

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N3036

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3036 is a Silicon NPN Epitaxial Planar Transistors mounted in a hermetically sealed package designed for general purpose switching and amplifier applications.

MAXIMUM RATINGS (T_A=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V _{CBO}	120	V
Collector-Emitter Voltage	V _{CEO}	80	V
Emitter-Base Voltage	V _{EBO}	7.0	V
Collector Current	I _C	1.2	A
Power Dissipation	P _D	0.8	W
Power Dissipation (T _C =25°C)	P _D	5.0	W
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 to +200	°C
Thermal Resistance	θ _{JA}	219	°C/W
Thermal Resistance	θ _{JC}	35	°C/W

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

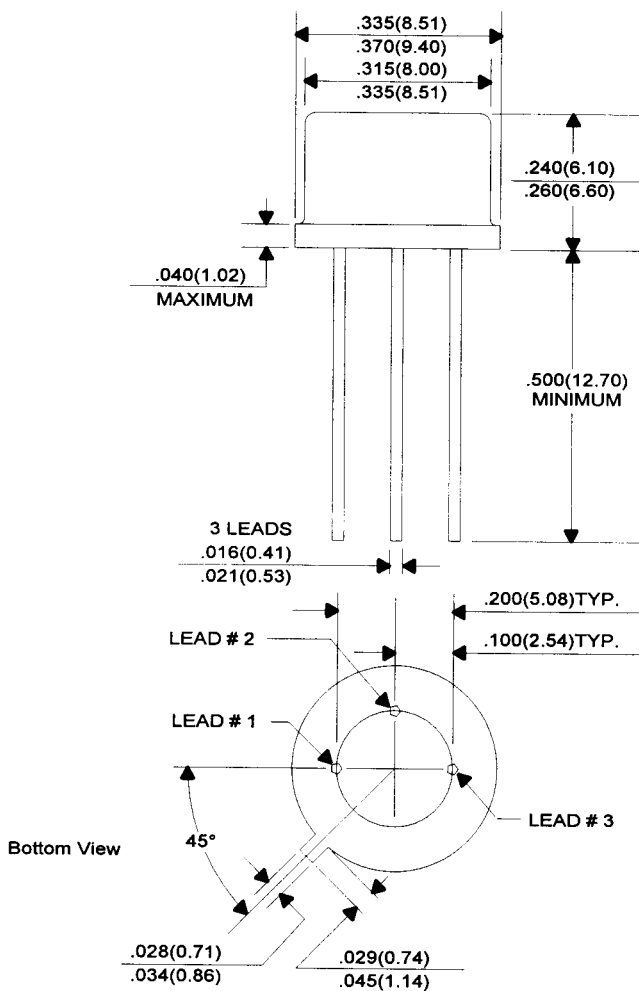
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{CBO}	V _{CB} =60V			10	nA
I _{CBO}	V _{CB} =60V T _A =150°C			10	μA
I _{EBO}	V _{EB} =5.0V			10	nA
BV _{CBO}	I _C =100μA	120			V
BV _{CEO}	I _C =30mA	80			V
BV _{EBO}	I _E =100μA	7.0			V
V _{CE(SAT)}	I _C =150mA, I _B =15mA			0.25	V
V _{CE(SAT)}	I _C =500mA, I _B =50mA			1.0	V
V _{BE(SAT)}	I _C =150mA, I _B =15mA	0.75		1.1	V
V _{BE(SAT)}	I _C =500mA, I _B =50mA			1.5	V
h _{FE}	V _{CE} =10V, I _C =100μA	20			
h _{FE}	V _{CE} =10V, I _C =10mA	40			
h _{FE}	V _{CE} =1.0V, I _C =150mA	30			
h _{FE}	V _{CE} =10V, I _C =150mA	50		150	
h _{FE}	V _{CE} =10V, I _C =500mA	25			
h _{FE}	V _{CE} =10V, I _C =1.0A	15			

(Continued on Reverse Side)

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$ h_{fe} $	$V_{CE}=10\text{V}$, $I_C=10\text{mA}$, $f=20\text{MHz}$	2.5			
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$			15	pF
C_{ib}	$V_{EB}=0.5\text{V}$, $I_C=0$, $f=1.0\text{MHz}$			85	pF
t_d	$V_{CC}=6.2\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$			30	ns
t_r	$V_{CC}=6.2\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$			150	ns
t_s	$V_{CC}=6.2\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$			1.0	μs
t_f	$V_{CC}=6.2\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$			200	ns

JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

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

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