Power Transistor
15A

multicomp PRO

Features:

- The 2N3055H is a Silicon power base transistor for high power audio, seriespass 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

Maximum Ratings

Rating	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	
Collector Current-Continuous	I_C	15	A
Base Current	I_B	7	
Total Power Dissipation at T_C = 25°C Derate above 25°C	P_D	115 0.657	W W/°C
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +200	°C

Thermal Characteristics

Characteristic	Symbol	Max.	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.52	°C/W

Electrical Characteristics (T_C = 25°C unless otherwise notes)

Characteristic	Symbol	Min.	Max.	Unit
OFF Characteristics (1)				
Collector-Emitter Sustaining Voltage (I_C = 200mA, I_B = 0)	$V_{CEO(sus)}$	60	-	V
Collector-Emitter Sustaining Voltage (I_C = 200mA, R_{BE} = 100Ω)	$V_{CER(sus)}$	70	-	
Collector-Emitter Sustaining Voltage (I_C = 100mA, $V_{BE(off)}$ = 1.5V)	$V_{CEX(sus)}$	90	-	
Collector Cut off Current (V_{CE} = 30V, I_B = 0)	I_{CEO}	-	0.7	mA
Collector Cut off Current (V_{CE} = 100V, $V_{BE(off)}$ = 1.5V) (V_{CE} = 100V, $V_{BE(off)}$ = 1.5V, T_C = 150°C)	I_{CEX}	-	1 5	
Emitter Cut off Current (V_{EB} = 7V, I_C = 0)	I_{EBO}	-	5	
ON Characteristics				
DC Current Gain (I_C = 4A, V_{CE} = 4V) (I_C = 10A, V_{CE} = 4V)	h_{FE}	20 5	70	-
Collector-Emitter Saturation Voltage (I_C = 4A, I_B = 0.4A) (I_C = 10A, I_B = 3.3A)	$V_{CE(sat)}$	-	1.1 8	V
Base-Emitter on Voltage (I_C = 4A, V_{CE} = 4V)	$V_{BE(on)}$	-	1.8	
Second Breakdown				
Second Breakdown Collector Current with Base Forward Based (t = 1s (non-repetitive), V_{CE} = 60V)	I	800	-	kHz
Dynamic Characteristics				
Current Gain-Bandwidth Product (2) (I_C = 1A, V_{CE} = 4V)	f	800	-	kHz
Small-Signal Current Gain (I_C = 1A, V_{CE} = 4V, f = 1kHz)	h	10	-	-

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

(2) f_T = | hfe | • f_{test}

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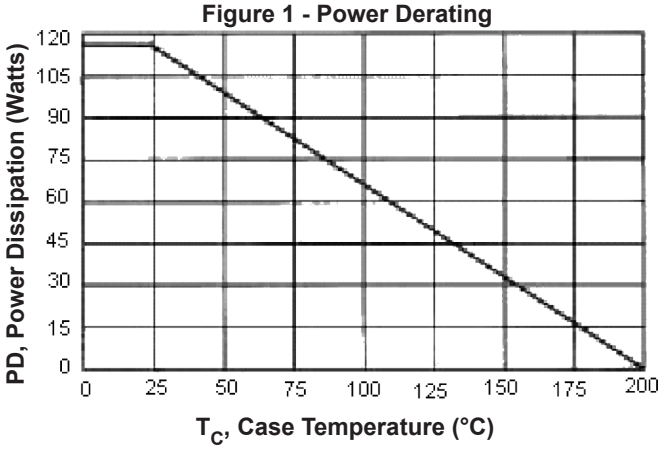
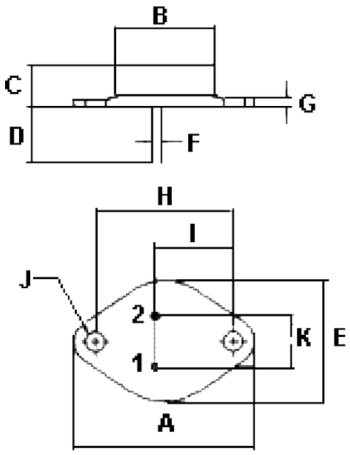
Figure 1 - Power Derating



Dimensions

(TO-3)



Dimensions	Min.	Max.
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.2	26.67
F	0.92	1.09
G	1.38	1.62
H	29.9	30.4
I	16.64	17.3
J	3.88	4.36
K	10.67	11.18

Dimensions : Millimetres

Pin Configuration

1. Base
2. Emitter
   Collector
   (Case)

Part Number Table

Description	Part Number
NPN Silicon Transistors, 60V, 115W	2N3055H