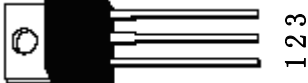


1、Features

- Medium Power Linear Switching Applications
- Complement to TIP42C

2、Pinning information

PIN	Description	Simplified outline
1	Base(B)	
2	Collector(C)	
3	Emitter(E)	

3、Limiting value

($T_a = 25^{\circ}\text{C}$ unless otherwise noted).

SYMBOL	PARAMETER	Limit	UNIT
Vcbo	Collector-Base Voltage	100	V
Vceo	Collector-Emitter Voltage	100	V
Vebo	Emitter-Base Voltage	5	V
Ic	Collector Current	DC	A
		Pulse	
Pd	Collector Power Dissipation		W
		TO-220	
Tj	Operating Junction Temperature	+125	$^{\circ}\text{C}$
Tstg	Operating Junction and Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$

4、Electrical Characteristics ($T_a = 25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	CONDITIONS	MIN	Typ	MAX	UNIT
BVcbo	Collector-Base Voltage	$I_C = 30\text{mA}$, $I_B = 0$	100			V
Bvceo	Collector-Emitter Breakdown Voltage	$I_C = 30\text{mA}$, $I_E = 0$	100			V
Bvebo	Emitter-Base Breakdown Voltage	$I_E = 10\text{mA}$, $I_C = 0$	5			V
Iceo	Collector Cutoff Current	$V_{CE} = 60\text{V}$, $I_E = 0$			0.7	mA
Iebo	Emitter Cutoff Current	$V_{EB} = 5\text{V}$, $I_C = 0$			1	mA
Vce(sat)	Collector-Emitter Saturation Voltage	$I_C / I_B = 6.0\text{A} / 0.6\text{A}$			1.5	V
Vbe(on)	Base-Emitter On Voltage	$V_{CE} = 4\text{V}$, $I_C = 6\text{A}$			2.0	V
HFE	DC Current Gain	$V_{CE} = 4\text{V}$, $I_C = 0.3\text{A}$	30			
		$V_{CE} = 4\text{V}$, $I_C = 3.0\text{A}$	15		75	
f_T	Frequency	$V_{CE} = 10\text{V}$, $I_C = 0.5\text{A}$	3			MHz

5、Electrical Characteristics Curve

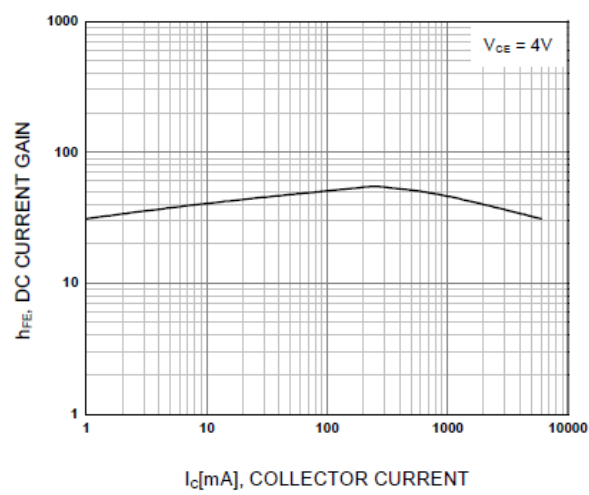


Figure 1. DC current Gain

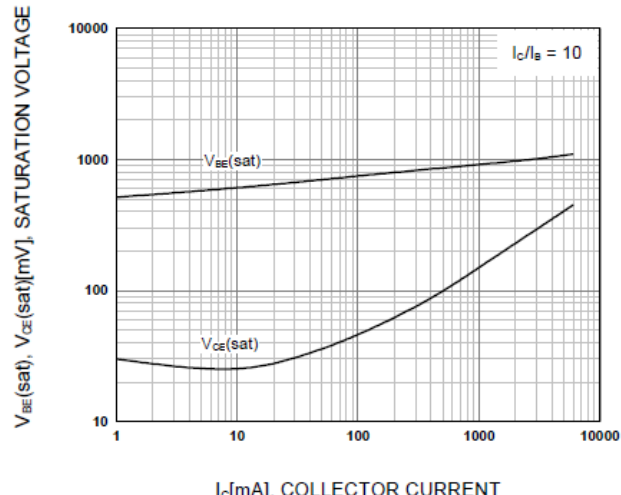


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

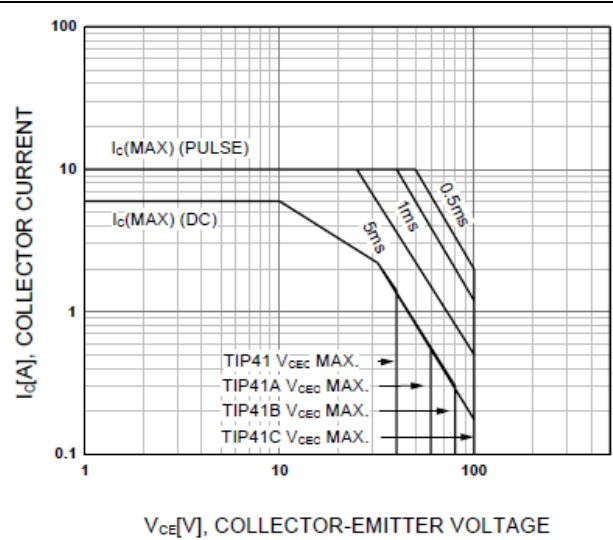


Figure 3. Safe Operating Area

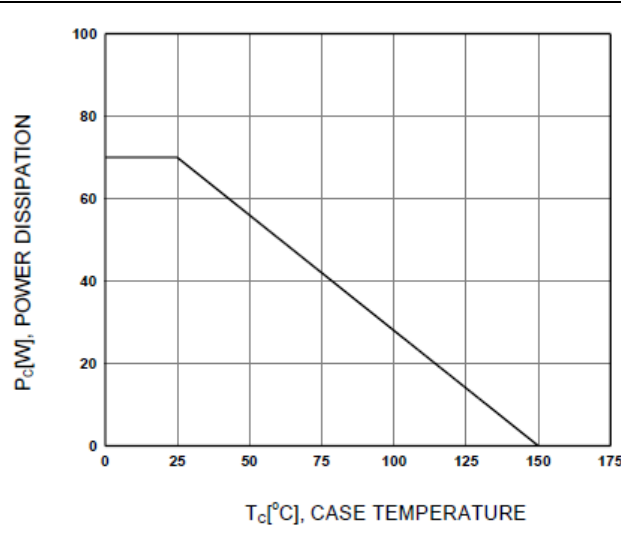
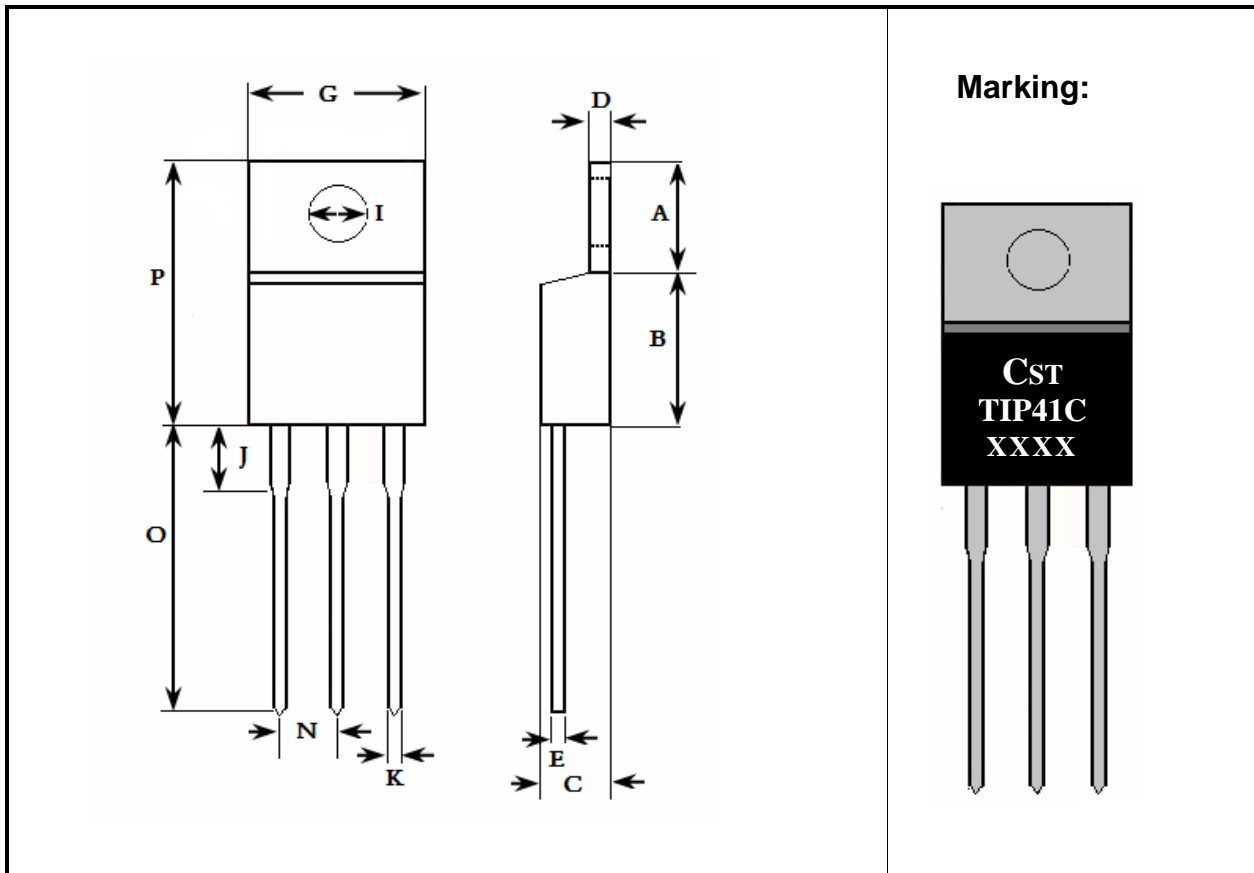


Figure 4. Power Derating

6、Package outline(TO-220)



DIM	Inches			Millimeters		
	Min	Type	Max	Min	Type	Max
A	0.226	0.258	0.301	5.75	6.55	7.65
B	0.349	0.362	0.369	8.86	9.20	9.38
C	0.171	0.178	0.183	4.35	4.53	4.65
D	0.046	0.051	0.055	1.16	1.30	1.40
E	0.012	0.016	0.020	0.30	0.40	0.50
G	0.367	0.394	0.415	9.31	10.00	10.55
I	-	0.143	0.152	-	3.62	3.85
J	0.087	0.108	0.127	2.22	2.75	3.22
K	0.027	0.031	0.035	0.68	0.8	0.88
N	-	0.100	0.104	-	2.54	2.65
O	0.485	0.514	0.546	12.32	13.05	13.88
P	0.593	0.616	0.648	15.07	15.65	16.47