DC COMPONENTS CO., LTD.

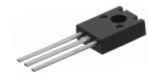
DISCRETE SEMICONDUCTORS

LB123D

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

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



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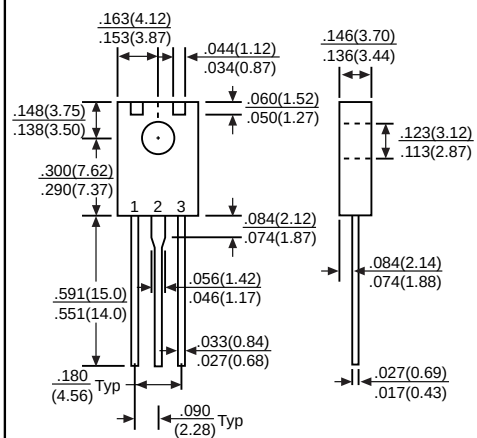

Dimensions in inches and (millimeters)

Pinning

1 = Emitter
2 = Collector
3 = Base

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current(DC)	I_C	1	A
Collector Current(Pluse)	I_C	2	A
Total Power Dissipation(T_C=25°C)	P_D	30	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

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

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

(1)Pulse Test: Pulse Width≦380μs, Duty Cycle≦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

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