

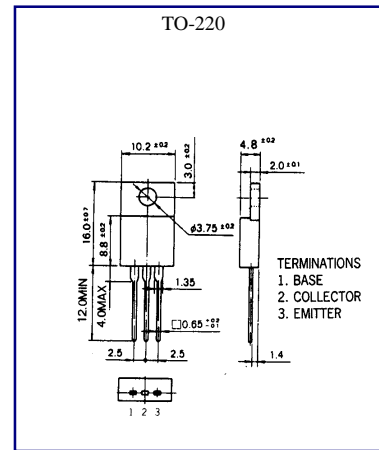


# TIP42 SERIES (TIP42/42A/42B/42C)

## PNP EPITAXIAL SILICON TRANSISTOR

### MEDIUM POWER LINEAR SWITCHING APPLICATIONS

•Complementary to TIP41/41A/41B/41C



### ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage :TIP41	V <sub>CB0</sub>	-40	V
:TIP41A		-60	V
:TIP41B		-80	V
:TIP41C		-100	V
Collector-Emitter Voltage :TIP41	V <sub>CE0</sub>	-40	V
:TIP41A		-60	V
:TIP41B		-80	V
:TIP41C		-100	V
Emitter-Base voltage	V <sub>EBO</sub>	-5	V
Collector Current (DC)	I <sub>C</sub>	-6	A
Collector Current (Pulse)	I <sub>C</sub>	-10	A
Base Current (DC)	I <sub>B</sub>	-2	A
Collector Dissipation (T <sub>c</sub> =25°C)	P <sub>C</sub>	65	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-50~150	°C

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## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Sustaining Voltage	:TIP41 :TIP41A :TIP41B :TIP41C	BV <sub>CEO(SUS)</sub>	I <sub>C</sub> =-30mA, I <sub>B</sub> =0	-40		V
				-600		V
				-80		V
				-100		V
Collector Cutoff Current	:TIP41/41A	ICEO	V <sub>CE</sub> = -30V, I <sub>B</sub> =0		-0.7	mA
	:TIP41B/41C		V <sub>CE</sub> = -60V, I <sub>B</sub> =0		-0.7	mA
Collector Cutoff Current	:TIP41	ICES	V <sub>CE</sub> = -40V, V <sub>EB</sub> = 0		-400	μA
	:TIP41A		V <sub>CE</sub> = 60V, V <sub>EB</sub> = 0		-400	μA
	:TIP41B		V <sub>CE</sub> = -80V, V <sub>EB</sub> = 0		-400	μA
	:TIP41C		V <sub>CE</sub> = -100V, V <sub>EB</sub> = 0		-400	μA
Emitter Cutoff Current		IEBO	V <sub>EB</sub> = -5V, I <sub>C</sub> =0		-1	mA
DC Current Gain		hFE	V <sub>CE</sub> = -4V, I <sub>C</sub> =-	30		
			0.3A	15	75	
Collector- Emitter Saturation Voltage		V <sub>CE(sat)</sub>	V <sub>CE</sub> = -4V, I <sub>C</sub> =-3A		-1.5	V
Base- Emitter On Voltage		V <sub>BE(on)</sub>	I <sub>C</sub> =-6A, I <sub>B</sub> =-600mA		-2.0	V
Current Gain Bandwith Product		f <sub>T</sub>	V <sub>CE</sub> = -4V, I <sub>C</sub> =-6A	3.0		MHZ
			V <sub>CE</sub> = -			
			10V, I <sub>C</sub> =500mA			
			f=1MHZ			