

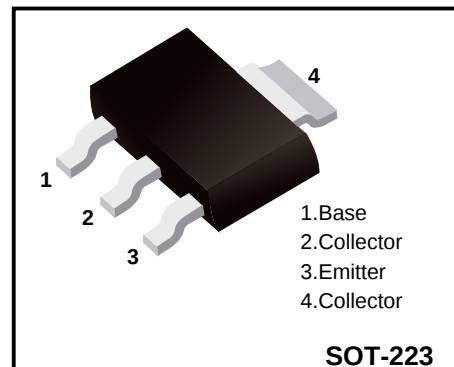
NPN Plastic-Encapsulate Transistors

APPLICATIONS

- ◆ Low Speed Switching
- ◆ General Purpose Amplifier

FEATURES

- ◆ High breakdown voltage
- ◆ Large current
- ◆ Complementary to PZT42C



Marking Code	
PZT41C	YFW PZT41C

Absolute Maximum Rating ($T_c=25^{\circ}\text{C}$, unless otherwise noted)

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 current (Pluse)	I_{CP}	10	A
Base current	I_B	2	A
Collector power dissipation	P_C	1.25	W
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics ($T_c=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	100			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 10\text{mA}$, $I_B = 0$	100			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu\text{A}$, $I_C = 0$	5			V
Collector cut-off current	I_{CES}	$V_{CE} = 100\text{V}$, $V_{BE} = 0$			100	μA
Collector cut-off current	I_{CEO}	$V_{CB} = 60\text{V}$, $I_B = 0$			0.5	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			100	μA
DC current gain*	h_{FE}	$V_{CE}=4\text{V}$, $I_C = 0.3\text{A}$ $V_{CE}=4\text{V}$, $I_C = 3\text{A}$	25 15			
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = 6\text{A}$, $I_B = 0.6\text{A}$			1.5	V
Base-emitter saturation voltage*	$V_{BE(on)}$	$V_{CE}=4\text{V}$, $I_C = 6\text{A}$			2.0	V
Transition frequency	f_T	$V_{CE} = 10\text{V}$, $I_B = 500\text{mA}$	3			MHz

* Pulse test: $PW \leq 300\mu\text{s}$, duty cycle $\leq 2\%$ Pulse

Typical Characteristics

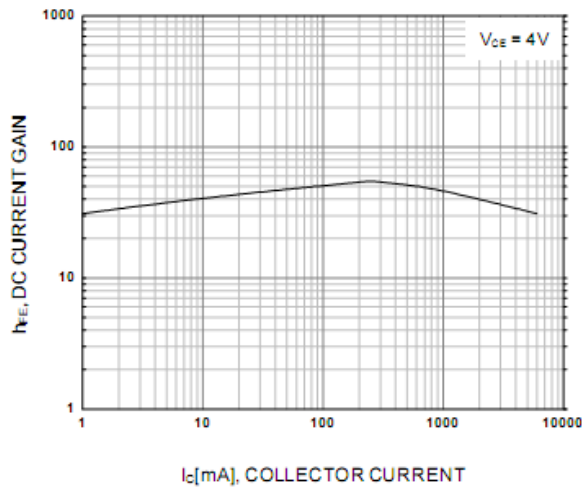
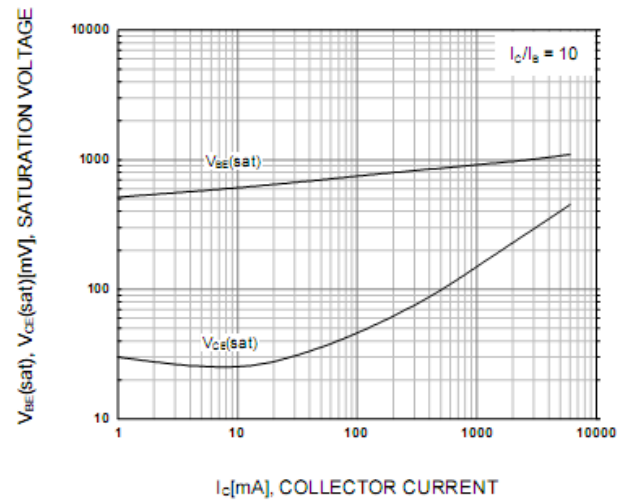


Figure 1. DC current Gain



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

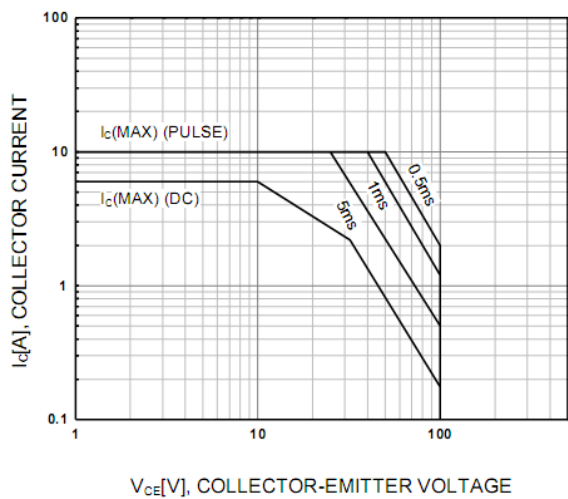


Figure 3. Safe Operating Area

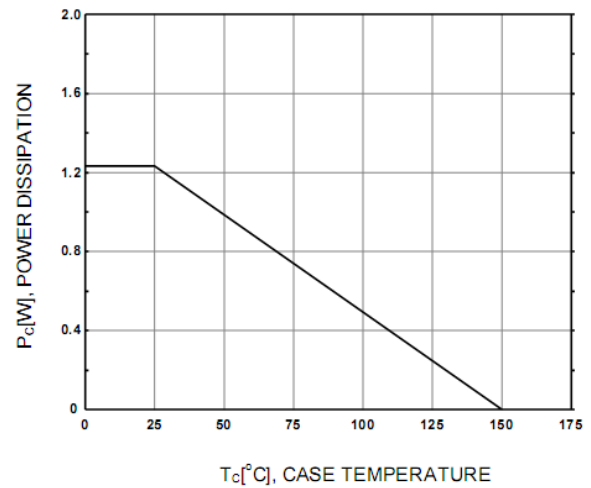


Figure 4. Power Derating

Ordering information

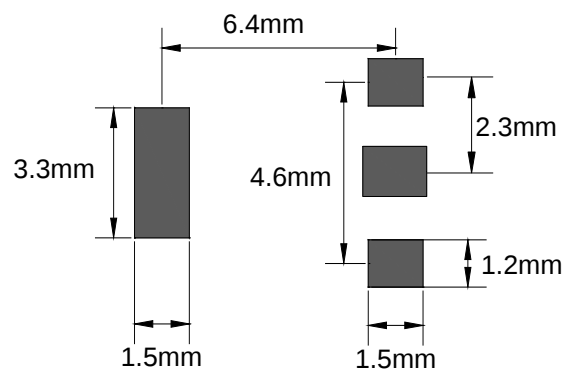
Package	Packing Description	Base Quantity	Packing Quantity
SOT-223	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton
	Tape/Reel, 13" reel	2500pcs/Reel	5000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-223

Dlm	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045

The recommended mounting pad size



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