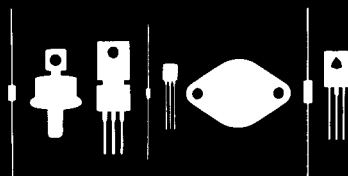


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145 Adams Avenue  
Hauppauge, New York 11788



TIP42  
TIP42A  
TIP42B  
TIP42C

SILICON PNP TRANSISTOR

JEDEC TO-220

## DESCRIPTION

The CENTRAL SEMICONDUCTOR TIP42 Series is a PNP Epitaxial-Base Silicon Power Transistor designed for power amplifier and high-speed switching applications.

## MAXIMUM RATINGS (T<sub>C</sub>=25°C unless otherwise noted)

	SYMBOL	TIP42	TIP42A	TIP42B	TIP42C	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	40	60	80	100	V
Emitter-Base Voltage	V <sub>EB0</sub>	5.0	5.0	5.0	5.0	V
Collector-Emitter Voltage	V <sub>CE0</sub>	40	60	80	100	V
Collector Current, Continuous	I <sub>C</sub>	6.0	6.0	6.0	6.0	A
Collector Current, Peak	I <sub>CM</sub>	10	10	10	10	A
Base Current	I <sub>B</sub>	3.0	3.0	3.0	3.0	A
Power Dissipation	P <sub>D</sub>	65	65	65	65	W
Power Dissipation (T <sub>A</sub> =25°C)	P <sub>D</sub>	2.0	2.0	2.0	2.0	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 TO +150		-65 TO +150		°C

## ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I <sub>CEO</sub>	V <sub>CE</sub> =30V (TIP42, TIP42A)		0.7	mA
I <sub>CEO</sub>	V <sub>CE</sub> =60V (TIP42B, TIP42C)		0.7	mA
I <sub>CES</sub>	V <sub>CE</sub> =Rated V <sub>CE0</sub>		0.4	mA
I <sub>EB0</sub>	V <sub>EB</sub> = 5.0V		1.0	mA
BV <sub>CEO</sub>	I <sub>C</sub> =30mA, (TIP42)	40		V
BV <sub>CEO</sub>	I <sub>C</sub> =30mA, (TIP42A)	60		V
BV <sub>CEO</sub>	I <sub>C</sub> =30mA, (TIP42B)	80		V
BV <sub>CEO</sub>	I <sub>C</sub> =30mA, (TIP42C)	100		V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =6.0A, I <sub>B</sub> =0.6A		1.5	V
V <sub>BE</sub> (on)	V <sub>CE</sub> =4.0V, I <sub>C</sub> =6.0A		2.0	V
h <sub>FE</sub>	V <sub>CE</sub> =4.0V, I <sub>C</sub> =0.3A	30		-
h <sub>FE</sub>	V <sub>CE</sub> =4.0V, I <sub>C</sub> =3.0A	15	75	-
h <sub>fe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A, f=1 kHz	20		-
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A, f=1 MHz	3		MHz
t <sub>on</sub>	I <sub>C</sub> =6.0A, I <sub>B1</sub> =I <sub>B2</sub> =0.6A, R <sub>L</sub> =5.0 OHMS	0.4	TYP	μSEC
t <sub>off</sub>	I <sub>C</sub> =6.0A, I <sub>B1</sub> =I <sub>B2</sub> =0.6A, R <sub>L</sub> =5.0 OHMS	0.7	TYP	μSEC