



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2N3773

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

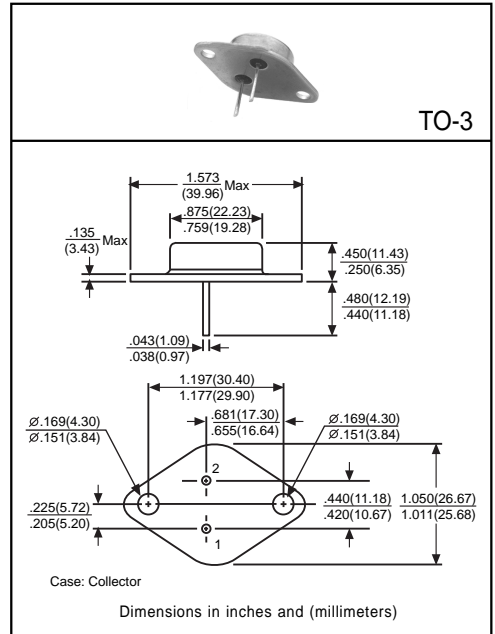
Designed for high power audio, disk head positioners, and other linear applications.

Pinning

1 = Base
2 = Emitter
Case = Collector

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	160	V
Collector-Emitter Voltage	V _{CEO}	140	V
	V _{CEX}	160	V
Emitter-Base Voltage	V _{EBO}	7	V
Collector Current (continuous)	I _C	16	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 _{CEO(sus)}	140	-	-	V	I _C =0.2A, I _B =0
	V _{CEX(sus)}	160	-	-	V	I _C =0.1A, V _{BE(off)} =1.5V, R _{BE} =100Ω
	V _{CER(sus)}	150	-	-	V	I _C =0.1A, R _{BE} =100Ω
Collector Cutoff Current	I _{CEO}	-	-	10	mA	V _{CE} =120V, I _B =0
	I _{CEx}	-	-	2	mA	V _{CE} =140V, V _{BE(off)} =1.5V
		-	-	10	mA	V _{CE} =140V, V _{BE(off)} =1.5V, T _C =150°C
	I _{CB0}	-	-	2	mA	V _{CB} =140V, 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 =8A, I _B =0.8A
	V _{CE(sat)2}	-	-	4	V	I _C =16A, I _B =3.2A
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	-	-	2.2	V	I _C =8A, V _{CE} =4V
DC Current Gain ⁽¹⁾	h _{FE1}	15	-	60	-	I _C =8A, V _{CE} =4V
	h _{FE2}	5	-	-	-	I _C =16A, V _{CE} =4V
Second Breakdown Collector with Base Forward Bias	I _{s/b}	1.5	-	-	A	V _{CE} =100V, t=1.0s, Non-repetitive
Small-Signal Current Gain	h _{fe}	40	-	-	-	I _C =1A, V _{CE} =4V, f=1KHZ
Magnitude of Common-Emitter Small-Signal, Short-Circuit, Forward Current Transfer Ratio	h _{fe}	4	-	-	-	I _C =1A, f=50KHZ

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