

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N2060M

NPN SILICON
DUAL TRANSISTOR

JEDEC TO-78 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N2060M is a silicon NPN dual transistor utilizing two individual chips mounted in a hermetically sealed metal case designed for differential amplifier applications.

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

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CER}	80	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	7.0	V
Collector Current	I_C	500	mA
Power Dissipation (One Die)	P_D	500	mW
Power Dissipation (Both Dice)	P_D	600	mW
Power Dissipation (One Die, $T_C=25^\circ\text{C}$)	P_D	1.5	W
Power Dissipation (Both Dice, $T_C=25^\circ\text{C}$)	P_D	3.0	W
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
I_{CBO}	$V_{CB}=80\text{V}$		2.0	nA
I_{EBO}	$V_{EB}=5.0\text{V}$		2.0	nA
BV_{CBO}	$I_C=100\mu\text{A}$	100		V
BV_{CER}	$I_C=10\text{mA}, R_{BE}=10\Omega$	80		V
BV_{CEO}	$I_C=30\text{mA}$	60		V
BV_{EBO}	$I_E=100\mu\text{A}$	7.0		V
$V_{CE(s)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.2	V
$V_{BE(s)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.9	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$	25	150	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	30	150	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	40	150	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	50	200	
f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=20\text{MHz}$	60		Mhz

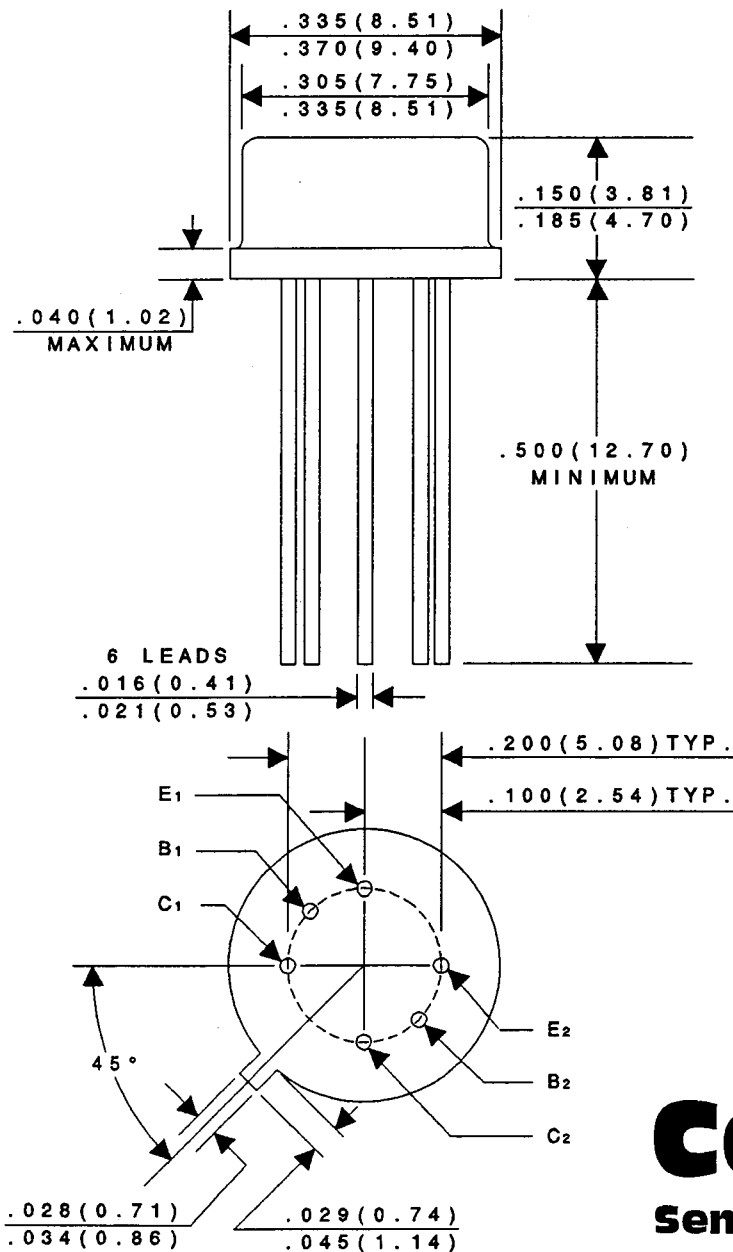
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ELECTRICAL CHARACTERISTICS (cont.) ($T_A=25^\circ\text{C}$ unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		15	pF
C_{ib}	$V_{BE}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		85	pF
NF	$V_{CE}=10\text{V}, I_C=300\mu\text{A}, R_S=510\Omega, f=1.0\text{kHz}, \text{BW}=200\text{Hz}$		8.0	dB
h_{FE1}/h_{FE2}	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	0.9	1.0	
h_{FE1}/h_{FE2}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	0.9	1.0	
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$		5.0	mV
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$		5.0	mV

TO-78 MECHANICAL OUTLINE

All Dimensions in inches (mm).



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