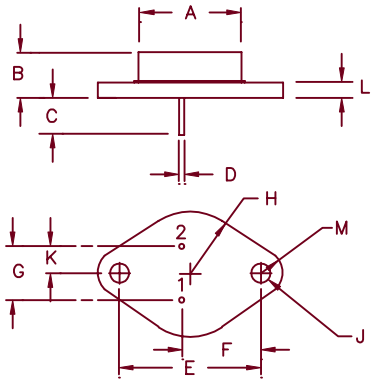
Silicon NPN Transistor
2N3055



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

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
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_{CBO}	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	Ic	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	Ptot	115	W
Storage Temperature	T_{STG}	–65 to 200	°C
Max. Operating Junction Temperature	Tj	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)	Ic=200mA. IB=0V	60	---	V
Collector–Emitter Sustaining Voltage	V_{CER} (sus)	Ic=0.2A. R_{BE}=100 Ohms	70	---	V
Collector Cut–off Current	I_{CEO}	V_{CE}=30V, IB=0	---	0.7	mA
Collector Cut–off Current	I_{CEX}	V_{CE}=100V, V_{BE} (off) = 1.5V	---	1.0	mA
		V_{CE}=100V, V_{BE} (off) = 1.5V Ta=150°C	---	5.0	---
Emitter Cut–off Current	I_{EBO}	V_{BE}= 7V, Ic=0	---	5.0	mA
ON CHARACTERISTICS					
DC Current Gain	h_{FE}	Ic=4A. V_{CE}=4V	20	70	---
		Ic=10A. V_{CE}=4V	5	---	---
Collector–Emitter Saturation Voltage	V_{CE} (sat.)	Ic=4A.IB=400mA	---	1.1	V
		Ic=10A.IB=3.3A	---	3.0	---

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6–8–01 Rev. IR

2N3055

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

Note (1) : Pulse Test; Pulse Width<=300 μs, Duty Cycle<=2%

Figure 1
DC Current Gain

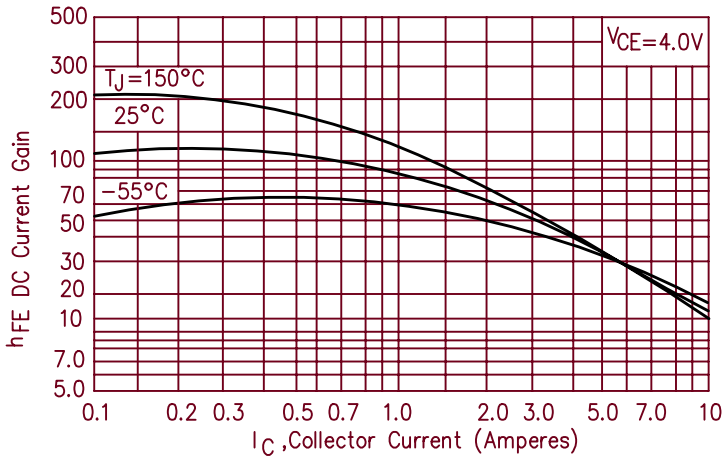

Figure 2
Collector Saturation Region

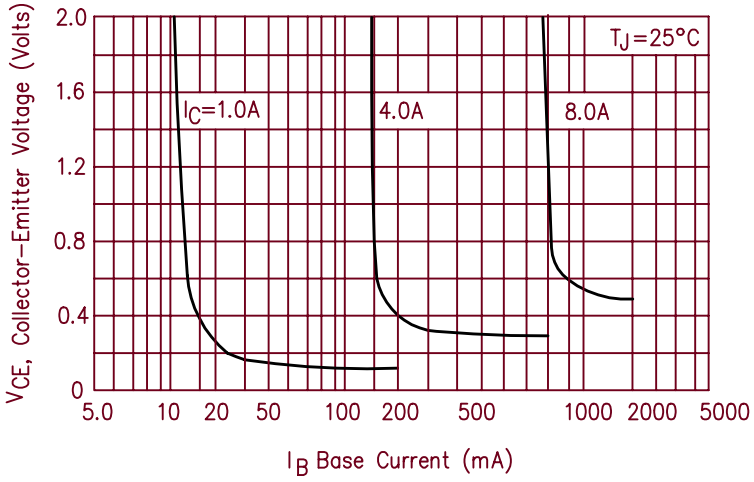

Figure 3
"ON" Voltages – Per Leg