



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

MJE13007

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

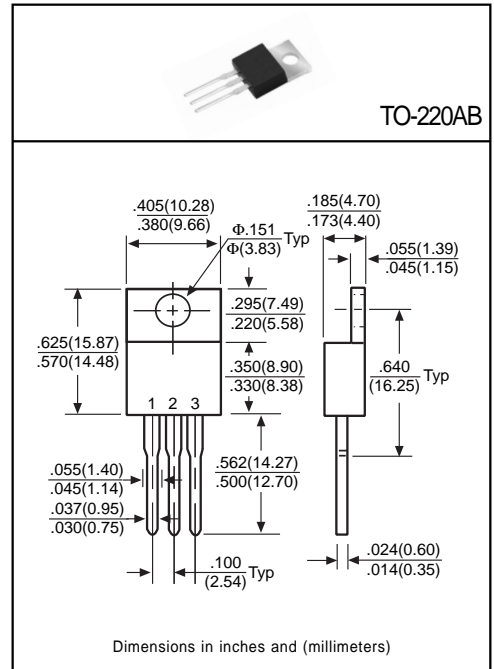
Designed for high-voltage, high-speed power switching inductive circuits.

Pinning

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

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	VCEX	700	V
	VCEO	400	V
Emitter-Base Voltage	VEBO	9	V
Collector Current	IC	8	A
Base Current	IB	4	A
Total Power Dissipation (Tc=25°C)	PD	80	W
Junction Temperature	TJ	+150	°C
Storage Temperature	TSTG	-55 to +150	°C



Electrical Characteristics

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Emitter Breakdown Voltage	BVCEX	700	-	-	V	IC=1mA, VBE(off)=1.5V
	BVCEO	400	-	-	V	IC=10mA
Collector Cutoff Current	ICEX	-	-	0.1	mA	VCE=700V, VBE(off)=1.5V
Emitter Cutoff Current	IEBO	-	-	0.1	mA	VEB=9V
Collector-Emitter Saturation Voltage ⁽¹⁾	VCE(sat)1	-	-	1	V	IC=2A, IB=400mA
	VCE(sat)2	-	-	2	V	IC=5A, IB=1A
	VCE(sat)3	-	-	3	V	IC=8A, IB=2A
Base-Emitter Saturation Voltage ⁽¹⁾	VBE(sat)1	-	-	1.2	V	IC=2A, IB=400mA
	VBE(sat)2	-	-	1.6	V	IC=5A, IB=1A
DC Current Gain ⁽¹⁾	hFE1	10	-	40	-	IC=2A, VCE=5V
	hFE2	10	-	30	-	IC=5A, VCE=5V

(1) Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%