Central™
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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 ($T_C = 25°C$)

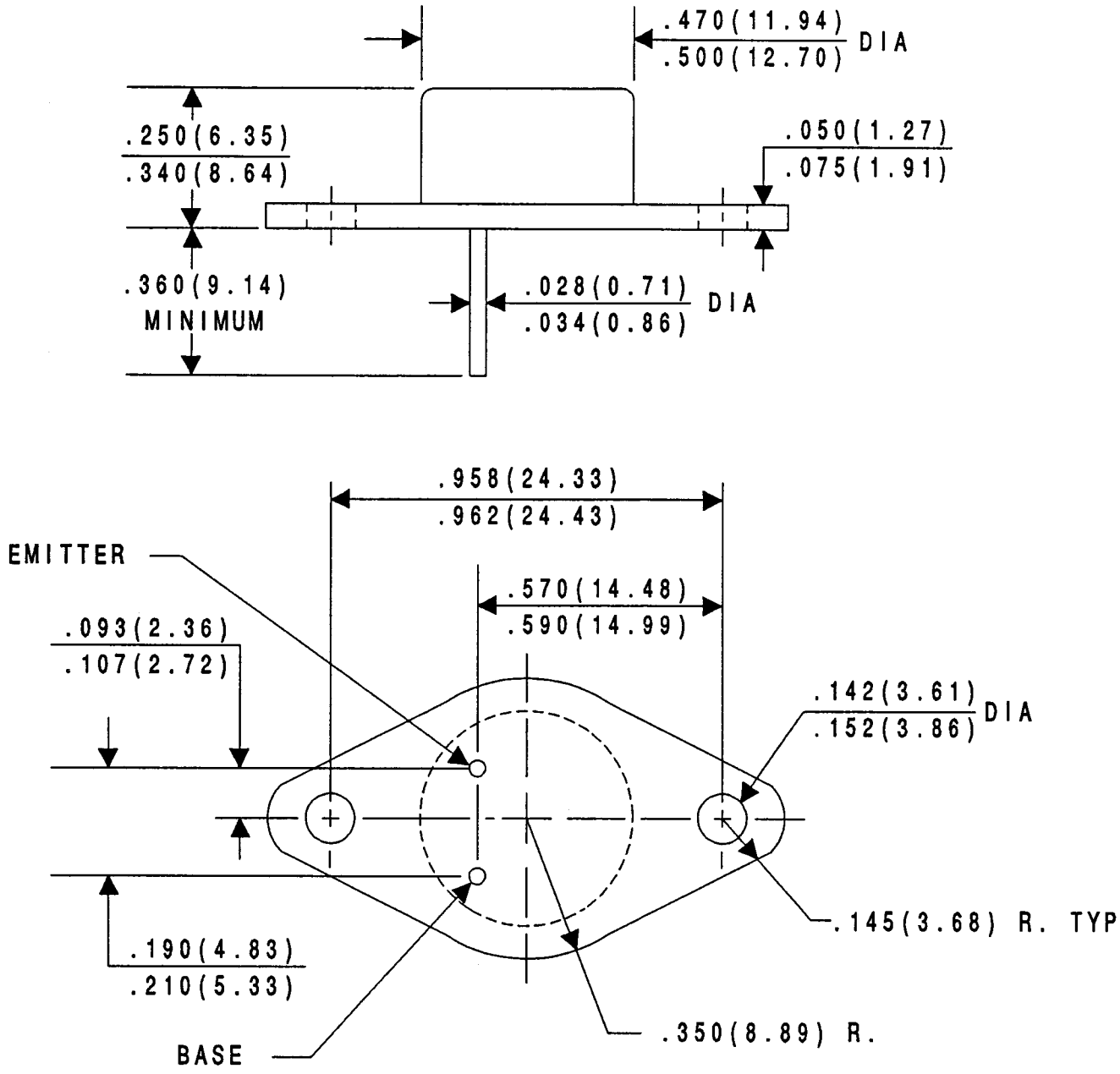
	SYMBOL	2N3054	2N3054A	UNITS
Collector-Base Voltage	V_{CBO}	90	90	V
Collector-Emitter Voltage	V_{CEV}	90	90	V
Collector-Emitter Voltage	V_{CER}	60	60	V
Collector-Emitter Voltage	V_{CEO}	55	55	V
Emitter-Base Voltage	V_{EBO}	7.0	7.0	V
Collector Current	I_C	4.0	4.0	A
Base Current	I_B	2.0	2.0	A
Power Dissipation	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 MIN	MAX	UNITS
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}	$I_C = 100mA$, $R_{BE} = 100\Omega$	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

(OVER)

JEDEC TO-66 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

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