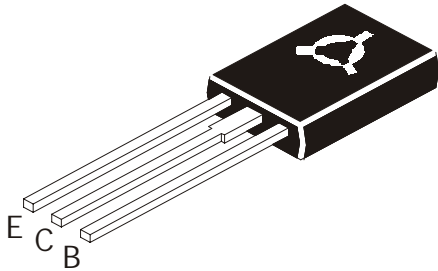


## SILICON POWER DARLINGTON TRANSISTORS

(PNP) 2N6034, 2N6035, 2N6036  
(NPN) 2N6037, 2N6038, 2N6039



TO126  
Plastic Package

Designed for General -Purpose Amplifier & Low Speed Switching Applications.

### ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless specified otherwise)

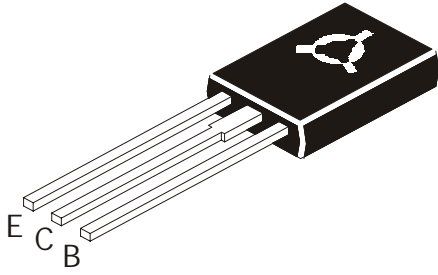
DESCRIPTION	SYMBOL	2n6034	2N6035	2N6036	UNIT
		2n6037	2N6038	2N6039	
Collector -Base Voltage	$V_{CBO}$	40	60	80	V
Collector -Emitter Voltage	$V_{CEO}$	40	60	80	V
Emitter Base Voltage	$V_{EBO}$		5.0		V
Collector Current Continuous	$I_C$		4.0		A
Collector Current (Peak Value)			8.0		A
Base Current	$I_B$		100		mA
Total Power Dissipation @ Tc=25°C	$P_D$	40			W
Derate above 25°C			0.32		W/°C
Total Power Dissipation @ Ta=25°C	$P_D$	1.5			W
Derate above 25°C			0.012		W/°C
Operating And Storage Junction Temperature Range	$T_j, T_{stg}$		-65 to +150		°C
<b>THERMAL RESISTANCE</b>					
Junction to ambient	$R_{th(j-a)}$		83.3		°C/W
Junction to case	$R_{th(j-c)}$		3.12		°C/W

### ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter (sus) Voltage	$V_{CEO(sus)}$	$I_C=100mA, I_B=0$				
2N6034,2N6037			40			V
2N6035, 2N6038			60			V
2N6036, 2N6039			80			V
Collector Cut off Current	$I_{CEO}$	$V_{CE}=40V, I_B=0$			100	$\mu A$
2N6034,2N6037		$V_{CE}=40V, I_B=0$			100	$\mu A$
2N6035, 2N6038		$V_{CE}=60V, I_B=0$			100	$\mu A$
2N6036, 2N6039		$V_{CE}=80V, I_B=0$			100	$\mu A$

# SILICON POWER DARLINGTON TRANSISTORS

(PNP) 2N6034, 2N6035, 2N6036  
(NPN) 2N6037, 2N6038, 2N6039



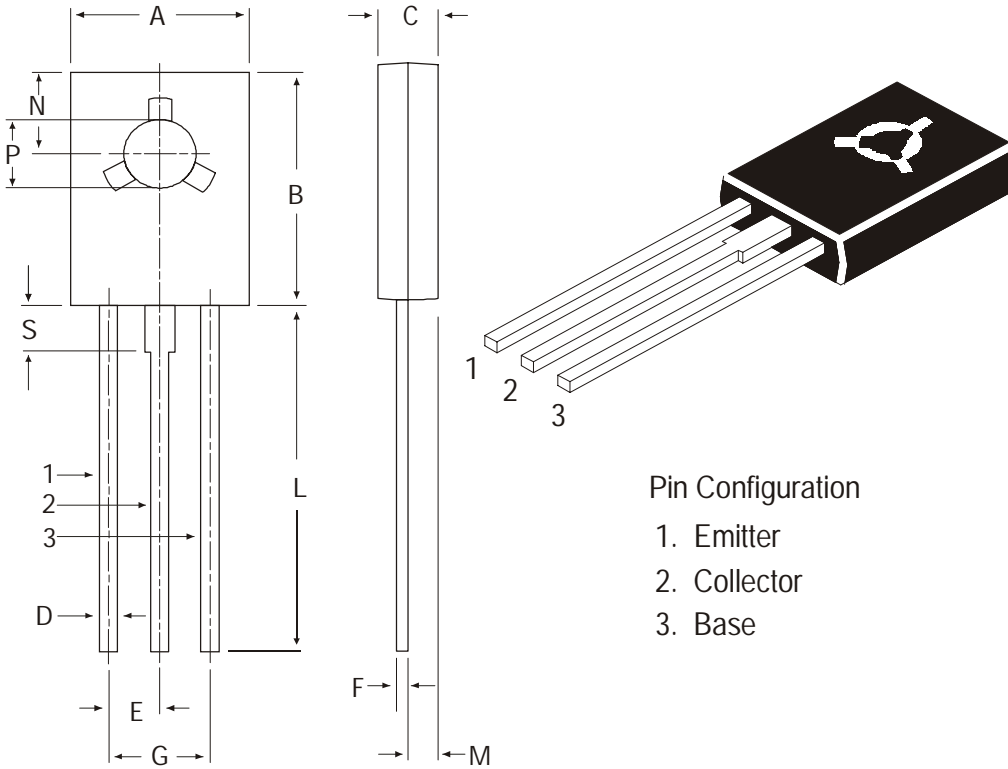
**TO126**  
**Plastic Package**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
	2N6034,2N6037	$I_{CEX}$	$V_{CE}=40V, V_{BE}(off)=1.5V$		100	$\mu A$
	2N6035, 2N6038		$V_{CE}=60V, V_{BE}(off)=1.5V$		100	$\mu A$
	2N6036, 2N6039		$V_{CE}=80V, V_{BE}(off)=1.5V$		100	$\mu A$
			$T_C=125^{\circ}C$			
	2N6034,2N6037		$V_{CE}=40V, V_{BE}(off)=1.5V$		500	$\mu A$
	2N6035, 2N6038		$V_{CE}=60V, V_{BE}(off)=1.5V$		500	$\mu A$
	2N6036, 2N6039		$V_{CE}=80V, V_{BE}(off)=1.5V$		500	$\mu A$
<b>Collector cut off Current</b>						
	2N6034,2N6037	$I_{CBO}$	$V_{CB}=40, I_E=0$		0.5	mA
	2N6035, 2N6038		$V_{CB}=60, I_E=0$		0.5	mA
	2N6036, 2N6039		$V_{CB}=80, I_E=0$		0.5	mA
<b>Emitter Cut off Current</b>						
		$I_{EBO}$	$V_{BE}=5V, I_C=0$		2.0	mA
<b>DC Current Gain</b>						
		$h_{FE}$	$I_C=0.5A, V_{CE}=3V$	500		
			$I_C=2A, V_{CE}=3V$	750	15000	
			$I_C=4A, V_{CE}=3V$	100		
<b>Collector Emitter Saturation Voltage</b>						
		$V_{CE(sat)}$	$I_C=2A, I_B=8mA$		2.0	V
			$I_C=4A, I_B=40mA$		3.0	V
<b>Base Emitter Saturation Voltage</b>						
		$V_{BE(sat)}$	$I_C=4A, I_B=40mA$		4.0	V
<b>Base Emitter on Voltage</b>						
		$V_{BE(on)}$	$I_C=2A, I_B=V_{CE}=3V$		2.8	V
<b>Dynamic Characteristics</b>						
<b>Small Signal Current Gain</b>						
		$ h_{fe} $	$I_C=0.75A, V_{CE}=10V$ $f=1MHz$	25		
<b>Output Capacitance</b>						
		$C_{ob}$	$V_{CB}=10V, I_E=0,$ $f=0.1MHz$		200	pF
	<b>PNP</b>					
	<b>NPN</b>				100	pF

(PNP) 2N6034, 2N6035, 2N6036  
 (NPN) 2N6037, 2N6038, 2N6039

**TO126**  
**Plastic Package**

**TO-126 (SOT-32) Plastic Package**



**Pin Configuration**

- 1. Emitter
- 2. Collector
- 3. Base

DIM	MIN	MAX
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 TYP.	
F	0.49	0.75
G	4.5 TYP.	
L	15.7 TYP.	
M	1.27 TYP.	
N	3.75 TYP.	
P	3.0	3.2
S	2.5 TYP.	

All dimensions in mm.

**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-126 Bulk	500 pcs/polybag	340 gm/500 pcs	3" x 7.5" x 7.5"	2K	17" x 15" x 13.5"	32K	31 kgs
TO-126 Tube	50 pcs/tube	73 gm/50 pcs	3" x 3.7" x 21.5"	1K	19" x 19" x 19"	10K	15 kgs

**TO126****Plastic Package****Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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