



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components



Micro Commercial Components
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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 (T _C =25°C)	65	W
T _J	Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C
R _{thJC}	Thermal Resistance, Junction to case	1.92	°C/W
R _{thJA}	Thermal Resistance, Junction to ambient	62.5	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

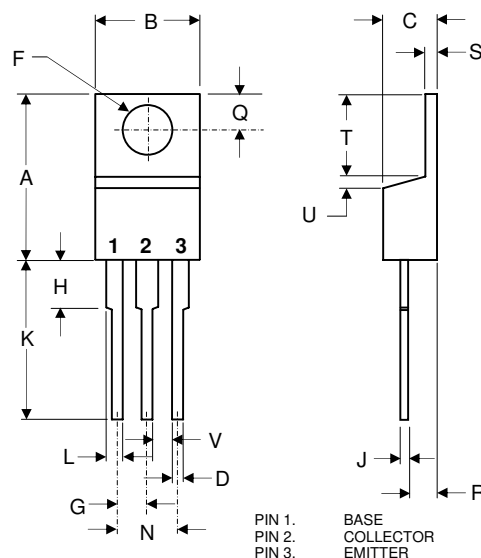
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =100mA, I _B =0)	60	---	Vdc
I _{CBO}	Collector-Base Cutoff Current (V _{CB} =60Vdc, I _E =0)	---	0.2	mA
I _{EBO}	Emitter-Base Cutoff Current (V _{EB} =5.0Vdc, I _C =0)	---	2.0	mA
I _{CEO}	Collector-Emitter Cutoff Current (V _{CE} =30Vdc, I _B =0)	---	0.5	mA

ON CHARACTERISTICS

h _{FE-1}	Forward Current Transfer Ratio (I _C =0.5Adc, V _{CE} =3.0Vdc)	1000	---	
h _{FE-2}	Forward Current Transfer Ratio (I _C =3.0Adc, V _{CE} =3.0Vdc)	1000	---	
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage (I _C =3.0Adc, I _B =12mA)	---	2.0	Vdc
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage (I _C =5.0Adc, I _B =20mA)	---	4.0	Vdc
V _{BE(on)}	Base-Emitter On Voltage (I _C =3.0Adc, V _{CE} =3.0Adc)	---	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	∅
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	-----	



TM

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Ordering Information :

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

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

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