

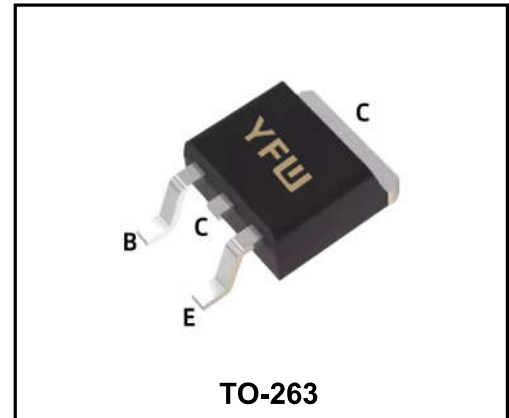
PNP Plastic-Encapsulate Transistors

APPLICATIONS

- ◆General purpose circuits
- ◆Audio amplifier
- ◆Power linear and switching

FEATURES

- ◆High switching speed
- ◆Complementary to TIP41CAS



Absolute Maximum Rating (Ta=25℃)

Characteristics		Symbols	Value	Units
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 peak current		I_{CM}	-10	A
Base current		I_B	-2	A
Collector dissipation	Ta = 25 °C	P_C	2	W
	Tc = 25 °C		65	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	-65~150	°C

Electrical Characteristics (Ta=25℃)

Characteristics	Test Condition	Symbols	Min	Typ	Max	Unit
Collector-Emitter Sustaining Voltage	$I_C = -10mA, I_B = 0$	$V_{CEO(sus)}$	-100			V
Collector cut-off current	$V_{CE} = -100V, I_E = 0$	I_{CES}			-0.4	mA
Collector cut-off current	$V_{CB} = -60V, I_E = 0$	I_{CEO}			-0.7	mA
Emitter cut-off current	$V_{EB} = -5V, I_C = 0$	I_{EBO}			-1	mA
DC current gain*	$V_{CE} = -4V, I_C = -0.3A$	h_{FE}	30			
	$V_{CE} = -4V, I_C = -3A$		15		75	
Collector-emitter saturation voltage*	$I_C = -6A, I_B = -0.6A$	$V_{CE(sat)}$			-1.5	V
Base-emitter saturation voltage*	$I_C = -6A, I_B = -0.6A$	$V_{BE(sat)}$			-2.0	V
Current gain bandwidth product	$V_{CE} = -10V, I_C = -0.5A$	f_T	3.0			MHz

* Pulse test : PW≤300μs, duty cycle≤2%

Typical Characteristics

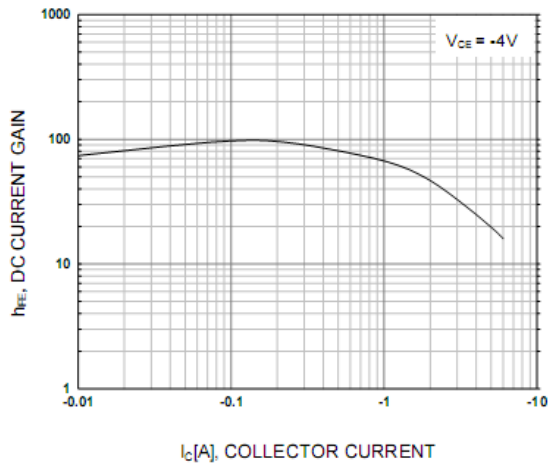


Figure 1. DC current Gain

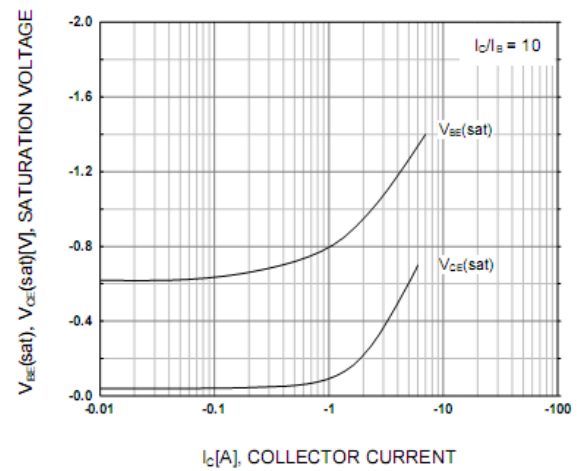


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

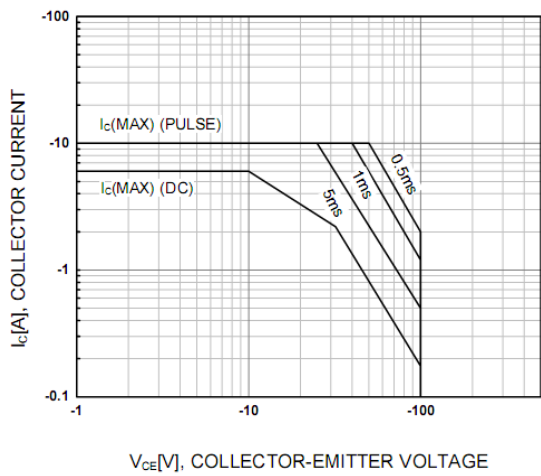


Figure 3. Safe Operating Area

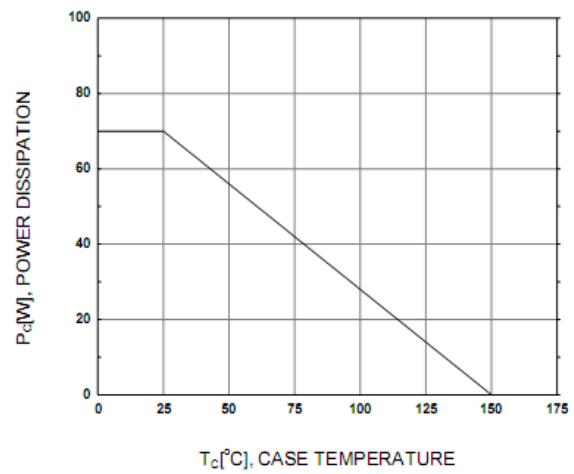
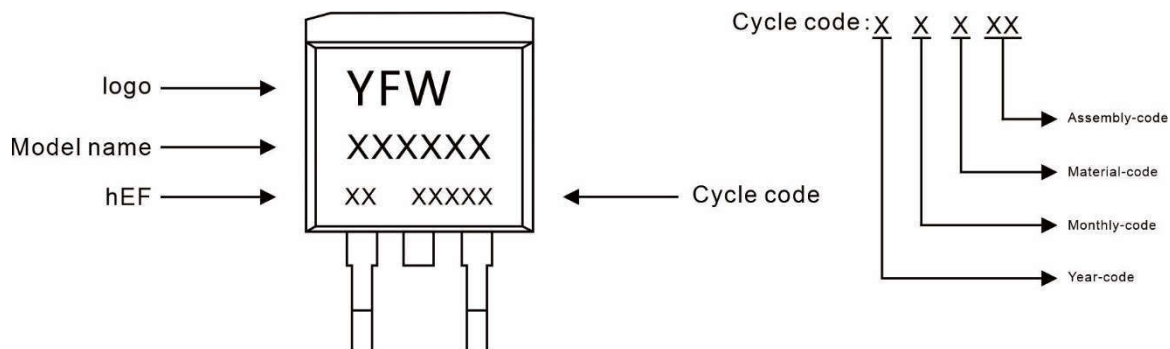


Figure 4. Power derating

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
TIP42CAS	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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