2N6034 2N6035 2N6036 PNP 2N6037 2N6038 2N6039 NPN

## COMPLEMENTARY SILICON DARLINGTON POWER TRANSISTORS





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# **DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N6034, 2N6037 series devices are complementary silicon Darlington power transistors, manufactured by the epitaxial base process, designed for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T <sub>C</sub> =25°C unless otherwise noted) SYMBOL			2N6034 2N6037		2N6036 2N6039	UNITS	
Collector-Base	e Voltage	V <sub>CBO</sub>	40	60	80	V	
Collector-Emitter Voltage		VCEO	40	60	80	V	
Emitter-Base Voltage		VEBO		5.0		V	
Continuous Collector Current		IC		4.0		Α	
Peak Collecto	r Current	I <sub>CM</sub>		8.0		Α	
Continuous Base Current		lΒ		100		mA	
Power Dissipa	ation	$P_{D}$		40		W	
Power Dissipa	ation (T <sub>A</sub> =25°C)	$P_{D}$		1.5		W	
Operating and	Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>		-65 to +150		°C	
Thermal Resis	stance	$\Theta_{JA}$		83.3		°C/W	
Thermal Resis	stance	$\Theta$ JC		3.12		°C/W	
ELECTRICAL	ELECTRICAL CHARACTERISTICS: (T <sub>C</sub> =25°C unless otherwise noted)  SYMBOL TEST CONDITIONS MIN MAX UNITS  CBO V <sub>CB</sub> =Rated V <sub>CBO</sub> 500 μA  CEV V <sub>CE</sub> =Rated V <sub>CEO</sub> , V <sub>BE</sub> =1.5V 100 μA  CEV V <sub>CE</sub> =Rated V <sub>CEO</sub> , V <sub>BE</sub> =1.5V, T <sub>C</sub> =125°C 500 μA						
SYMBOL		MIN					
ICBO							
<sup>I</sup> CEV						•	
		125°C				•	
ICEO	OL OLO						
I <sub>EBO</sub>	V <sub>EB</sub> =5.0V			2.0		mA	
BVCEO	I <sub>C</sub> =100mA (2N6034, 2N6037)	40				V	
BVCEO	I <sub>C</sub> =100mA (2N6035, 2N6038)	60				V	
BV <sub>CEO</sub>	I <sub>C</sub> =100mA (2N6036, 2N6039)	80				V	
VCE(SAT)	I <sub>C</sub> =2.0A, I <sub>B</sub> =8.0mA			2.0		V	
VCE(SAT)	I <sub>C</sub> =4.0A, I <sub>B</sub> =40mA			3.0		V	
V <sub>BE</sub> (SAT)	I <sub>C</sub> =4.0A, I <sub>B</sub> =40mA			4.0		V	
V <sub>BE(ON)</sub>	$V_{CE}$ =3.0V, $I_{C}$ =2.0A			2.8		V	
hFE	$V_{CE}$ =3.0V, $I_{C}$ =500mA	500					
h <sub>FE</sub>	$V_{CE} = 3.0V, I_{C} = 2.0A$	750		15K			
h <sub>FE</sub>	$V_{CE}$ =3.0V, $I_{C}$ =4.0A	100					
fT	V <sub>CE</sub> =10V, I <sub>C</sub> =750mA, f=1.0MHz	25				MHz	
C <sub>ob</sub>	$V_{CB}$ =10V, $I_E$ =0, f=100kHz (PNP)			200		pF	
C <sub>ob</sub>	$V_{CB}$ =10V, $I_E$ =0, f=100kHz (NPN)			100		pF	

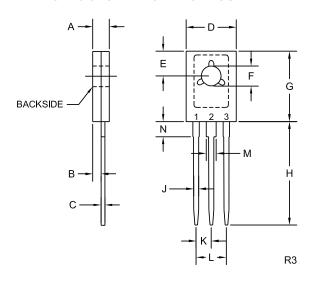
R1 (12-March 2014)

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# **TO-126 CASE - MECHANICAL OUTLINE**



## LEAD CODE:

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

# MARKING:

**FULL PART NUMBER** 

DIMENSIONS							
	INCHES		MILLIMETERS				
SYMBOL	MIN	MAX	MIN	MAX			
Α	0.094	0.110	2.40	2.80			
В	0.050		1.27				
С	0.015	0.030	0.38	0.75			
D	0.291	0.335	7.40	8.50			
Е	0.148		3.75				
F	0.118	0.134	3.00	3.40			
G	0.413	0.472	10.50	12.00			
Н	0.618		15.70				
J	0.024	0.035	0.62	0.90			
K	0.089		2.25				
Ĺ	0.177		4.50				
М	0.045	0.055	1.14	1.40			
N	0.083		2.10				

TO-126 (REV:R3)

## **OUTSTANDING SUPPORT AND SUPERIOR SERVICES**



#### PRODUCT SUPPORT

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

- Supply management (Customer portals)
- · Inventory bonding
- · Consolidated shipping options

- · Custom bar coding for shipments
- · Custom product packing

#### **DESIGNER SUPPORT/SERVICES**

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

- Free guick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- · Custom electrical curves
- · Environmental regulation compliance
- · Customer specific screening
- · Up-screening capabilities

- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- · Application and design sample kits
- Custom product and package development

#### REQUESTING PRODUCT PLATING

- 1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
- 2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

#### **CONTACT US**

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