

M·C·C·

Micro Commercial Components



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

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

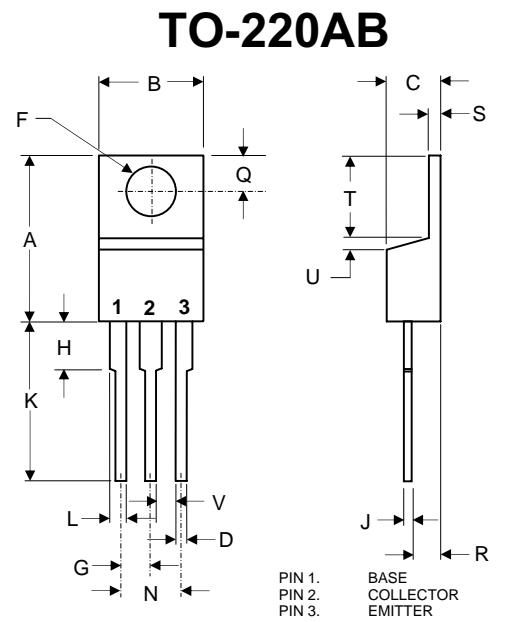
Absolute Maximum Ratings @ $T_A = 25^\circ\text{C}$ (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO} TIP110 TIP111 TIP112	Collector-base voltage (Open emitter)	60 80 100	V
V_{CEO} TIP110 TIP111 TIP112	Collector-emitter voltage (Open base)	60 80 100	V
V_{EBO}	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($T_A=25^\circ\text{C}$)	2	W
	Total Device Dissipation($T_C=25^\circ\text{C}$)	50	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
$V_{CEO(SUS)}$ TIP110 TIP111 TIP112	Collector-emitter sustaining voltage ($I_C=30\text{mA}$; $I_E=0$)	60 80 100		V
$V_{CE(sat)}$	Collector-emitter Saturation Voltage ($I_C=2\text{A}$ $I_E=0.008\text{A}$)		2.5	V
V_{BE}	Base-emitter Voltage ($I_C=2\text{A}$; $V_{CE}=4\text{V}$)		2.8	V
I_{CBO} TIP110 TIP111 TIP112	Collector cut-off current ($V_{CB}=60\text{V}$; $I_E=0$) ($V_{CB}=80\text{V}$; $I_E=0$) ($V_{CB}=100\text{V}$; $I_E=0$)	1		mA
I_{CEO} TIP110 TIP111 TIP112	Collector cut-off current ($V_{CE}=30\text{V}$; $V_{EB}=0$) ($V_{CE}=40\text{V}$; $V_{EB}=0$) ($V_{CE}=50\text{V}$; $V_{EB}=0$)	2		mA
I_{EBO}	Emitter cut-off current ($V_{EB}=5\text{V}$; $I_C=0$)		2.0	mA
H_{fe}	DC current gain ($I_C=1\text{A}$; $V_{CE}=4\text{V}$) ($I_C=2\text{A}$; $V_{CE}=4\text{V}$)	1000 500		
C_{OB}	Output capacitance ($I_E=0$; $V_{CB}=-10\text{V}$, $f=0.1\text{MHz}$)		100	PF

**Silicon NPN
Darlington
Power Transistor**



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	-----	

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

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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