

2N4036
2N4037

PNP SILICON TRANSISTOR



TO-39 CASE



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4036, 2N4037 are epitaxial planar PNP Silicon Transistors designed for small signal, medium power, general purpose industrial applications.

MARKING: FULL PART NUMBER

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

Collector-Base Voltage	V_{CBO}	90	60	V
Collector-Emitter Voltage	V_{CEO}	65	40	V
Emitter-Base Voltage	V_{EBO}	7.0	7.0	V
Continuous Collector Current	I_C		1.0	A
Continuous Base Current	I_B		0.5	A
Power Dissipation	P_D		5.0	W
Power Dissipation ($T_A=25^\circ\text{C}$)	P_D		1.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
Thermal Resistance	θ_{JC}		35	$^\circ\text{C/W}$

SYMBOL	2N4036	2N4037	UNITS
V_{CBO}	90	60	V
V_{CEO}	65	40	V
V_{EBO}	7.0	7.0	V
I_C		1.0	A
I_B		0.5	A
P_D		5.0	W
P_D		1.0	W
T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
θ_{JC}		35	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	2N4036		2N4037		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=90\text{V}$	-	1.0	-	-	μA
I_{CBO}	$V_{CB}=60\text{V}$	-	-	-	0.25	μA
I_{CEX}	$V_{CE}=85\text{V}, V_{EB}=1.5\text{V}$	-	100	-	-	μA
I_{CEX}	$V_{CE}=30\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$	-	-	-	100	mA
I_{EBO}	$V_{EB}=7.0\text{V}$	-	10	-	-	μA
I_{EBO}	$V_{EB}=5.0\text{V}$	-	-	-	1.0	μA
BV_{CEO}	$I_C=100\text{mA}$	65	-	40	-	V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	0.65	-	1.4	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	1.4	-	-	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	-	-	-	1.5	V
h_{FE}	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	20	-	-	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	-	-	15	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	40	140	50	250	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=150\text{mA}$	20	200	-	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$	20	-	-	-	
f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=20\text{MHz}$	60	-	60	-	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	-	30	-	30	pF
t_{on}	$V_{CE}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$	-	110	-	-	ns
t_{off}	$V_{CE}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$	-	700	-	-	ns

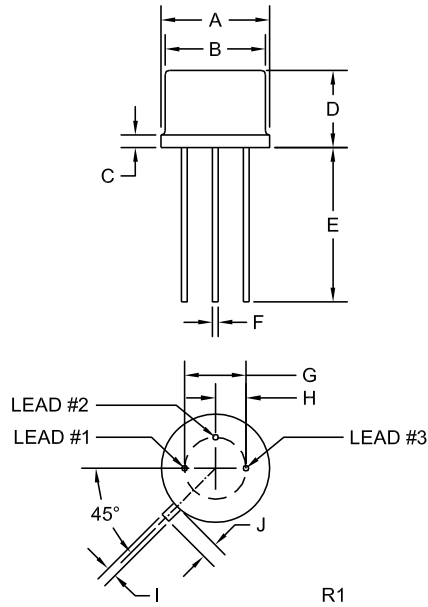
R1 (1-April 2010)

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TO-39 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING: FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

R1 (1-April 2010)

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Central's operations team provides the highest level of support to insure product is delivered on-time.

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- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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Central's applications engineering team is ready to discuss your design challenges. Just ask.

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- Special wafer diffusions
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- Application notes
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CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

Worldwide Distributors:
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