

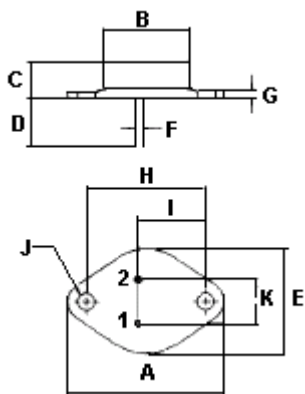
2N3055H

15A Power Transistors



Features:

- The 2N3055H is a Silicon power base transistor for high power audio, series-pass power supplies, disk-head positioners and other linear application. These devices can also be used in power switching circuits such as converters or inverters.
- Higher safe operating area than 2N3055 at $V_{CE} > 40V$.
- Low saturation voltages.
- High power dissipation capability.



Pin 1. Base
2. Emitter
Collector(Case)

Dimensions	Minimum	Maximum
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18

Dimensions : Millimetres

NPN
2N3055H

15 Ampere
NPN Silicon Transistors
60 Volts
115 Watts



TO-3

Maximum Ratings

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	60	V
Collector-Emitter Voltage	V_{CER}	70	
Collector-Base Voltage	V_{CBO}	100	
Emitter-Base Voltage	V_{EBO}	7.0	
Collector Current-Continuous	I_C	15	A
Base Current	I_B	7.0	
Total Power Dissipation at $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	115 0.657	W W/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +200	$^\circ C$



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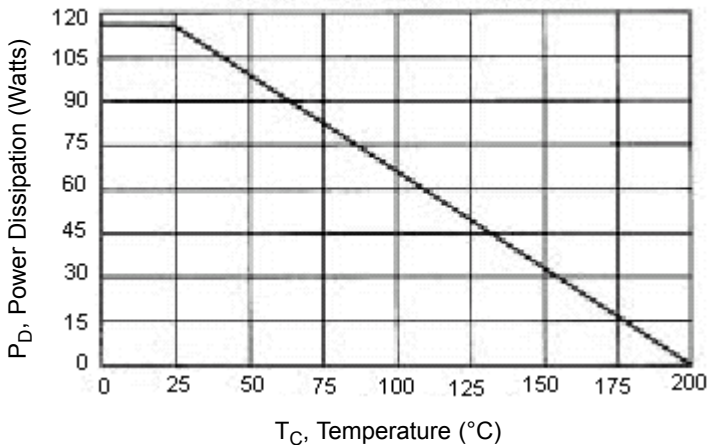
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Thermal Characteristics

Characteristic	Symbol	Maximum	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.52	$^{\circ}\text{C}/\text{W}$

Figure 1 - Power Derating



Electrical Characteristics ($T_C = 25^{\circ}\text{C}$ unless otherwise notes)

Characteristic	Symbol	Minimum	Maximum	Unit
OFF Characteristics (1)				
Collector-Emitter Sustaining Voltage ($I_C = 200\text{mA}$, $I_B = 0$)	$V_{CEO(sus)}$	60	-	V
Collector-Emitter Sustaining Voltage ($I_C = 200\text{mA}$, $R_{BE} = 100\Omega$)	$V_{CER(sus)}$	70	-	
Collector-Emitter Sustaining Voltage ($I_C = 100\text{mA}$, $V_{BE(off)} = 1.5\text{V}$)	$V_{CEX(sus)}$	90	-	
Collector Cut off Current ($V_{CE} = 30\text{V}$, $I_B = 0$)	I_{CEO}	-	0.7	mA
Collector Cut off Current ($V_{CE} = 100\text{V}$, $V_{BE(off)} = 1.5\text{V}$) ($V_{CE} = 100\text{V}$, $V_{BE(off)} = 1.5\text{V}$, $T_C = 150^{\circ}\text{C}$)	I_{CEX}	-	1.0 5.0	
Emitter Cut off Current ($V_{EB} = 7.0\text{V}$, $I_C = 0$)	I_{EBO}	-	5.0	
ON Characteristics				
DC Current Gain ($I_C = 4.0\text{A}$, $V_{CE} = 4.0\text{V}$) ($I_C = 10\text{A}$, $V_{CE} = 4.0\text{V}$)	h_{FE}	20 5.0	70	-
Collector-Emitter Saturation Voltage ($I_C = 4.0\text{A}$, $I_B = 0.4\text{A}$) ($I_C = 10\text{A}$, $I_B = 3.3\text{A}$)	$V_{CE(sat)}$	-	1.1 8.0	V
Base-Emitter on Voltage ($I_C = 4.0\text{A}$, $V_{CE} = 4.0\text{V}$)	$V_{BE(on)}$	-	1.8	



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Characteristic	Symbol	Minimum	Maximum	Unit
Second Breakdown				
Second Breakdown Collector Current with Base Forward Based ($t = 1\text{s}$ (non-repetitive), $V_{CE} = 60\text{V}$)	$I_{S/B}$	800	-	KHz
Dynamic Characteristics				
Current Gain-Bandwidth Product (2) ($I_C = 1.0\text{A}$, $V_{CE} = 4.0\text{V}$)	f_T	800	-	KHz
Small-Signal Current Gain ($I_C = 1.0\text{A}$, $V_{CE} = 4.0\text{V}$, $f = 1\text{KHz}$)	h_{fe}	10	-	-

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$

$$(2) f_T = |h_{fe}| \cdot f_{\text{test}}$$

Specifications

$I_{C(av)}$ maximum (A)	V_{CE0} maximum (V)	h_{FE} minimum at $I_C = 4\text{A}$	P_{tot} at 25°C (W)	Package	Type	Part Number
15	60	20	115	TO-3	NPN	2N3055H

2N3055H

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Notes:

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