

**Micro Commercial Components** 



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# TIP42/42A/42B/42C

## **Features**

- Halogen free available upon request by adding suffix "-HF" Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
  The complementary NPN types are the TIP41 respectively
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Marking: Part Number
- Mounting Torgue: 5 in-lbs Maximum

# Silicon PNP **Power Transistors**

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**TO-220** 

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

Symbol	Parameter	Value	Unit
V <sub>CBO</sub> TIP42 TIP42A TIP42B TIP42C	Collector-base voltage (Open emitter)	-40 -60 -80 -100	V
V <sub>CEO</sub> TIP42 TIP42A TIP42B TIP42C	Collector-emitter voltage (Open base)	-40 -60 -80 -100	V
V <sub>EBO</sub>	Emitter-base Voltage (Open collector)	-5	V
Ic	Collector Current	-6	Α
I <sub>CM</sub>	Collector Current Pulse	-10	Α
$I_B$	Base Current	-2	Α
Pc	Total Device Dissipation(Ta=25°C)	-2	W
	Total Device Dissipation(Tc=25°C)	65	W
TJ	Junction Temperature	150	$^{\circ}\mathbb{C}$
T <sub>STG</sub>	Storage Temperature Range	-65 to +150	°C

#### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
V <sub>CEO(SUS)</sub> TIP42 TIP42A TIP42B TIP42C	Collector-emitter sustaining voltage ( I <sub>C</sub> =-30mA; I <sub>B</sub> =0)	-40 -60 -80 -100		V
$V_{\text{CE(sat)}}$	Collector-emitter Saturation Voltage ( $I_C$ =-6A $I_B$ =-0.6A )		-1.5	V
$V_{BE}$	Base-emitter Voltage $(I_C=-6A; V_{CE}=-4V)$		-2.0	V
I <sub>CES</sub> TIP42 TIP42A TIP42B TIP42C	Collector cut-off current $(V_{CE}=-40V; V_{EB}=0)$ $(V_{CE}=-60V; V_{EB}=0)$ $(V_{CE}=-80V; V_{EB}=0)$ $(V_{CE}=-100V; V_{EB}=0)$	-0.4		mA
I <sub>CEO</sub> TIP42/42A TIP42B/C	Collector cut-off current $(V_{CE}=-30V; V_{EB}=0)$ $(V_{CE}=-60V; V_{EB}=0)$	-0.7		mA
I <sub>EBO</sub>	Emitter cut-off current $(V_{EB}=-5V; I_{C}=0)$		-1.0	mA
h <sub>fe</sub>	DC current gain ( $I_C$ =-0.3A ; $V_C$ =-4V) ( $I_C$ =-3A ; $V_C$ =-4V)	30 15	75	
f <sub>T</sub>	Transition frequency ( $I_C$ =-0.5A; $V_{CE}$ =-10V)	3		MHZ

COLLECTOR EMITTER PIN 2. PIN 3. DIMENSIONS INCHES NOTE MIN .560 MAX 14.22 15.88 В .380 .420 9.65 10.67 .140 3.56 4.82 .020 .045 0.51 1.14 .139 .161 3.53 4.09 0 .110 .250 2.29 G .190 2.79 6.35 .025 0.30 0.64 .500 .580 12.70 14.73 .045 .060 1.14 Ν .190 .210 4.83 5.33 Q .100 .135 2.54 3.43 R .080 .115 2.04 2.92 .055 1.14 .045 1.39 .270 5.84 6.86 .230 U 1.27

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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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