Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

2N6036

PNP Darlington Power Transistor

Features

- Halogen free available upon request by adding suffix "-HF"
- This device is designed for general purpose amplifier and low-speed switching applications.
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Marking:2N6036

Maximum Ratings*

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	80	V
V_{CBO}	Collector-Base Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current, Continuous Peak	4.0 8.0	A
I_B	Base Current	100	mA
T_J	Operating Junction Temperature	-55 to +150	^{O}C
T_{STG}	Storage Temperature	-55 to +150	^{O}C

Thermal Characteristics

Symbol	Rating	Max	Unit
P_D	Total Device Dissipation Derate above 25^{O}C	40 0.32	W W/^{O}C
P_D	Total Device Dissipation Derate above 25^{O}C	1.5 0.012	W W/^{O}C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	3.12	^{O}C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	83.3	^{O}C/W

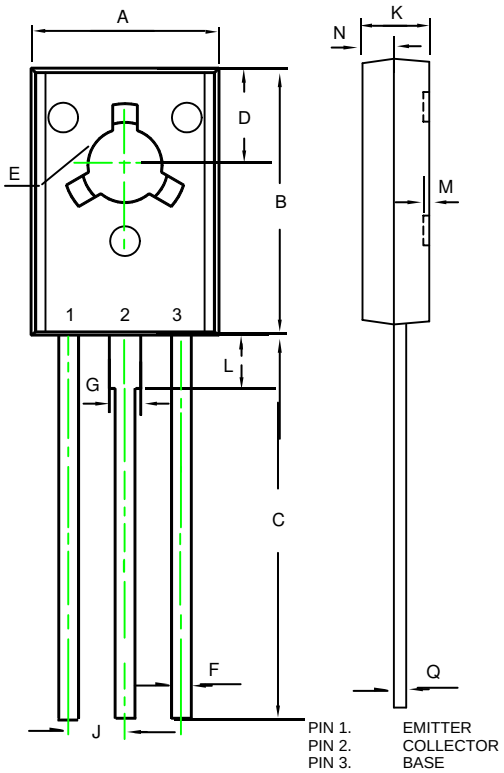
Electrical Characteristics @25^{O}C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{CEO(sus)}$	Collector-Emitter Breakdown Voltage [1] (I_C=100mAdc, I_E=0)	80	---	Vdc
I_{CEO}	Collector Cutoff Current (V_{CB}=60Vdc, I_E=0)	---	100	uAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=80Vdc, $V_{EB(off)}$=1.5Vdc) (V_{CE}=80Vdc, $V_{EB(off)}$=1.5Vdc, T_C=125 ^{O}C)	--- ---	100 500	uA mA
I_{CBO}	Collector-Cutoff Current (V_{CB}=80Vdc, I_E=0)	---	0.5	mAdc
I_{EBO}	Emitter Cutoff Current (V_{EB}=5.0Vdc, I_C=0)	---	2.0	mAdc

*Indicates JEDEC Registered Data

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

TO-126



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	0.291	0.307	7.40	7.80	
B	0.417	0.433	10.60	11.00	
C	0.602	0.618	15.30	15.70	
D	0.154	0.161	3.90	4.10	
E	0.118	0.126	3.00	3.20	
F	0.026	0.034	0.66	0.86	
G	0.046	0.054	1.17	1.37	
J	0.090TYP		2.290TYP		
K	0.098	0.114	2.50	2.90	
L	0.083	0.091	2.10	2.30	
M	0.000	0.012	0.00	0.30	
N	0.043	0.059	1.10	1.50	
Q	0.018	0.024	0.45	0.60	

Symbol	Parameter	Min	Max	Units
	DYNAMIC CHARACTERISTICS			
h_{FE}	DC Current Gain (V_{CE}=3.0Vdc, I_C=0.5Adc) (V_{CE}=3.0Vdc, I_C=2.0Adc) (V_{CE}=3.0Vdc, I_C=4.0Adc)	 500 750 100	 --- 15000 ---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=2.0Adc, I_B=8.0mA dc) (I_C=4.0Adc, I_B=40mAdc)	 ---	 2.0 3.0	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=4.0Adc, I_B=40mAdc)	---	4.0	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage (I_C=2.0Adc, V_{CE}=3.0Vdc)	---	2.8	Vdc
	DYNAMIC CHARACTERISTICS			
$\|h_{fe}\|$	Small-Signal Current-Gain (I_C=0.75Adc, V_{CE}=10Vdc, f=1.0MHz)	25	---	---
C_{ob}	Output Capacitance (V_{CB}=10Vdc, I_E=0, f=0.1MHz)	---	200	pF

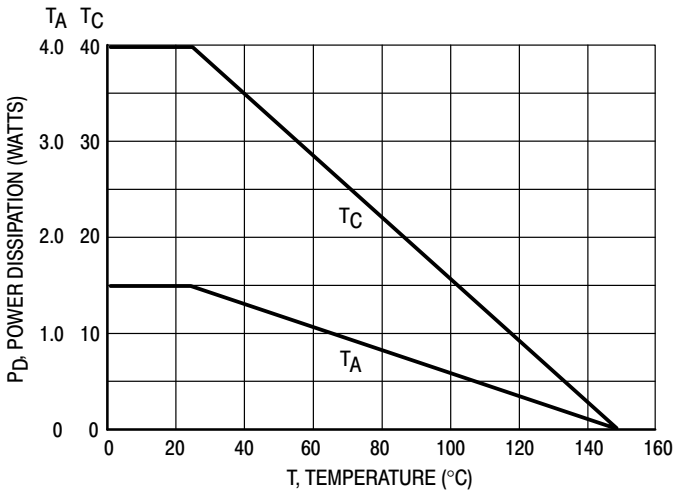


Figure 1. Power Derating

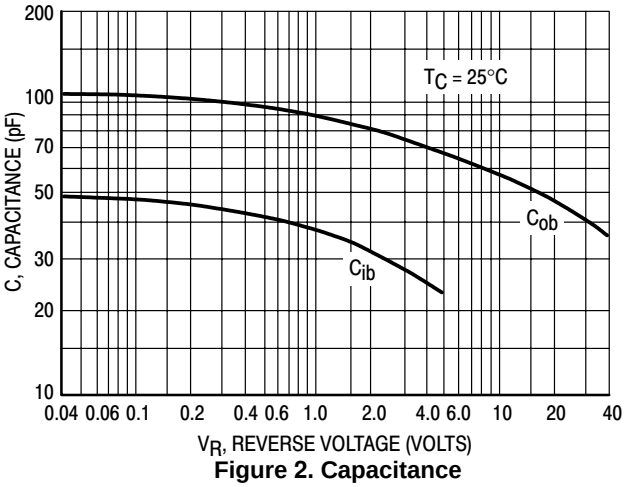


Figure 2. Capacitance

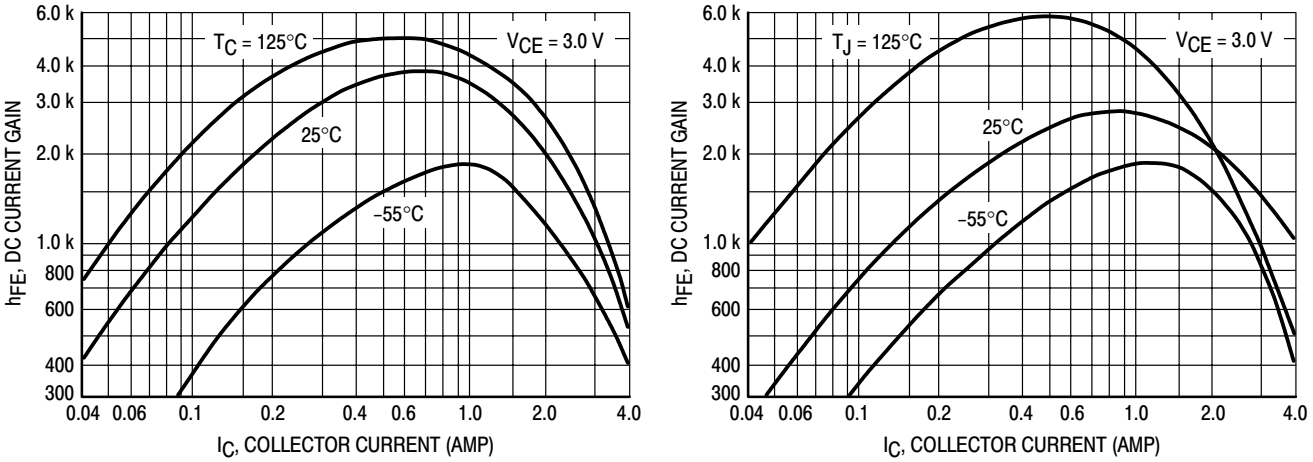


Figure 3. DC Current Gain

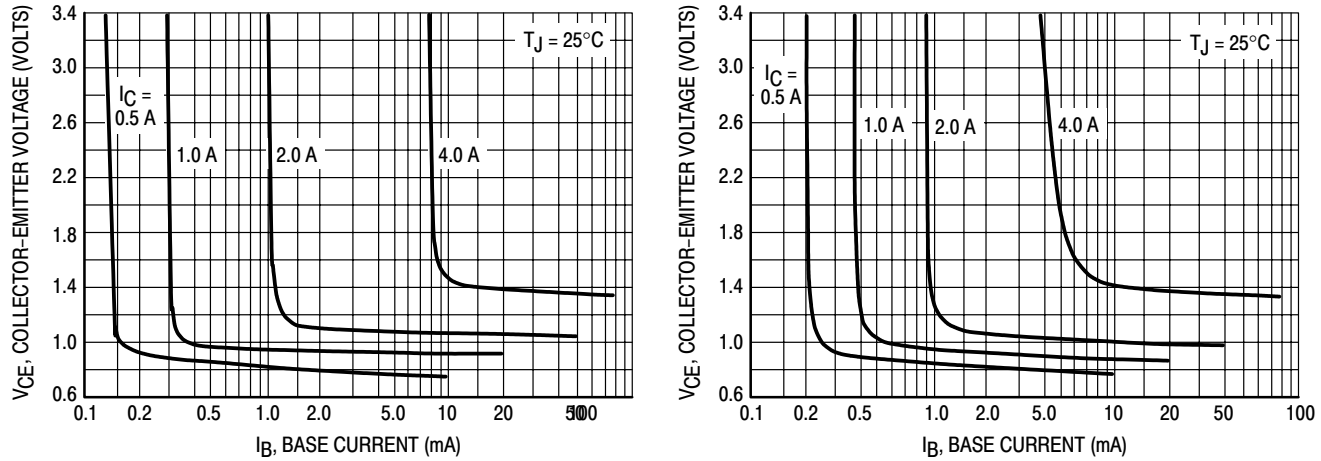


Figure 4. Collector Saturation Region

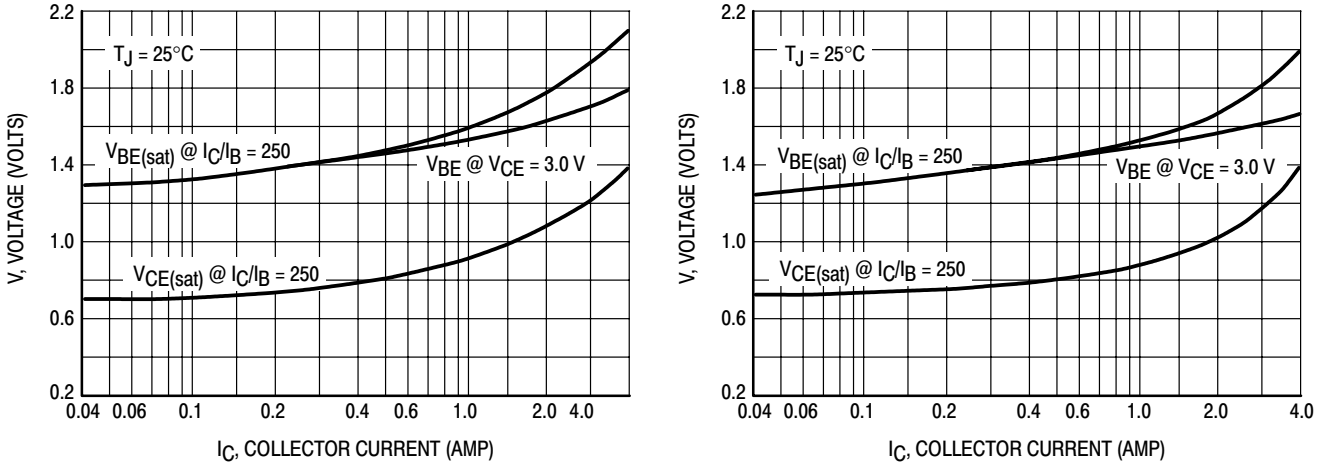


Figure 5. “On” Voltages

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Ordering Information :

Device	Packing
Part Number-BP	Bulk;1Kpcs/Box

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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