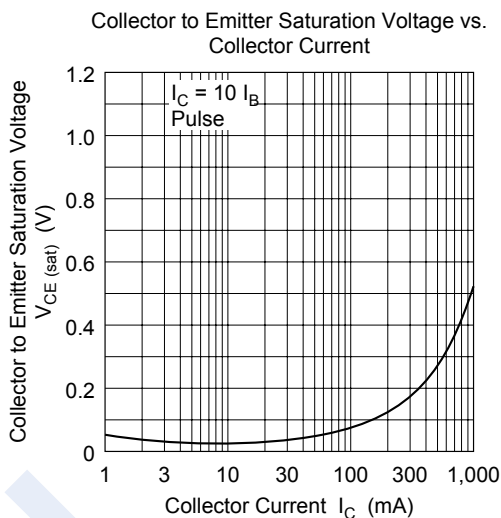
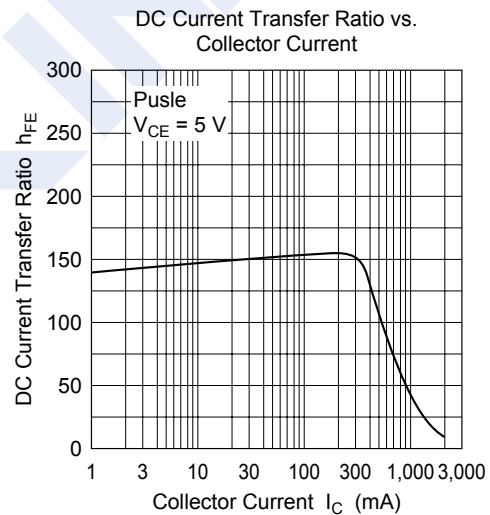
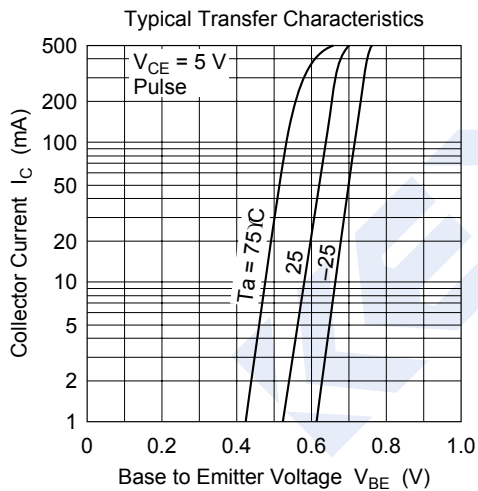
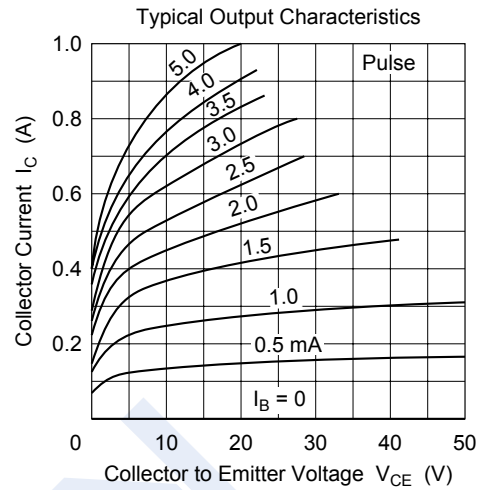
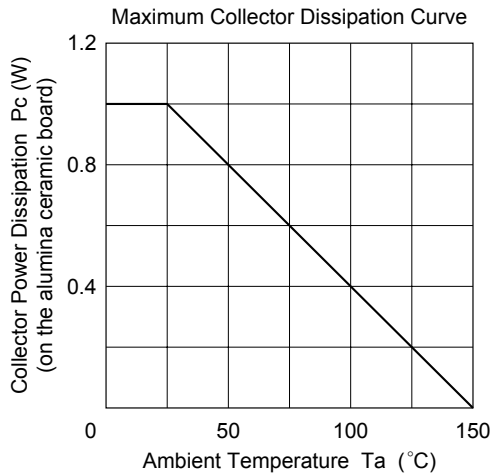
#### ■ Classification of $h_{FE}(1)$

| Type    | 2SD1420-A | 2SD1420-B | 2SD1420-C |
|---------|-----------|-----------|-----------|
| Range   | 60-120    | 100-200   | 160-320   |
| Marking | EA        | EB        | EC        |

## NPN Transistors

### 2SD1420

■ Typical Characteristics



## NPN Transistors

## 2SD1420

## ■ Typical Characteristics

