



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2N3055

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

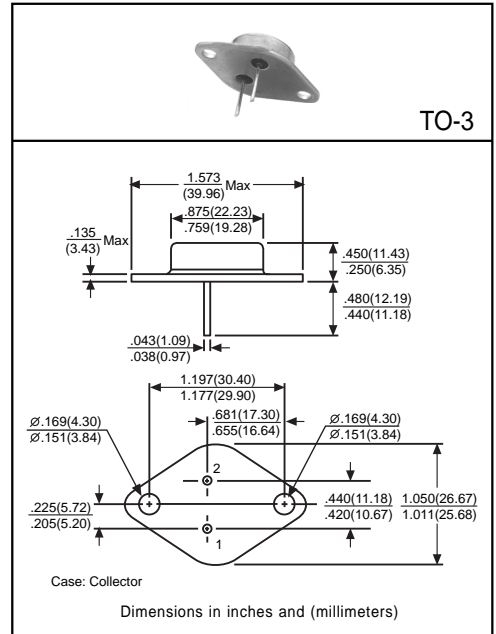
Designed for power switching circuits, series and shunt regulators, output stages and high fidelity amplifiers.

Pinning

- 1 = Base
- 2 = Emitter
- Case = Collector

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	100	V
Collector-Emitter Voltage	V _{CEO}	60	V
	V _{CEV}	70	V
Emitter-Base Voltage	V _{EBO}	7	V
Collector Current	I _C	15	A
Base Current	I _B	7	A
Total Power Dissipation (T _C =25°C)	P _D	115	W
Junction Temperature	T _J	+200	°C
Storage Temperature	T _{STG}	-65 to +200	°C



Electrical Characteristics

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Emitter Sustaining Voltage	V _{CEO(sus)}	60	-	-	V	I _C =0.2A, I _B =0
	V _{CER(sus)}	70	-	-	V	I _C =0.2A, R _{BE} =100Ω
Collector Cutoff Current	I _{CEO}	-	-	0.7	mA	V _{CE} =30V, I _B =0
	I _{CEx}	-	-	1	mA	V _{CE} =100V, V _{BE(off)} =1.5V
		-	-	5	mA	V _{CE} =100V, V _{BE(off)} =1.5V, T _C =150°C
Emitter Cutoff Current	I _{EBO}	-	-	5	mA	V _{BE} =7V, I _C =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)1}	-	-	1.1	V	I _C =4A, I _B =0.4A
	V _{CE(sat)2}	-	-	3	V	I _C =10A, I _B =3.3A
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	-	-	1.5	V	I _C =4A, V _{CE} =4V
DC Current Gain ⁽¹⁾	h _{FE1}	20	-	70	-	I _C =4A, V _{CE} =4V
	h _{FE2}	5	-	-	-	I _C =10A, V _{CE} =4V
Second Breakdown Collector with Base Forward Bias	I _{S/b}	2.87	-	-	A	V _{CE} =40V, t=1.0s, Non-repetitive
Current Gain - Bandwidth Product	f _T	2.5	-	-	MHz	I _C =0.5A, V _{CE} =10V, f=1MHz
Small-Signal Current Gain	h _{fe}	15	-	120	-	I _C =10A, V _{CE} =4V, f=1KHz
Small-Signal Current Gain Cutoff Frequency	f _{hfe}	10	-	-	KHz	I _C =1A, V _{CE} =4V, f=1KHz

(1) Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%