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**2N3053
 2N3053A**

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

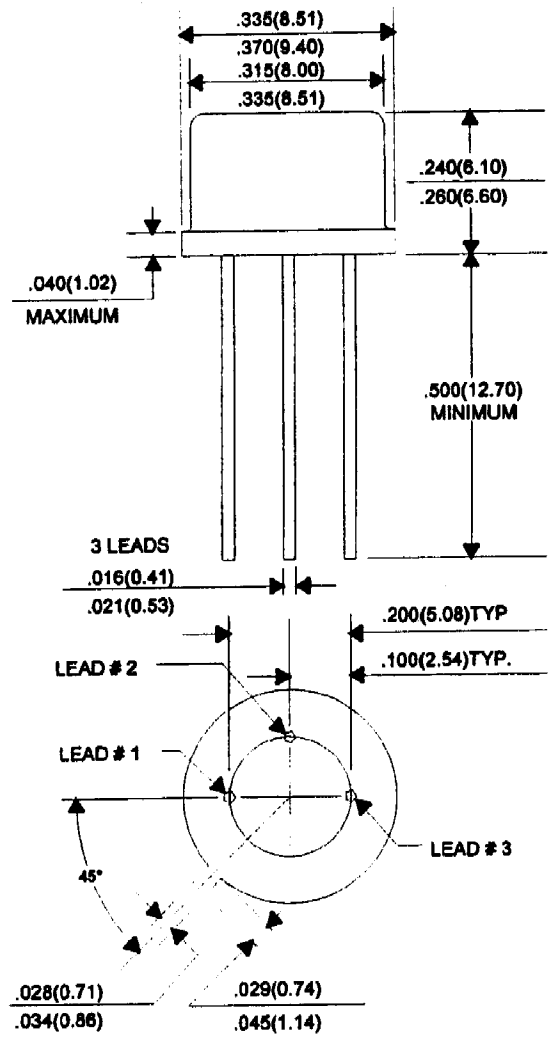
	<u>SYMBOL</u>	<u>2N3053</u>	<u>2N3053A</u>	<u>UNITS</u>
Collector-Base Voltage	V_{CBO}	60	80	V
Collector-Emitter Voltage	V_{CEO}	40	60	V
Emitter-Base Voltage	V_{EBO}	5.0		V
Collector Current	I_C	700		mA
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D	5.0		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
Thermal Resistance	θ_{JC}	35		$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>2N3053</u>		<u>2N3053A</u>		<u>UNITS</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
I_{CEV}	$V_{CE}=30\text{V}, V_{EB(\text{off})}=1.5\text{V}$		250			nA
I_{CEV}	$V_{CE}=60\text{V}, V_{EB(\text{off})}=1.5\text{V}$				250	nA
I_{EBO}	$V_{EB}=4.0\text{V}$		250		250	nA
BV_{CBO}	$I_C=100\mu\text{A}$	60		80		V
BV_{CER}	$I_C=100\text{mA}, R_{BE}=10\Omega$	50		70		V
BV_{CEO}	$I_C=100\mu\text{A}$	40		60		V
BV_{EBO}	$I_E=100\mu\text{A}$	5.0		5.0		V
$V_{CE(\text{SAT})}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.4		0.3	V
$V_{BE(\text{SAT})}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.7	0.6	1.0	V
$V_{BE(\text{ON})}$	$V_{CE}=2.5\text{V}, I_C=150\text{mA}$		1.7		1.0	V
h_{FE}	$V_{CE}=2.5\text{V}, I_C=150\text{mA}$	25		25		
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	50	250	50	250	
f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=20\text{MHz}$	100		100		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=140\text{kHz}$		15		15	pF
C_{ib}	$V_{BE}=0.5\text{V}, I_C=0, f=140\text{kHz}$		80		80	pF



NJ Semi-Cond reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Cond is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Cond assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Cond encourages customers to verify that Datasheets are current before placing orders.



Lead Code:

- 1) Emitter
- 2) Base
- 3) Collector