



查询"LB123D"供应商 DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

LB123D

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

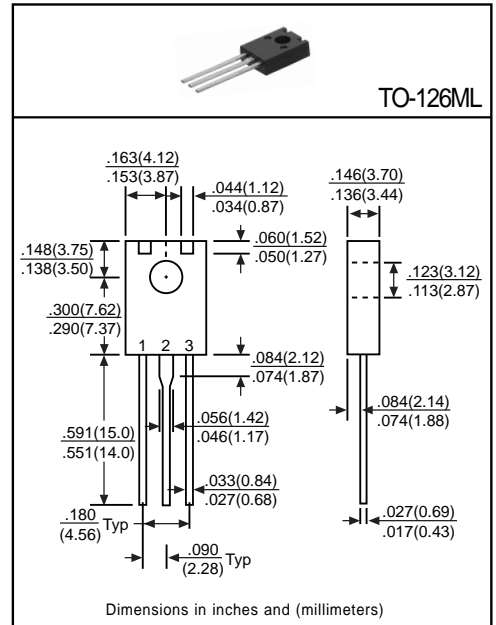
Designed for high voltage, high speed switching circuits, and amplifier applications.

Pinning

- 1 = Emitter
- 2 = Collector
- 3 = Base

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

| Characteristic | Symbol | Rating | Unit |
|---|-----------|-------------|--------------------|
| Collector-Base Voltage | V_{CB0} | 600 | V |
| Collector-Emitter Voltage | V_{CE0} | 400 | V |
| Emitter-Base Voltage | V_{EB0} | 8 | V |
| Collector Current(DC) | I_C | 1 | A |
| Collector Current(Pulse) | I_C | 2 | A |
| Total Power Dissipation($T_C=25^{\circ}\text{C}$) | P_D | 30 | W |
| Junction Temperature | T_J | +150 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | -55 to +150 | $^{\circ}\text{C}$ |



Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Conditions |
|---|----------------|-----|-----|-----|---------------|-------------------------------------|
| Collector-Base Breakdown Voltage | BV_{CB0} | 600 | - | - | V | $I_C=1\text{mA}, I_E=0$ |
| Collector-Emitter Breakdown Voltage | BV_{CE0} | 400 | - | - | V | $I_C=10\text{mA}, I_B=0$ |
| Emitter-Base Breakdown Voltage | BV_{EB0} | 8 | - | - | V | $I_E=1\text{mA}, I_C=0$ |
| Collector Cutoff Current | I_{CB0} | - | - | 10 | μA | $V_{CB}=600\text{V}, I_E=0$ |
| Emitter Cutoff Current | I_{EB0} | - | - | 10 | μA | $V_{BE}=9\text{V}, I_C=0$ |
| Collector-Emitter Saturation Voltage ⁽¹⁾ | $V_{CE(sat)1}$ | - | - | 0.8 | V | $I_C=0.1\text{A}, I_B=10\text{mA}$ |
| | $V_{CE(sat)2}$ | - | - | 0.9 | V | $I_C=0.3\text{A}, I_B=30\text{mA}$ |
| Base-Emitter Saturation Voltage ⁽¹⁾ | $V_{BE(sat)1}$ | - | - | 1.2 | V | $I_C=0.1\text{A}, I_B=10\text{mA}$ |
| | $V_{BE(sat)2}$ | - | - | 1.8 | V | $I_C=0.3\text{A}, I_B=30\text{mA}$ |
| DC Current Gain ⁽¹⁾ | h_{FE1} | 10 | - | 50 | - | $I_C=0.3\text{A}, V_{CE}=5\text{V}$ |
| | h_{FE2} | 10 | - | - | - | $I_C=0.5\text{A}, V_{CE}=5\text{V}$ |
| | h_{FE3} | 6 | - | - | - | $I_C=1\text{A}, V_{CE}=5\text{V}$ |

(1)Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

Classification of h_{FE1}

| Rank | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Range | 10~17 | 13~22 | 18~27 | 23~32 | 28~37 | 33~42 | 38~47 | 43~50 |