2N3055

NPN SILICON POWER TRANSISTORS

The 2N3055 is a silicon Planar Epitaxial NPN transistor in Jedec TO-3 metal case. Designed for general purpose, moderate speed, switching and amplifier applications Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CBO}	Collector to Base Voltage		100	V
V_{CEO}	#Collector-Emitter Voltage		60	V
V_{CER}	Collector-Emitter Voltage		70	V
V_{EBO}	Emitter-Base Voltage		7	V
V_{CB}	Collector-Base Voltage		100	V
V_{EB}	Emitter-Base Voltage		7	V
I_C	Collector Current – Continuous		15	A
I_B	Base Current – Continuous		7	A
P_D	Total Device Dissipation	@ T_C = 25°	115	W
		Derate above 25°	0.657	W/°C
T_J	Junction Temperature		200	°C
T_S	Storage Temperature		-65 to +200	°C

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	1.52	°C/W

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	I_C= 200 mA, I_B= 0	60	-	-	V
V_{CER}	Collector-Emitter Breakdown Voltage (*)	I_C= 200 mA, R_{BE}= 100Ω	70	-	-	V
I_{CEO}	Collector-Emitter Current	V_{CE}= 30 V, I_B= 0	-	-	0.7	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= 100 V, $V_{EB(off)}$= 1.5 V	-	-	5	mA
I_{EBO}	Emitter Cutoff Current	V_{BE}= 7 V, I_C = 0	-	-	5	mA
h_{FE}	DC Current Gain	I_C= 4 A, V_{CE} = 4 A	20	-	70	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	I_C= 4 A, I_B= 400 mA	-	-	1.1	V
V_{BE}	Base-Emitter Voltage	I_C= 4 A, V_{CE}= 4 V	-	1.8	-	V
h_{fe}	Small Signal Current Gain	V_{CE}= 4 V, I_C= 1 A f= 1 kHz	15	-	120	-
$f_{\alpha e}$	Small Signal Current Gain Cutoff Frequency	V_{CE}= 4 V, I_C= 1 A f= 1 kHz	10	-	-	kHz
$I_{s/b}$	Second Breakdown Collector Current	t= 1 S (non repetitive)	1.95	-	-	A

In accordance with JEDEC Registration Data
(*) Pulse Width ≈ 300 μs, Duty Cycle ∠ 2.0%

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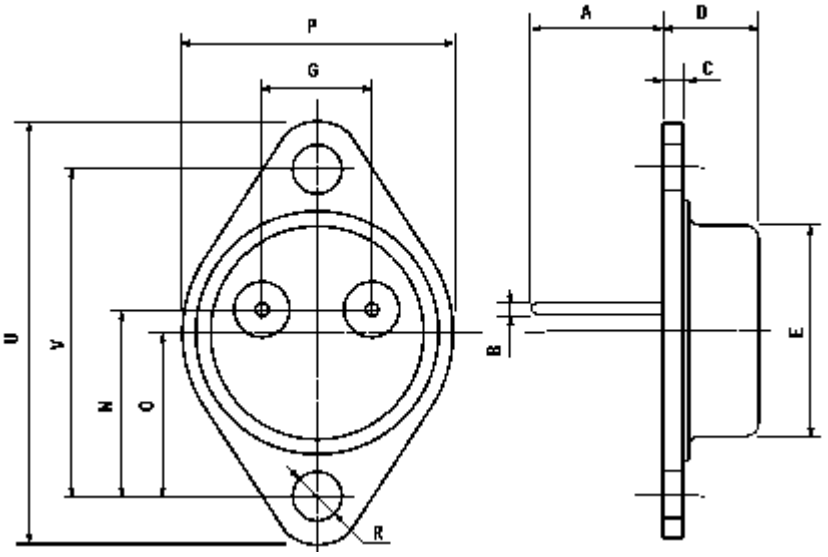
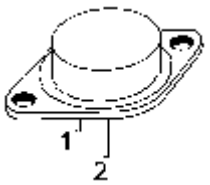
MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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