



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2SC4242

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

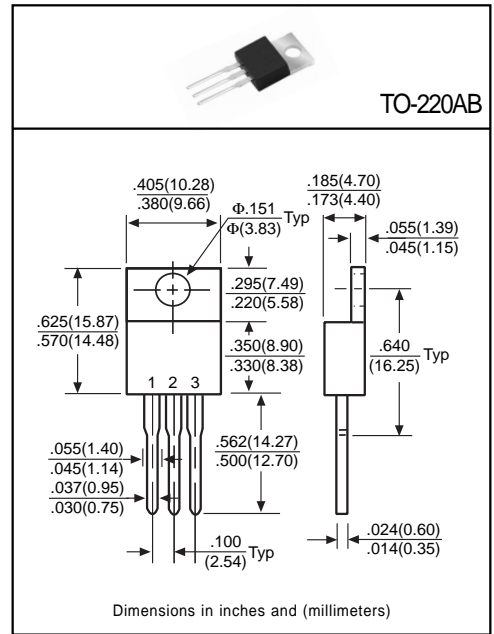
Designed for high speed switching applications.

Pinning

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

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	450	V
Collector-Emitter Voltage	V _{CE0}	400	V
Emitter-Base Voltage	V _{EB0}	10	V
Collector Current	I _C	7	A
Base Current	I _B	2	A
Total Power Dissipation(T _C =25°C)	P _D	40	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 Voltage	BV _{CB0}	450	-	-	V	I _C =1mA, I _E =0
Collector-Emitter Breakdown Voltage	BV _{CE0}	450	-	-	V	I _C =100mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EB0}	10	-	-	V	I _E =1mA, I _C =0
Collector Cutoff Current	I _{CBO}	-	-	100	μA	V _{CB} =450V, I _E =0
Emitter Cutoff Current	I _{EBO}	-	-	100	μA	V _{EB} =10V, I _C =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	-	0.8	V	I _C =4A, I _B =0.8A
Base-Emitter Saturation Voltage ⁽¹⁾	V _{BE(sat)}	-	-	1.2	V	I _C =4A, I _B =0.8A
DC Current Gain ⁽¹⁾	hFE1	15	-	55	-	I _C =0.8A, V _{CE} =5V
	hFE2	10	-	-	-	I _C =2A, V _{CE} =5V
	hFE3	10	-	-	-	I _C =4A, V _{CE} =5V

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

Classification of hFE1

Rank	A	B1	B2	B3	B4
Range	15~28	22~35	29~42	36~49	43~55