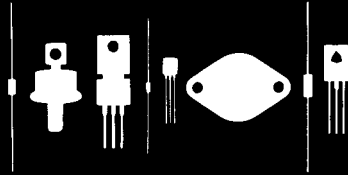


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TIP42
TIP42A
TIP42B
TIP42C

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_C=25°C unless otherwise noted)

	SYMBOL	TIP42	TIP42A	TIP42B	TIP42C	UNIT
Collector-Base Voltage	V _{CB0}	40	60	80	100	V
Emitter-Base Voltage	V _{EB0}	5.0	5.0	5.0	5.0	V
Collector-Emitter Voltage	V _{CE0}	40	60	80	100	V
Collector Current, Continuous	I _C	6.0	6.0	6.0	6.0	A
Collector Current, Peak	I _{CM}	10	10	10	10	A
Base Current	I _B	3.0	3.0	3.0	3.0	A
Power Dissipation	P _D	65	65	65	65	W
Power Dissipation (T _A =25°C)	P _D	2.0	2.0	2.0	2.0	W
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 TO +150		-65 TO +150		°C

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I _{CEO}	V _{CE} =30V (TIP42, TIP42A)		0.7	mA
I _{CEO}	V _{CE} =60V (TIP42B, TIP42C)		0.7	mA
I _{CES}	V _{CE} =Rated V _{CE0}		0.4	mA
I _{EBO}	V _{EB} =5.0V		1.0	mA
BV _{CEO}	I _C =30mA, (TIP42)	40		V
BV _{CEO}	I _C =30mA, (TIP42A)	60		V
BV _{CEO}	I _C =30mA, (TIP42B)	80		V
BV _{CEO}	I _C =30mA, (TIP42C)	100		V
V _{CE(SAT)}	I _C =6.0A, I _B =0.6A		1.5	V
V _{BE(on)}	V _{CE} =4.0V, I _C =6.0A		2.0	V
h _{FE}	V _{CE} =4.0V, I _C =0.3A	30		-
h _{FE}	V _{CE} =4.0V, I _C =3.0A	15	75	-
h _{fe}	V _{CE} =10V, I _C =0.5A, f=1 kHz	20		-
f _T	V _{CE} =10V, I _C =0.5A, f=1 MHz	3		MHz
t _{on}	I _C =6.0A, I _{B1} =I _{B2} =0.6A, R _L =5.0 OHMS	0.4	TYP	µSEC
t _{off}	I _C =6.0A, I _{B1} =I _{B2} =0.6A, R _L =5.0 OHMS	0.7	TYP	µSEC