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.

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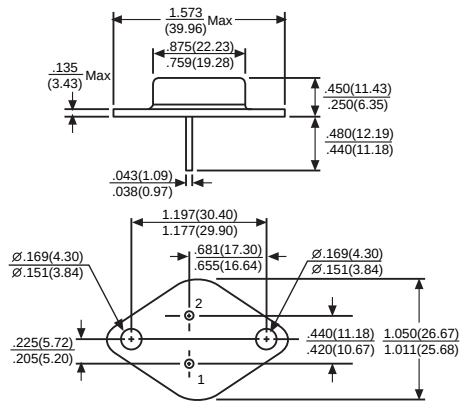

Dimensions in inches and (millimeters)

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_{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 Volatge	$V_{CEO(sus)}$	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	Is/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	hfe	15	-	120	-	I_C=10A, V_{CE}=4V, f=1KHz
Small-Signal Current Gain Cutoff Frequency	fhfe	10	-	-	KHz	I_C=1A, V_{CE}=4V, f=1KHz

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