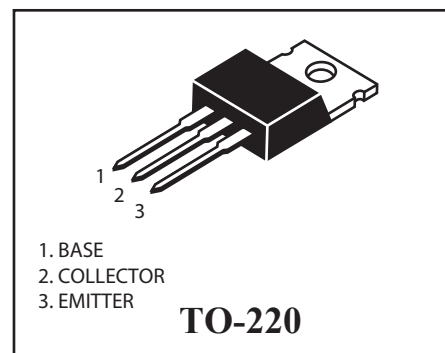
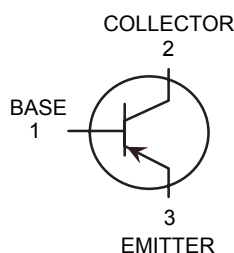


PNP Silicon Epitaxial Power Transistor

(Pb) Lead(Pb)-Free

Features:

- * Medium Power Linear Switching Applications
- * Complement to TIP41/41A/41B/41C



MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Parameter	Symbol	TIP42	TIP42A	TIP42B	TIP42C	Units
Collector-Base Voltage	V _{CBO}	-40	-60	-80	-100	V
Collector-Emitter Voltage	V _{CEO}	-40	-60	-80	-100	V
Emitter-Base Voltage	V _{EBO}	-5				V
Collector Current -Continuous	I _C	-6				A
Collector Power Dissipation	P _C	2				W
Junction Temperature	T _J	150				°C
Storage Temperature Range	T _{stg}	-55to+150				°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	TIP42 TIP42A TIP42B TIP42C V _{(BR)CBO}	I _C = -1mA, I _E =0	-40 -60 -80 -100		V
Collector-emitter breakdown voltage	TIP42 TIP42A TIP42B TIP42C V _{(BR)CEO} *	I _C = -30mA, I _B =0	-40 -60 -80 -100		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -1mA, I _C =0	-5		V
Collector cut-off current	TIP42 TIP42A TIP42B TIP42C I _{CBO}	V _{CB} =-40V, I _E =0 V _{CB} =-60V, I _E =0 V _{CB} =-80V, I _E =0 V _{CB} =-100V, I _E =0		-0.4	mA
Collector cut-off current	TIP42/42A TIP42B/42C I _{CEO}	V _{CE} = -30V, I _B = 0 V _{CE} = -60V, I _B = 0		-0.7	mA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0		-1	mA
DC current gain	h _{FE(1)}	V _{CE} =-4V, I _C =-0.3A	30		
	h _{FE(2)}	V _{CE} =-4 V, I _C = -3A	15	75	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-6A, I _B =-0.6A		-1.5	V
Base-emitter voltage	V _{BE}	V _{CE} =-4V, I _C =-6A		-2	V
Transition frequency	f _T	V _{CE} =-10V, I _C =-0.5	3		MHz

* Pulse test

Typical Characteristics

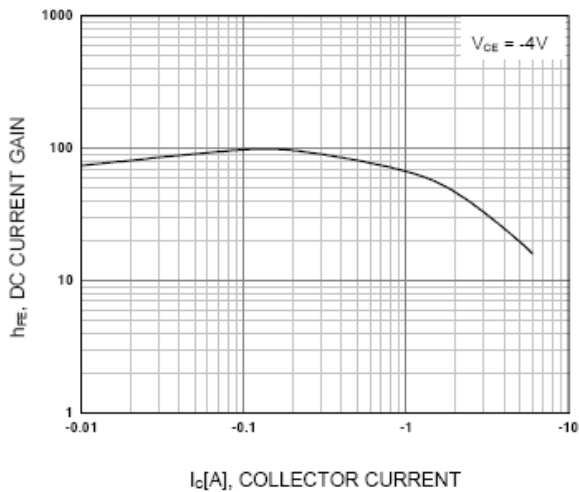


Figure 1. DC current Gain

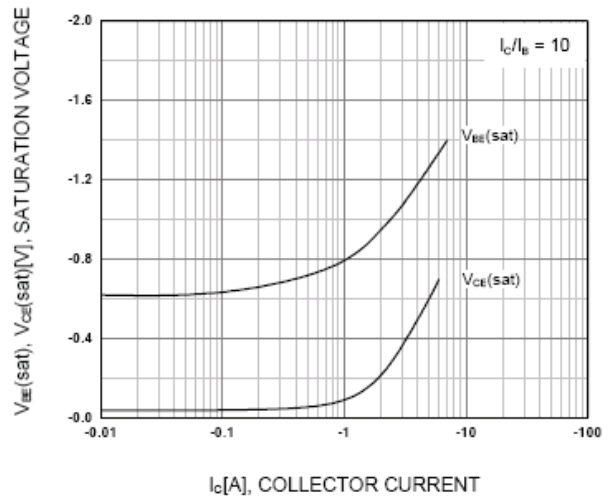


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

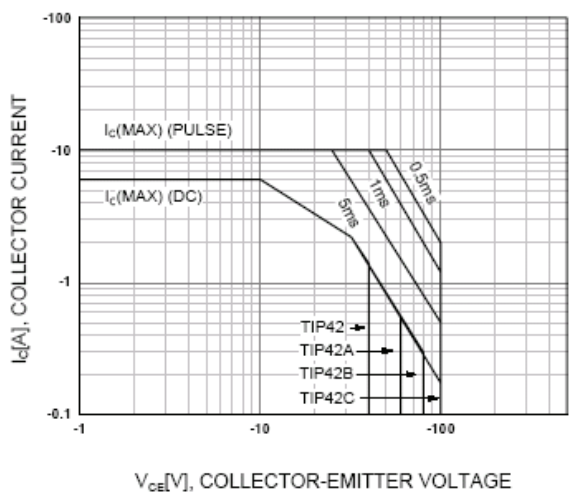


Figure 3. Safe Operating Area

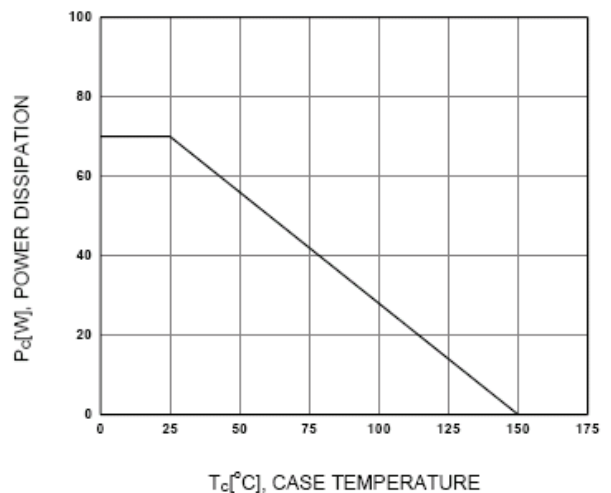
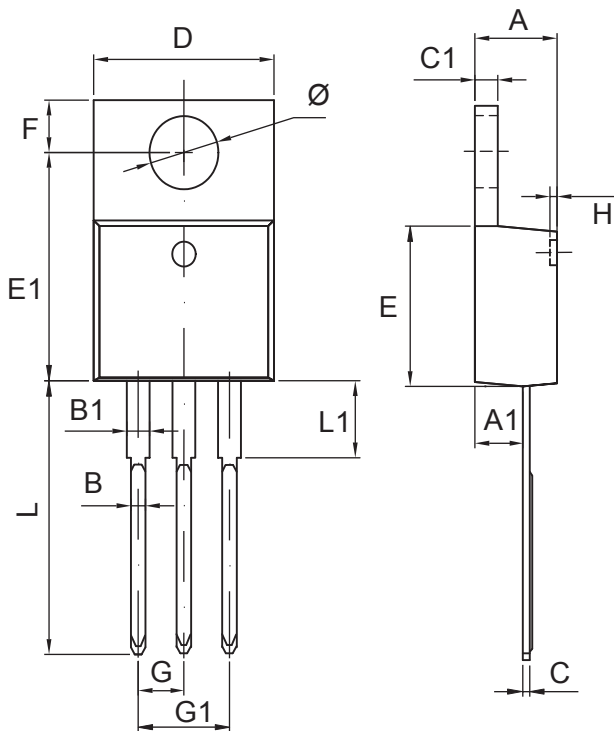


Figure 4. Power derating

TO-220 Outline Dimensions

unit:mm



TO-220		
Dim	Min	Max
A	4.47	4.67
A1	2.52	2.82
B	0.71	0.91
B1	1.17	1.37
C	0.31	0.53
C1	1.17	1.37
D	10.01	10.31
E	8.50	8.90
E1	12.06	12.446
G	2.54 TYP	
G1	4.98	5.18
F	2.59	2.89
H	0.00	0.30
L	13.4	13.8
L1	3.56	3.96
Ø	3.73	3.93