



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

1882

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

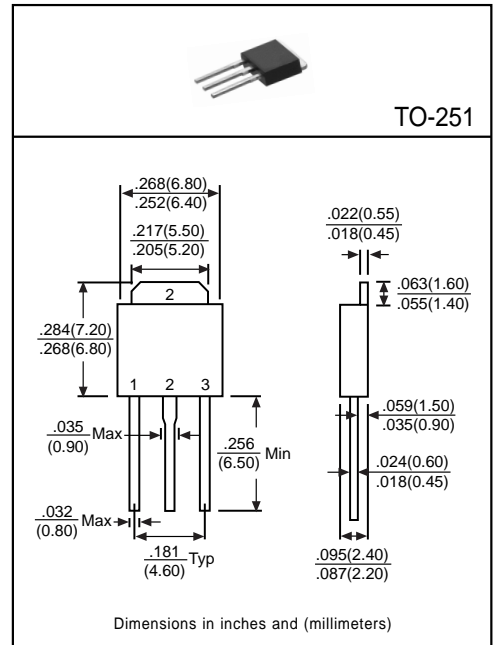
Designed for use in output stage of 10W audio amplifier, voltage regulator, DC-DC converter, and relay driver.

Pinning

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

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	40	V
Collector-Emitter Voltage	V _{CE0}	30	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current (DC)	I _C	3	A
Collector Current (pulse)	I _C	7	A
Base Current (DC)	I _B	600	mA
Total Power Dissipation(T _C =25°C)	P _D	10	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}	40	-	-	V	I _C =100μA, I _E =0
Collector-Emitter Breakdown Voltage	BV _{CE0}	30	-	-	V	I _C =1mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EB0}	5	-	-	V	I _E =10μA, I _C =0
Collector Cutoff Current	I _{CB0}	-	-	1	μA	V _{CB} =30V, I _E =0
Emitter Cutoff Current	I _{EB0}	-	-	1	μA	V _{EB} =3V, I _C =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	0.3	0.5	V	I _C =2A, I _B =0.2A
Base-Emitter Saturation Voltage ⁽¹⁾	V _{BE(sat)}	-	1	2	V	I _C =2A, I _B =0.2A
DC Current Gain ⁽¹⁾	hFE1	30	-	-	-	I _C =20mA, V _{CE} =2V
	hFE2	100	-	500	-	I _C =1A, V _{CE} =2V
Transition Frequency	f _T	-	90	-	MHz	I _C =0.1A, V _{CE} =5V, f=100MHz
Output Capacitance	C _{ob}	-	45	-	pF	V _{CB} =10V, f=1MHz

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

Classification of hFE2

Rank	Q	P	E
Range	100~200	160~320	250~500