



Micro Commercial Components



Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311

Phone: (818) 701-4933

Fax: (818) 701-4939

TIP120

NPN Epitaxial Darlington Transistors

Features

- Halogen free available upon request by adding suffix "-HF"
- Mounting Torque: 5 in-lbs Maximum
- Low collector-emitter saturation voltage
- Amplifier applications-emitter shunt resistors
- TO-220 compact package
- 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

Maximum Ratings @ Ta=25°C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	60	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_{CP}	Peak Collector Current	8.0	A
I_C	Collector Current	5.0	A
P_C	Collector power dissipation (Tc=25°C)	65	W
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C
$R_{\theta JC}$	Thermal Resistance, Junction to case	1.92	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to ambient	62.5	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

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

OFF CHARACTERISTICS

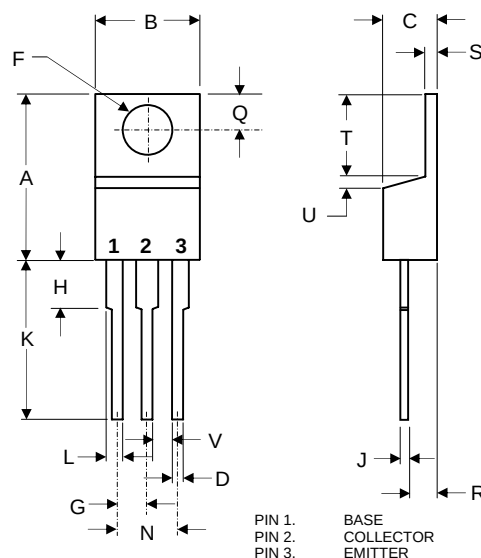
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=100\text{mA}$, $I_B=0$)	60	---	Vdc
I_{CBO}	Collector-Base Cutoff Current ($V_{CB}=60\text{Vdc}$, $I_E=0$)	---	0.2	mA
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=5.0\text{Vdc}$, $I_C=0$)	---	2.0	mA
I_{CEO}	Collector-Emitter Cutoff Current ($V_{CE}=30\text{Vdc}$, $I_B=0$)	---	0.5	mA

ON CHARACTERISTICS

h_{FE-1}	Forward Current Transfer Ratio ($I_C=0.5\text{A}$, $V_{CE}=3.0\text{Vdc}$)	1000	---	
h_{FE-2}	Forward Current Transfer Ratio ($I_C=3.0\text{A}$, $V_{CE}=3.0\text{Vdc}$)	1000	---	
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage ($I_C=3.0\text{A}$, $I_B=12\text{mA}$)	---	2.0	Vdc
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage ($I_C=5.0\text{A}$, $I_B=20\text{mA}$)	---	4.0	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage ($I_C=3.0\text{A}$, $V_{CE}=3.0\text{Vdc}$)	---	2.5	Vdc

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

TO-220



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.140	.190	3.56	4.82	
D	.020	.045	0.51	1.14	
F	.139	.161	3.53	4.09	Ø
G	.190	.110	2.29	2.79	
H	---	.250	---	6.35	
J	.012	.025	0.30	0.64	
K	.500	.580	12.70	14.73	
L	.045	.060	1.14	1.52	
N	.190	.210	4.83	5.33	
Q	.100	.135	2.54	3.43	
R	.080	.115	2.04	2.92	
S	.045	.055	1.14	1.39	
T	.230	.270	5.84	6.86	
U	---	.050	---	1.27	
V	.045	---	1.15	---	

Ordering Information :

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

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

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.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9