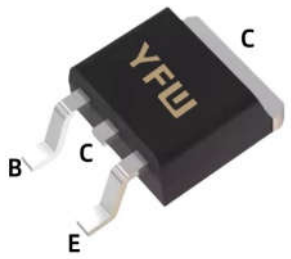
NPN Plastic-Encapsulate Transistors

Medium Power Linear Switching Applications
♦Complementary to TIP42C



TO-263

Absolute Maximum Ratings (Ta = 25 °C)

Parameter		Symbol	Value	Unit
Collector-base voltage		BV_{CBO}	100	V
Collector-emitter voltage		BV_{CEO}	100	V
Emitter-base voltage		BV_{EBO}	5	V
Collector current(DC)		I_C	6	A
Collector power dissipation	Ta =25 ℃	P_C	2	W
	Tc =25 ℃		65	
Junction temperature		Tj	150	℃
Storage temperature		Tstg	-65～150	℃

Electrical Characteristics (Ta = 25 °C)

Parameter	Symbol	Conditions	Min	Typ	Unit
Collector-base breakdown voltage	BV_{CBO}	I_C = 0.5mA，I_E = 0	100		V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 10mA，I_B = 0	100		V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 0.5mA，I_C = 0	5		V
Collector cut-off current	I_{CBO}	V_{CE} =100V，I_E = 0			mA
Collector cut-off current	I_{CEO}	V_{CB} = 60V，I_E = 0			mA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V，I_C = 0			mA
DC current gain*	h_{FE}	V_{CE}= 4V，I_C= 0.3A V_{CE}= 4V，I_C= 3A	20 15		
Collector-emitter saturation voltage*	$V_{CE(sat)}$	I_C = 6A，I_B = 0.6A			V
Base-emitter oN voltage*	$V_{BE\ (on)}$	V_{CE}= 4V，I_C= 6A			V
Current gain bandwidth product	f_T	V_{CE}=10V, I_C=500mA	3.0		MHz

* Pulse Test : PW ≤ 300μs, Duty cycle ≤ 2%

TypicalCharacteristics

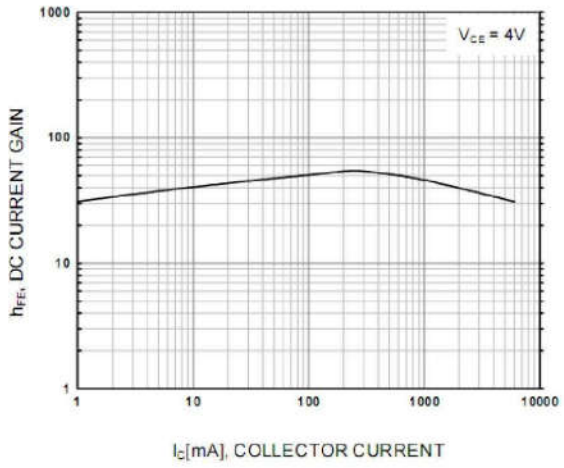


Figure 1. DC current Gain

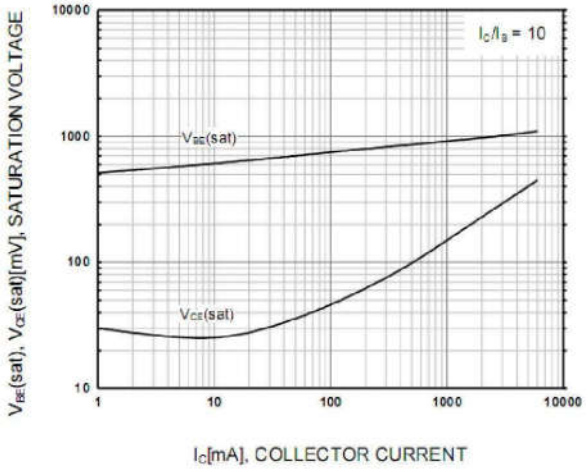


Figure 2. Base-EmitterSaturation Voltage and Collector-Emitter Saturation Voltage n

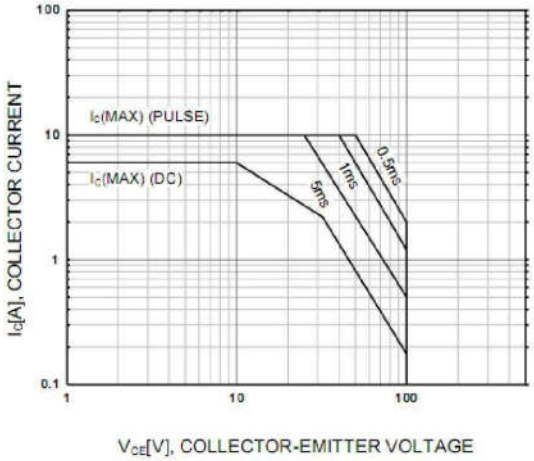


Figure 3. Safe Operating Area

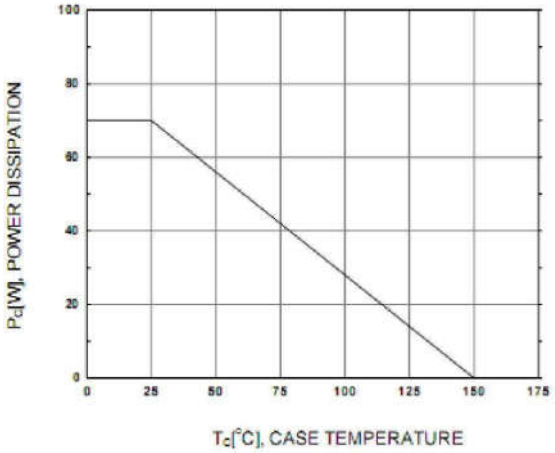
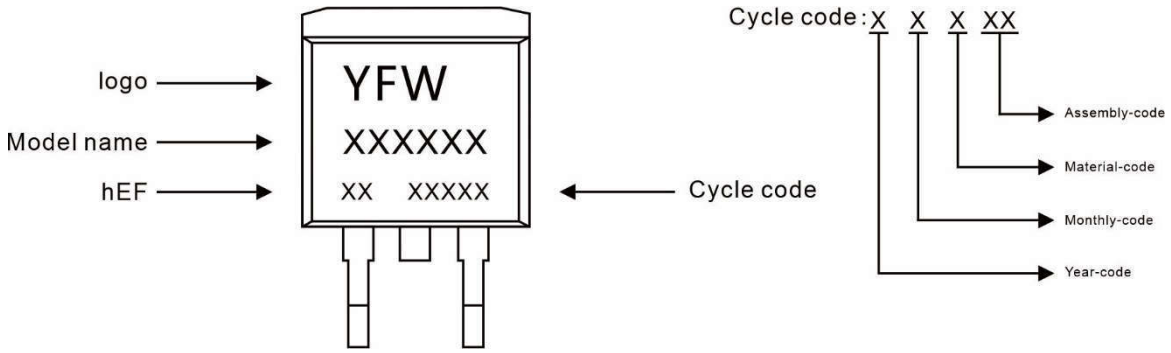


Figure 4. Power Derating

Marking Diagram

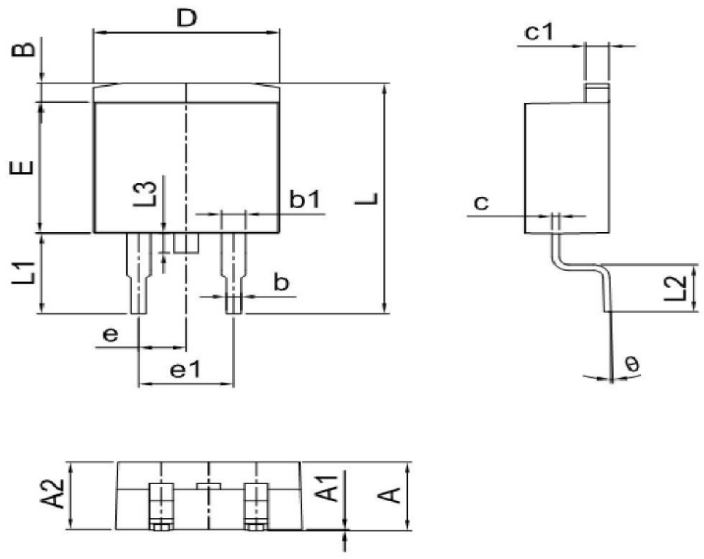


Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
TIP41C	TO-263	0.04oz(1.16g)	800pcs/reel	1600pcs/box 8000pcs/Carton

Package Dimensions

TO-263



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A1	0.00	0.15	0.000	0.006
A2	4.30	4.55	0.169	0.179
B	1.10	1.50	0.043	0.059
b	0.70	0.90	0.028	0.035
b1	1.20	1.50	0.047	0.059
c	0.30	0.60	0.012	0.024
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
L	15.00	15.30	0.591	0.602
L1	5.20	5.40	0.205	0.213
L2	2.40	2.60	0.094	0.102
L3	1.60	1.80	0.063	0.071

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