



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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TIP110/111/112

Features

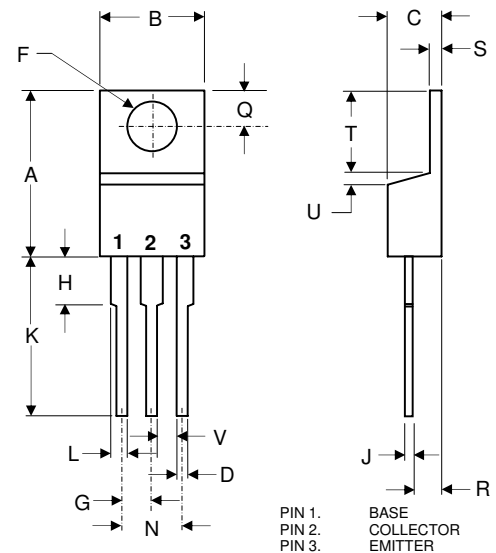
- Halogen free available upon request by adding suffix "-HF"
- The complementary PNP types are the TIP115/116/117 respectively
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Part number
- Mounting Torque: 5 in-lbs Maximum

Silicon NPN Darlington Power Transistor

Absolute Maximum Ratings @ T_a = 25°C (unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0} TIP110 TIP111 TIP112	Collector-base voltage (Open emitter)	60 80 100	V
V _{CE0} TIP110 TIP111 TIP112	Collector-emitter voltage (Open base)	60 80 100	V
V _{EB0}	Emitter-base Voltage(Open collector)	5	V
I _C	Collector Current	2	A
I _{CM}	Collector Current Pulse	4	A
I _B	Base Current	0.05	A
P _C	Total Device Dissipation(T _a =25°C)	2	W
	Total Device Dissipation(T _c =25°C)	50	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature Range	-65 to +150	°C

TO-220AB



Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
V _{CE(SUS)} TIP110 TIP111 TIP112	Collector-emitter sustaining voltage (I _C =30mA; I _B =0)	60 80 100		V
V _{CE(sat)}	Collector-emitter Saturation Voltage (I _C =2A; I _B =0.008A)		2.5	V
V _{BE}	Base-emitter Voltage (I _C =2A; V _{CE} =4V)		2.8	V
I _{CB0} TIP110 TIP111 TIP112	Collector cut-off current (V _{CB} =60V; I _E =0) (V _{CB} =80V; I _E =0) (V _{CB} =100V; I _E =0)	1		mA
I _{CE0} TIP110 TIP111 TIP112	Collector cut-off current (V _{CE} =30V; V _{EB} =0) (V _{CE} =40V; V _{EB} =0) (V _{CE} =50V; V _{EB} =0)	2		mA
I _{EBO}	Emitter cut-off current (V _{EB} =5V; I _C =0)		2.0	mA
h _{FE}	DC current gain (I _C =1A; V _{CE} =4V) (I _C =2A; V _{CE} =4V)	1000 500		
C _{OB}	Output capacitance (I _E =0; V _{CB} =-10V, f=0.1MHz)		100	PF

DIM	DIMENSIONS				NOTE
	INCHES		MM		
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	----	

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



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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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