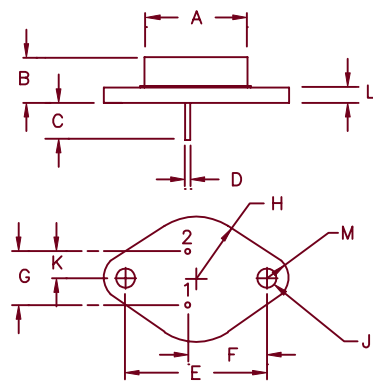


Silicon NPN Transistor

2N3055



Pin 1 – Base
Pin 2 – Emitter
Pin 3 – Collector

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	—	.875	—	22.23	Dia.
B	.250	.450	6.35	11.43	
C	.435	—	11.05	—	
D	.038	.043	.97	1.09	Dia.
E	1.177	1.197	29.90	30.40	
F	.655	.675	16.64	17.15	
G	.420	.440	10.67	11.18	
H	—	.525	—	13.34	Rad.
J	.151	.161	3.84	4.09	Dia.
K	.205	.225	5.21	5.72	
L	—	.135	—	3.43	
M	—	.188	—	4.78	Rad.

TO-204AA (TO-3)

ABSOLUTE MAXIMUM RATING (Ta=25°C unless otherwise specified)

PARAMETERS	SYMBOL	VALUE	UNITS
Collector–Base Voltage	V_{CB0}	100	V
Collector–Emitter Voltage	V_{CEO}	60	V
Collector–Base Voltage	V_{EBO}	7	V
Collector–Emitter Voltage	V_{CEV}	70	V
Collector Current	I_c	15	A
Collector Peak Current (1)	I_{CM}	15	A
Base Current	I_B	7	A
Base Peak Current (1)	I_{BM}	15	A
Total Dissipation at Ta = 25°C	P_{tot}	115	W
Storage Temperature	T_{STG}	–65 to 200	°C
Max. Operating Junction Temperature	T_j	200	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
OFF CHARACTERISTICS					
Collector–Emitter Sustaining Voltage	$V_{CEO} (sus)$	$I_c=200mA, I_B=0V$	60	---	V
Collector–Emitter Sustaining Voltage	$V_{CER} (sus)$	$I_c=0.2A, R_{BE}=100 \text{ Ohms}$	70	---	V
Collector Cut-off Current	I_{CEO}	$V_{CE}=30V, I_B=0$	---	0.7	mA
Collector Cut-off Current	I_{CEX}	$V_{CE}=100V, V_{BE} (off) = 1.5V$ $V_{CE}=100V, V_{BE} (off) = 1.5V$ $T_a=150^\circ C$	---	5.0	mA
Emitter Cut-off Current	I_{EBO}	$V_{BE}=7V, I_c=0$	---	5.0	mA
ON CHARACTERISTICS					
DC Current Gain	h_{FE}	$I_c=4A, V_{CE}=4V$ $I_c=10A, V_{CE}=4V$	20 5	70 ---	---
Collector–Emitter Saturation Voltage	$V_{CE} (sat.)$	$I_c=4A, I_B=400mA$ $I_c=10A, I_B=3.3A$	---	1.1 3.0	V ---

2N3055

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
Base-Emitter On Voltage	$V_{BE} (on)$	$I_C=4A, V_{CE}=4V$	---	1.5	V
SECOND BREAKDOWN					
Second Breakdown Collector with Base Forward Biased	I_S/b	$V_{CE}=60V, T=1.0s,$ Non-repetitive	2.87	---	A
DYNAMIC CHARACTERISTICS					
Current Gain-Bandwidth Product	F_T	$I_C=0.5A, V_{CE}=10V, f=1kHz$	2.5	---	MHz
Small Signal-Current Gain	h_{FE}	$I_C=1A, V_{CE}=4V, f=1kHz$	15	120	---
Small Signal-Current Gain Cut-off Frequency	f_{HFE}	$I_C=1A, V_{CE}=4V$ $F = 1.0kHz$	10	---	kHz

Note (1) : Pulse Test; Pulse Width $\leq 300 \mu s$, Duty Cycle $\leq 2\%$

Figure 1
DC Current Gain

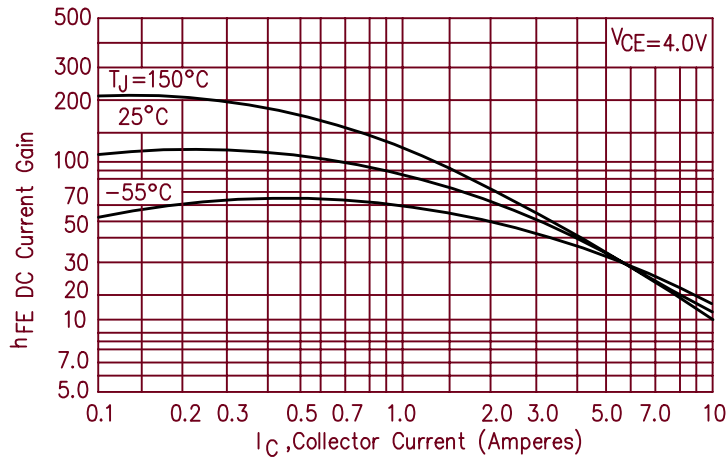


Figure 3
"ON" Voltages - Per Leg

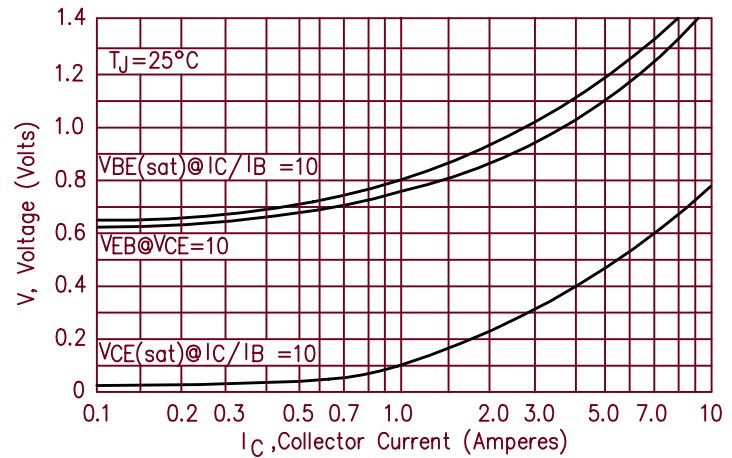


Figure 2
Collector Saturation Region

