



2N3055

NPN SILICON DARLINGTONS

The 2N3055 is a silicon Planar Epitaxial NPN transistor in Jedec TO-39 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	@ $T_C = 25^\circ$	115	W
		Derate above 25°	0.657	W/ $^\circ$ C
T_J	Junction Temperature	200	$^\circ$ C	
T_S	Storage Temperature	-65 to +200	$^\circ$ C	

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	1.52	$^\circ$ 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 (*)	$I_C=200\text{ mA}, I_B=0$	60	-	-	V
BV_{CER}	Collector-Emitter Breakdown Voltage (*)	$I_C=200\text{ mA}, R_{BE}=100\Omega$	70	-	-	V
I_{CEO}	Collector-Emitter Current	$V_{CE}=30\text{ V}, I_B=0$	-	-	0.7	MA
I_{CEX}	Collector Cutoff Current	$V_{CE}=100\text{ V}, V_{EB(off)}=1.5\text{ V}$	-	-	5.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{BE}=7.0\text{ V}, I_C=0$	-	-	5.0	mA
h_{FE}	DC Current Gain	$I_C=4.0\text{ A}, I_B=4.0\text{ Adc}$	20	-	70	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C=4.0\text{ A}, I_B=0.4\text{ 2Adc}$	-	-	1.1	V
V_{BE}	Base-Emitter Voltage	$I_C=4.0\text{ A}, V_{CE}=4.0\text{ V}$	-	1.8	-	V
h_{fe}	Small Signal Current Gain	$V_{CE}=4.0\text{ V}, I_C=1.0\text{ A}$ $f=1.0\text{ kHz}$	15	-	120	-
$f_{\alpha e}$	Small Signal Current Gain Cutoff Frequency	$V_{CE}=4.0\text{ V}, I_C=1.0\text{ A}$ $f=1.0\text{ kHz}$	10	-	-	kHz
$V_{CER(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.2\text{ A}, I_B=0\text{ A}$ $R_{BE}=100\Omega$	60	-	-	V
$I_{s/b}$	Second Breakdown Collector Current	$t=1\text{ S (non repetitive)}$	1.95	-	-	A

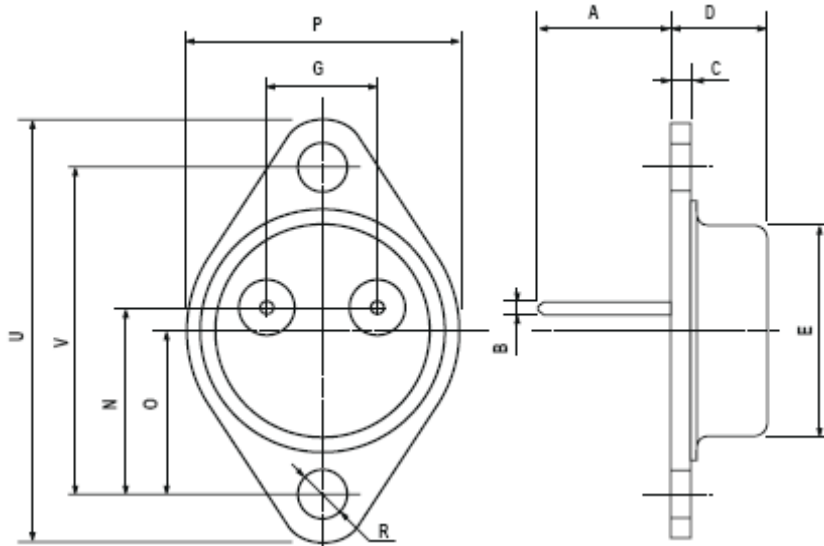
In accordance with JEDEC Registration Data

(*) Pulse Width $\approx 300\ \mu\text{s}$, Duty Cycle $\angle 2.0\%$

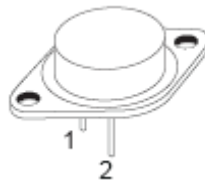
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MECHANICAL DATA CASE TO-3

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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