

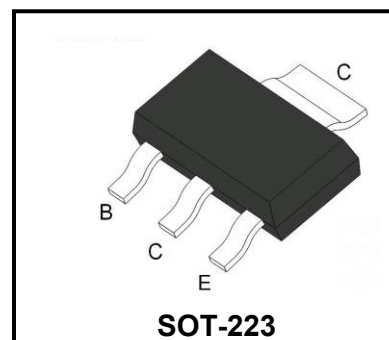
PNP Plastic-Encapsulate Transistors

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	μA
Emitter-base cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-1.0	μA
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		μs
Storage time	t_s			1.5		μs
Fall time	t_f			0.3		μs

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

h_{FE}1 Classification

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

Typical Characteristics

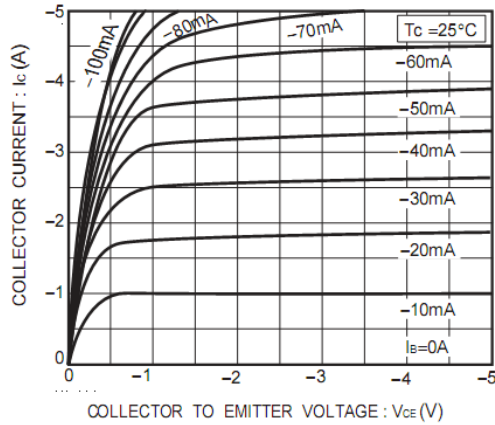


Figure 1. Static Characteristic

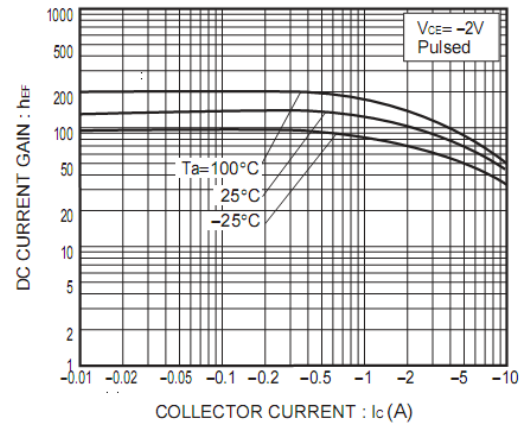


Figure 2. DC current Gain

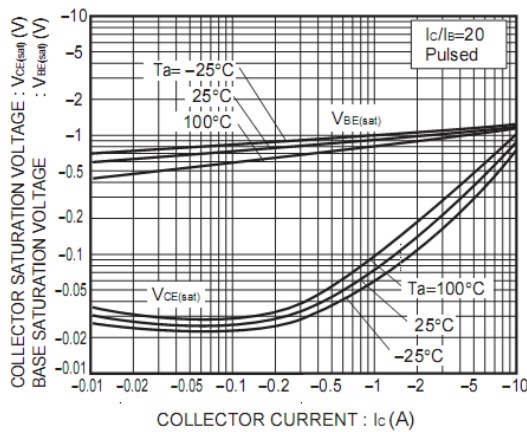


Figure 3. Saturation Voltage

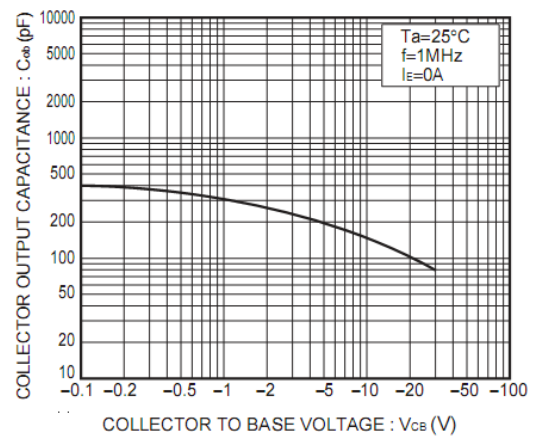


Figure 4. Collector output capacitance

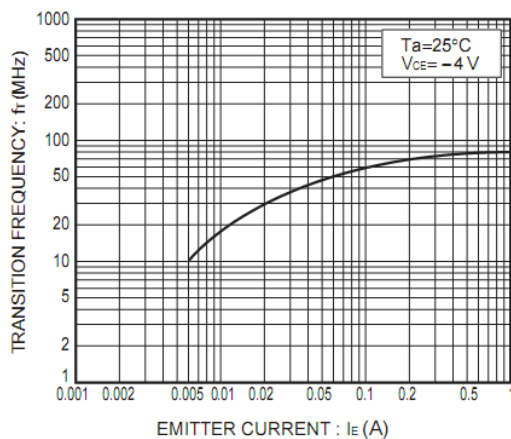


Figure 5. Resistance ratio vs. emitter current

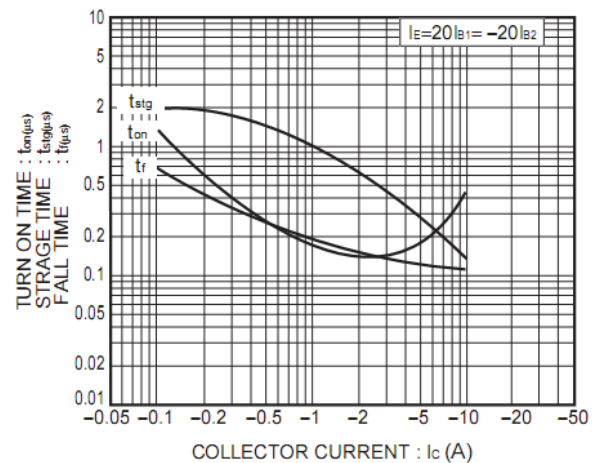


Figure 6. Switching characteristics

Package Dimensions

SOT-223

DIm	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