

**2N3054**  
**2N3054A**

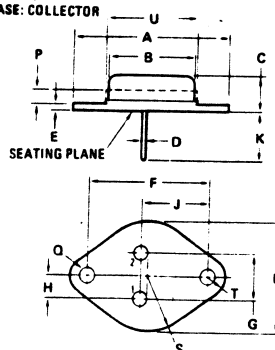
**ELECTRICAL CHARACTERISTICS** ( $T_C = 25^\circ$  unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
<b>*OFF CHARACTERISTICS</b>				
Collector-Emitter Sustaining Voltage (1) ( $I_C = 100$ mAdc, $I_B = 0$ )	$V_{CE(sus)}$	55	—	Vdc
Collector-Emitter Sustaining Voltage (1) ( $I_C = 100$ mAdc, $R_{BE} = 100 \Omega$ )	$V_{CER(sus)}$	60	—	Vdc
Collector Cutoff Current ( $V_{CE} = 30$ Vdc, $I_B = 0$ )	$I_{CEO}$	—	500	$\mu$ Adc
Collector Cutoff Current ( $V_{CE} = 90$ Vdc, $V_{BE(off)} = 1.5$ Vdc) ( $V_{CE} = 90$ Vdc, $V_{BE(off)} = 1.5$ Vdc, $T_C = 150^\circ C$ )	$I_{CEX}$	—	1.0 6.0	mAdc
Emitter Cutoff Current ( $V_{BE} = 7.0$ Vdc, $I_C = 0$ )	$I_{EBO}$	—	1.0	mAdc
<b>*ON CHARACTERISTICS (1)</b>				
DC Current Gain ( $I_C = 0.5$ Adc, $V_{CE} = 4.0$ Vdc) ( $I_C = 3.0$ Adc, $V_{CE} = 4.0$ Vdc)	$h_{FE}$	25 5.0	150 —	—
Collector-Emitter Saturation Voltage ( $I_C = 500$ mAdc, $I_B = 50$ mAdc) ( $I_C = 3.0$ Adc, $I_B = 1.0$ Adc)	$V_{CE(sat)}$	—	1.0 6.0	Vdc
Base-Emitter On Voltage ( $I_C = 500$ mAdc, $V_{CE} = 4.0$ Vdc)	$V_{BE(on)}$	—	1.7	Vdc
<b>DYNAMIC CHARACTERISTICS</b>				
Current-Gain—Bandwidth Product ( $I_C = 200$ mAdc, $V_{CE} = 10$ Vdc)	$f_T$	3.0	—	MHz
*Small-Signal Current Gain ( $I_C = 100$ mAdc, $V_{CE} = 4.0$ Vdc, $f = 1.0$ kHz)	$h_{fe}$	25	180	—
*Common-Emitter Cutoff Frequency ( $I_C = 100$ mAdc, $V_{CE} = 4.0$ Vdc)	$f_{hfe}$	30	—	kHz

**\*MAXIMUM RATINGS**

Rating	Symbol	2N3054A	2N3054	Unit
Collector-Emitter Voltage	$V_{CEO}$	55	—	Vdc
Collector-Emitter Voltage ( $R_{BE} = 100 \Omega$ )	$V_{CER}$	60	—	Vdc
Collector-Base Voltage	$V_{CB}$	90	—	Vdc
Emitter-Base Voltage	$V_{EB}$	7.0	—	Vdc
Collector Current — Continuous Peak	$I_C$	4.0 10**	—	Adc
Base Current	$I_B$	2.0	—	Adc
Total Device Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	$P_D$	75 0.43	25 0.143	Watts W/ $^\circ C$
Operating and Storage Junction, Temperature Range	$T_J, T_{stg}$	-65 to +200		$^\circ C$

STYLE 1:  
PIN 1. BASE  
2. EMITTER  
CASE: COLLECTOR



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
B	11.94	12.70	0.470	0.500
C	8.35	8.64	0.330	0.340
D	0.71	0.86	0.028	0.034
E	1.27	1.91	0.050	0.075
F	24.33	24.43	0.958	0.962
G	4.83	5.33	0.190	0.210
H	2.41	2.67	0.095	0.105
J	14.48	14.99	0.570	0.590
K	9.14	—	0.360	—
P	—	1.27	—	0.050
Q	3.61	3.86	0.142	0.152
S	—	8.89	—	0.350
T	—	3.68	—	0.145
U	—	15.75	—	0.620

