



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2N3772

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

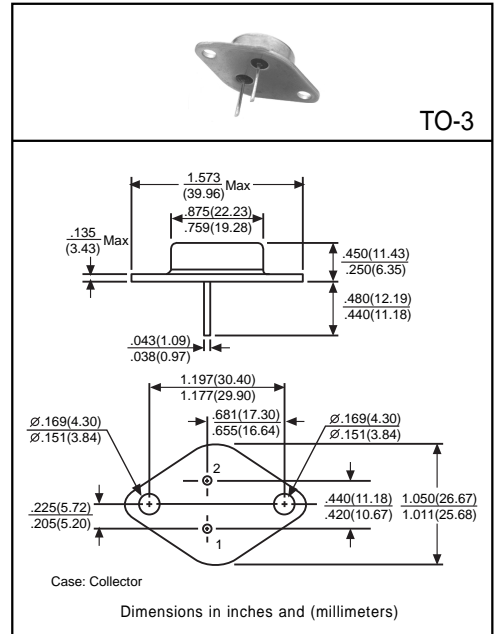
Designed for linear amplifiers, series pass regulators, and inductive switching applications.

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 _{CE0}	60	V
	V _{CEx}	80	V
Emitter-Base Voltage	V _{EBO}	7	V
Collector Current (continuous)	I _C	30	A
Collector Current (peak)	I _C	30	A
Total Power Dissipation (T _C =25°C)	P _D	150	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 _{CE0(sus)}	60	-	-	V	I _C =0.2A, I _B =0
	V _{CEx(sus)}	80	-	-	V	I _C =0.2A, V _{BE(off)} =1.5V, R _{BE} =100Ω
	V _{CER(sus)}	70	-	-	V	I _C =0.2A, R _{BE} =100Ω
Collector Cutoff Current	I _{CEO}	-	-	10	mA	V _{CE} =50V, I _B =0
	I _{CEx}	-	-	5	mA	V _{CE} =100V, V _{BE(off)} =1.5V
		-	-	10	mA	V _{CE} =30V, V _{BE(off)} =1.5V, T _C =150°C
	I _{CB0}	-	-	5	mA	V _{CB} =50V, I _E =0
Emitter Cutoff Current	I _{EBO}	-	-	5	mA	V _{BE} =7V, I _C =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)1}	-	-	1.4	V	I _C =10A, I _B =1.5A
	V _{CE(sat)2}	-	-	4	V	I _C =20A, I _B =4A
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	-	-	2.2	V	I _C =10A, V _{CE} =4V
DC Current Gain ⁽¹⁾	h _{FE1}	15	-	60	-	I _C =10A, V _{CE} =4V
	h _{FE2}	5	-	-	-	I _C =20A, V _{CE} =4V
Second Breakdown Collector with Base Forward Bias	I _{S/b}	2.5	-	-	A	V _{CE} =60V, t=1.0s, Non-repetitive
Current Gain - Bandwidth Product	f _T	0.2	-	-	MHz	I _C =1A, V _{CE} =4V, f=50KHz
Small-Signal Current Gain	h _{fe}	40	-	-	-	I _C =1A, V _{CE} =4V, f=1KHz

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