

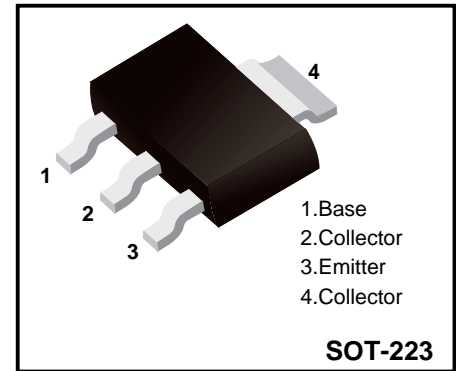
**PNP Plastic-Encapsulate Transistors**

**Application**

- High current switching

**Features**

- Low collector-emitter saturation voltage
- $V_{CE(sat)} = -0.4V$  (Max.) at  $I_C = -3A$
- High speed switching time:
- Complementary types: 2SC2562



**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$BV_{CBO}$	-60	V
Collector-Emitter Voltage	$BV_{CEO}$	-50	V
Emitter-Base Voltage	$BV_{EBO}$	-5	V
Collector Current	$I_C$	-3	A
Collector Power Dissipation	$P_C$	1	W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

**Electrical Characteristics (Ta=25°C, unless otherwise specified.)**

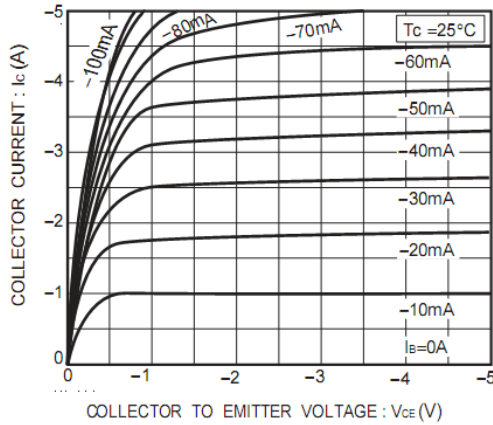
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CBO}$	$I_C = -100\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-1.0	$\mu A$
Emitter-base cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-1.0	$\mu A$
DC current gain*	$h_{FE1}$	$V_{CE} = -1V, I_C = -1mA$	120		700	
	$h_{FE2}$	$V_{CE} = -1V, I_C = -3A$	100			
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = -3A, I_B = -0.15A$			-0.4	V
Base-emitter On Voltage*	$V_{BE(on)}$	$I_C = -3A, I_B = -0.15A$			-1.2	V
Transition frequency	$f_T$	$V_{CE} = -4V, I_C = -1A$		80		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, f = 1MHz$		130		fF
Turn-on time	$t_{on}$	$V_{CC} = -30V, I_C = -3A$ $I_{B1} = -I_{B2} = -0.15A$ $t_p = 20\mu s$		0.3		$\mu s$
Storage time	$t_s$			1.5		$\mu s$
Fall time	$t_f$			0.3		$\mu s$

\*Pulse Test: Pulse Width  $\leq 300$  ms, Duty Cycle  $\leq 2.0\%$

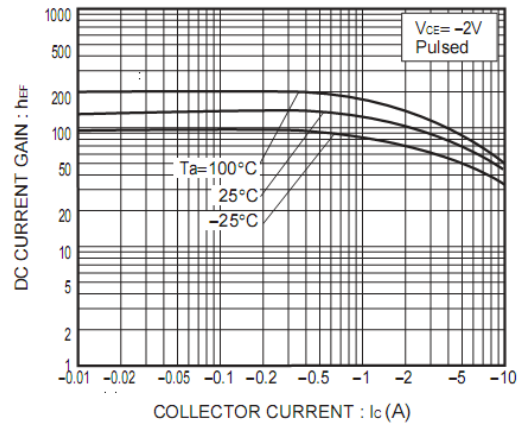
**h<sub>FE</sub>1 Classification**

Classification	YFW1012A-Y	YFW1012A-G	YFW1012A-B
Range	120~240	200~400	350~700

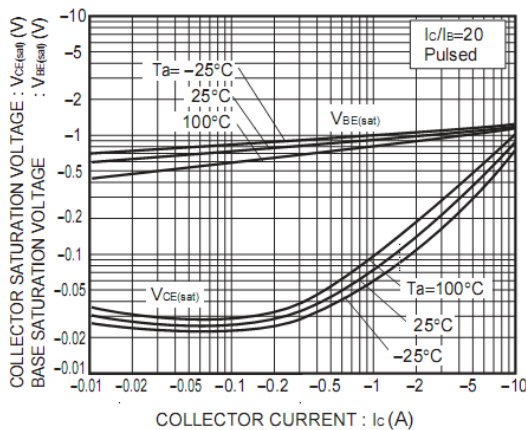
**Typical Characteristics**



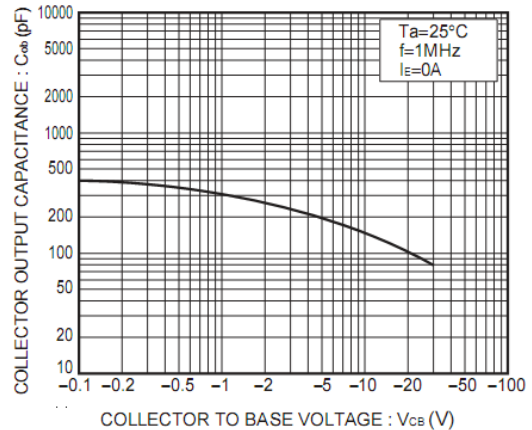
**Figure 1. Static Characteristic**



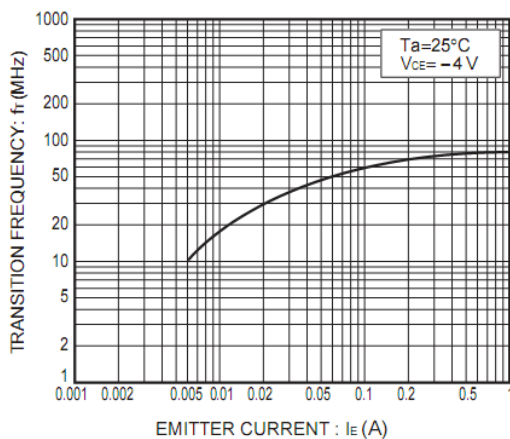
**Figure 2. DC current Gain**



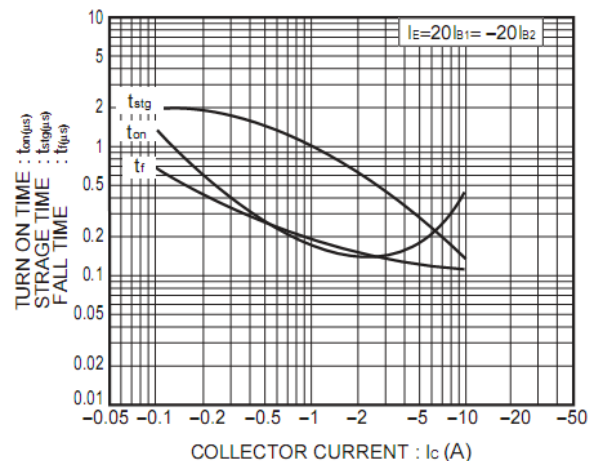
**Figure 3. Saturation Voltage**



**Figure 4. Collector output capacitance**



**Figure 5. Resistance ratio vs. emitter current**



**Figure 6. Switching characteristics**

**Ordering information**

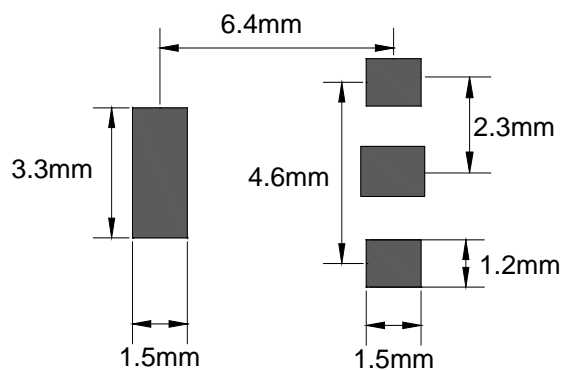
Package	Packing Description	Base Quantity	Packing Quantity
SOT-223	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton
	Tape/Reel, 13" reel	2500pcs/Reel	5000PCS/Box 30000PCS/Carton

**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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