



Micro Commercial Components



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

2N6036

Features

- 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
- Moisture 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	4.0	A
	Peak	8.0	A
I_B	Base Current	100	mA
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Thermal Characteristics

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

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
--------	-----------	-----	-----	-------

OFF CHARACTERISTICS

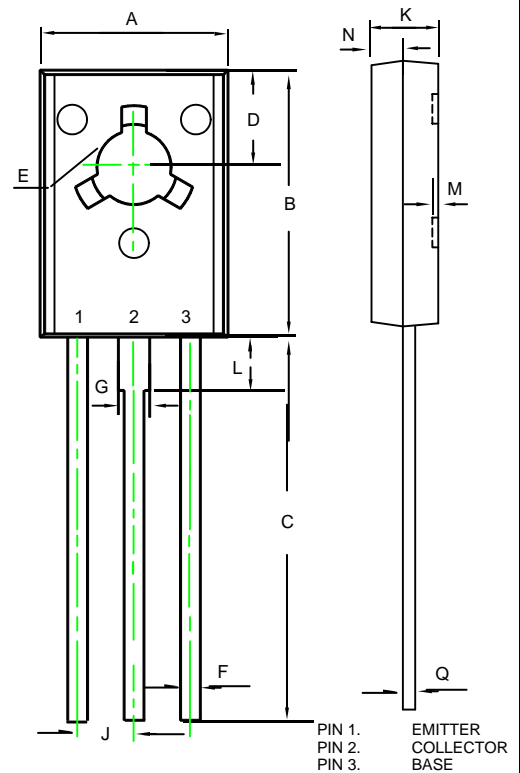
$V_{CEO(sus)}$	Collector-Emitter Breakdown Voltage ⁽¹⁾ ($I_C=100mA$, $I_E=0$)	80	---	Vdc
I_{CEO}	Collector Cutoff Current ($V_{CB}=60Vdc$, $I_E=0$)	---	100	uAdc
I_{CEX}	Collector Cutoff Current ($V_{CE}=80Vdc$, $V_{EB(off)}=1.5Vdc$) ($V_{CE}=80Vdc$, $V_{EB(off)}=1.5Vdc$, $T_C=125°C$)	---	100 500	uA mA
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.

PNP Darlington Power Transistor

TO-126



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	MIN	MAX	MIN	MAX	
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	

2N6036

Symbol	Parameter	Min	Max	Units
DYNAMIC CHARACTERISTICS				
h_{FE}	DC Current Gain ($V_{CE}=3.0Vdc, I_C=0.5Adc$)	500	---	---
	($V_{CE}=3.0Vdc, I_C=2.0Adc$)	750	15000	---
	($V_{CE}=3.0Vdc, I_C=4.0Adc$)	100	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=2.0Adc, I_B=8.0mAdc$) ($I_C=4.0Adc, I_B=40mAdc$)	---	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

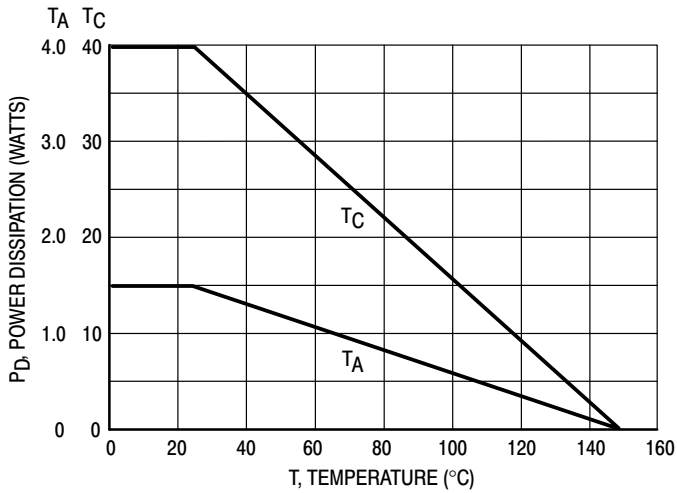


Figure 1. Power Derating

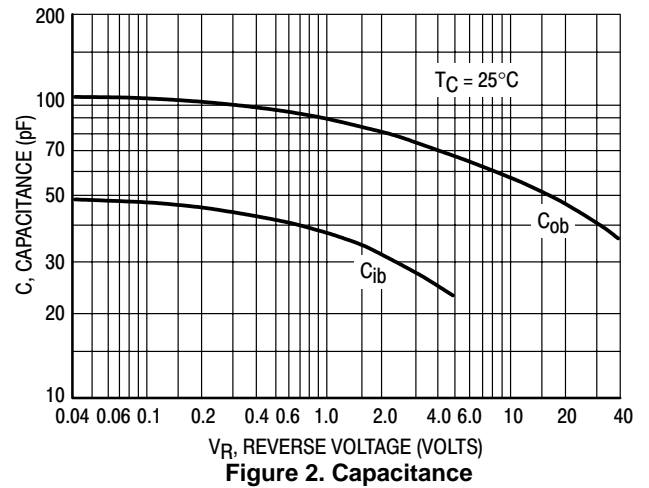


Figure 2. Capacitance

2N6036

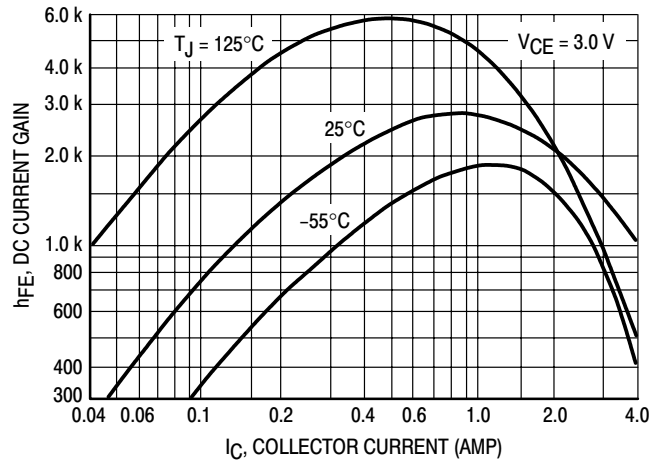
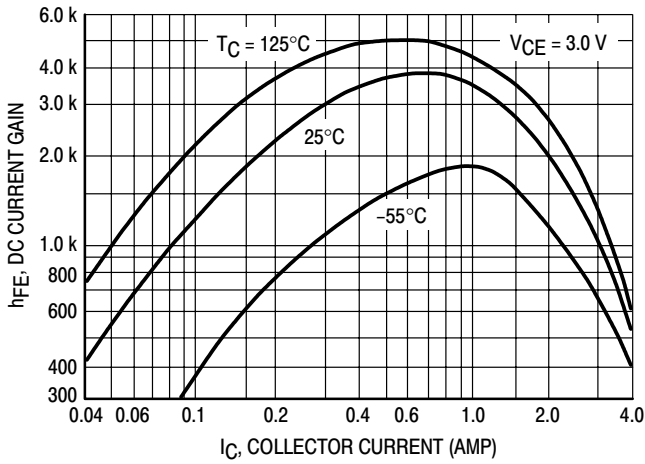


Figure 3. DC Current Gain

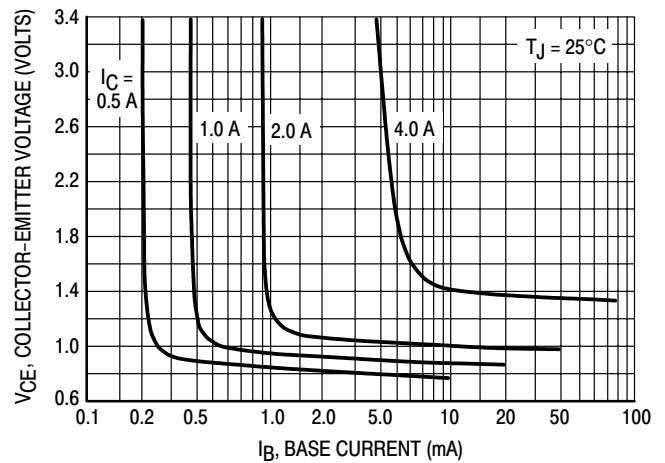
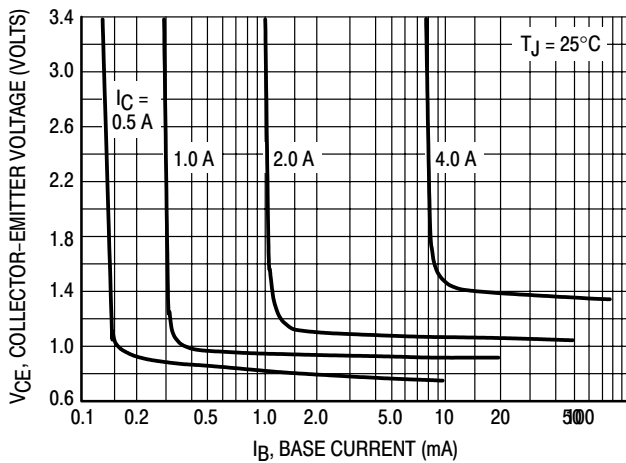


Figure 4. Collector Saturation Region

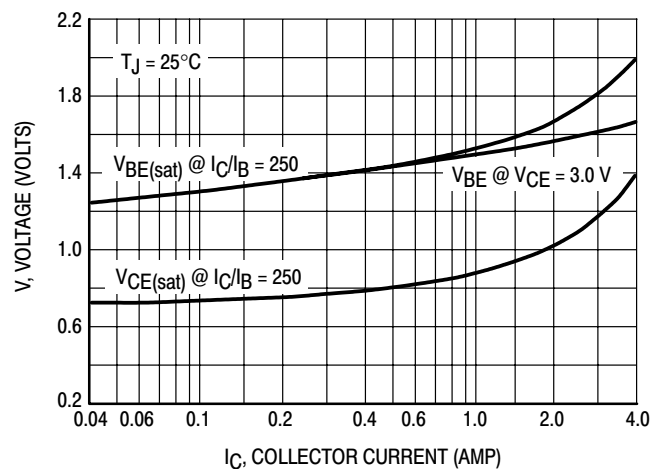
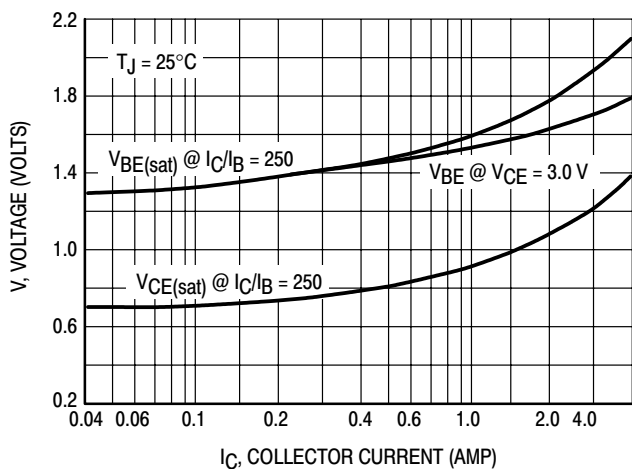


Figure 5. "On" Voltages



Micro Commercial Components

Ordering Information :

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

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

*****CUSTOMER AWARENESS*****

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.