

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N3054
2N3054A

NPN SILICON POWER TRANSISTOR

JEDEC TO-66 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3054, 2N3054A types are NPN Silicon Power Transistors manufactured by the epitaxial base process, mounted in a hermetically sealed metal case, designed for general purpose switching and amplifier applications. The 2N3054A uses a larger chip than the 2N3054 to allow better power dissipation and lower thermal resistance.

MAXIMUM RATINGS (T_C = 25°C)

	SYMBOL	2N3054	2N3054A	UNITS
Collector-Base Voltage	V _{CBO}	90	90	V
Collector-Emitter Voltage	V _{CEV}	90	90	V
Collector-Emitter Voltage	V _{CER}	60	60	V
Collector-Emitter Voltage	V _{CEO}	55	55	V
Emitter-Base Voltage	V _{EBO}	7.0	7.0	V
Collector Current	I _C	4.0	4.0	A
Base Current	I _B	2.0	2.0	A
Power Dissipation	P _D	25	75	W
Operating and Storage				
Junction Temperature	T _J , T _{stg}	-65 to +200		°C
Thermal Resistance	θ _{J-C}	7.0	2.33	°C/W

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N3054 2N3054A		UNITS
		MIN	MAX	
I _{CEV}	V _{CE} = 90V, V _{EB(OFF)} = 1.5V		1.0	mA
I _{CEV}	V _{CE} = 90V, V _{EB(OFF)} = 1.5V, T _C = 150°C		6.0	mA
I _{CEO}	V _{CE} = 30V		500	μA
I _{EBO}	V _{BE} = 7.0V		1.0	mA
BV _{CEO}	I _C = 100mA	55		V
BV _{CER}	I _C = 100mA, R _{BE} = 100Ω	60		V
V _{CE(SAT)}	I _C = 500mA, I _B = 50mA		1.0	V
V _{CE(SAT)}	I _C = 3.0A, I _B = 1.0A		6.0	V
V _{BE(ON)}	V _{CE} = 4.0V, I _C = 500mA		1.7	V
h _{FE}	V _{CE} = 4.0V, I _C = 500mA	25	150	
h _{FE}	V _{CE} = 4.0V, I _C = 3.0A	5.0		
h _{fe}	V _{CE} = 4.0V, I _C = 100mA, f = 1.0kHz	25	180	
f _T	V _{CE} = 10V, I _C = 200mA, f = 1.0MHz	3.0		MHz
f _{hfe}	V _{CE} = 4.0V, I _C = 100mA	30		kHz

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Mouser Electronics

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