DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

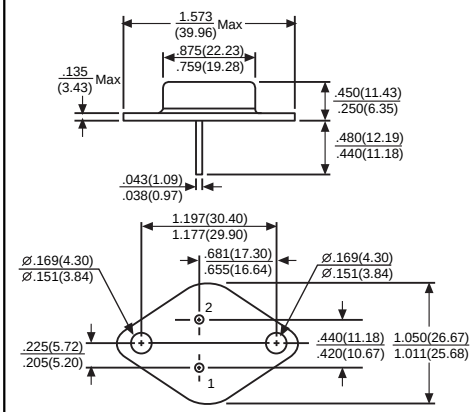
2N3772

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

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

TO-3



Dimensions in inches and (millimeters)

Pinning

1 = Base
2 = Emitter
Case = Collector

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	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	$V_{CEO(sus)}$	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_{CBO}	-	-	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	Is/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	hfe	40	-	-	-	I_C=1A, V_{CE}=4V, f=1KHz

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

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