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2SC2223 NPN Transistors

SOT-23 Plastic-Encapsulate Transistors

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客户确认：

公司签章：

部门

工程部

品保部

采购部

签名

日期

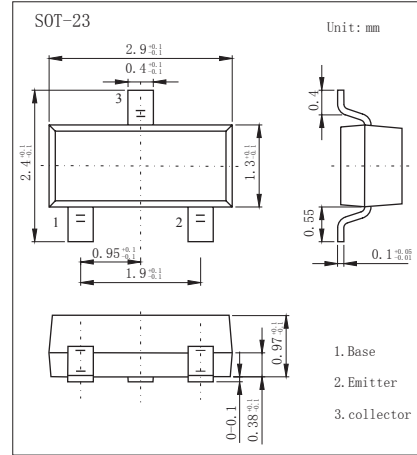


SOT-23 Plastic-Encapsulate Transistors

2SC2223 NPN Transistors

■ Features

- Collector Current Capability $I_c=20\text{mA}$
- Collector Emitter Voltage $V_{CE0}=20\text{V}$



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	30	V
Collector - Emitter Voltage	V_{CEO}	20	
Emitter - Base Voltage	V_{EBO}	4	
Collector Current - Continuous	I_c	20	mA
Collector Power Dissipation	P_c	150	mW
Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{stg}	-55 to 125	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

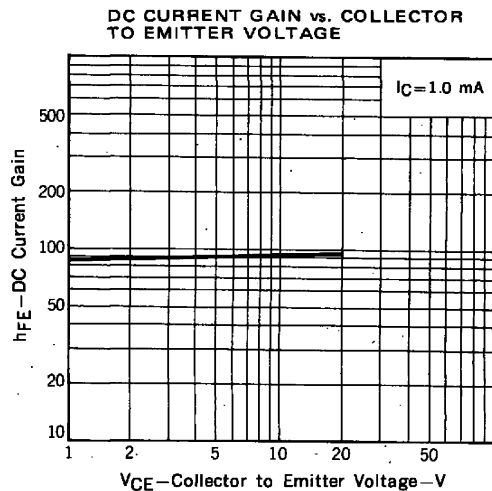
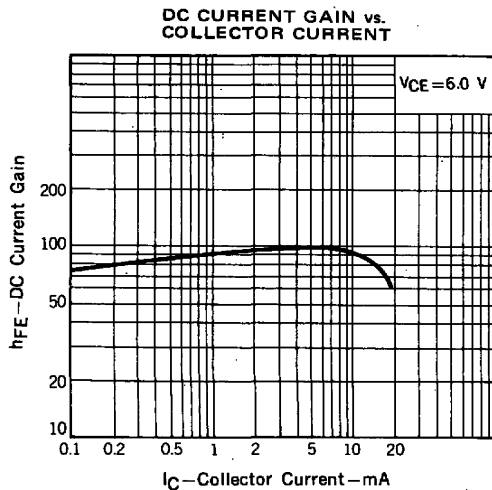
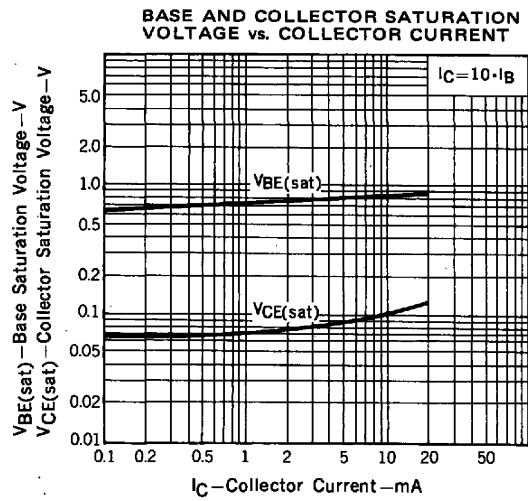
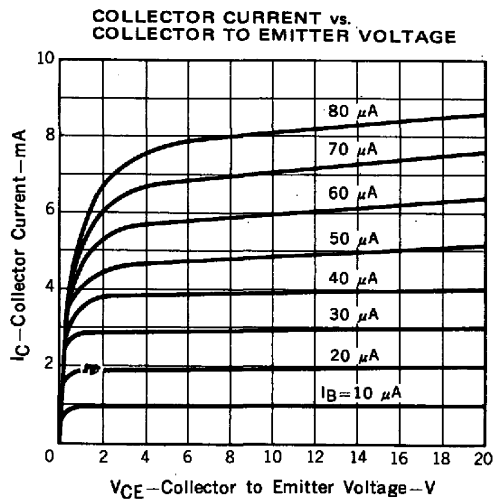
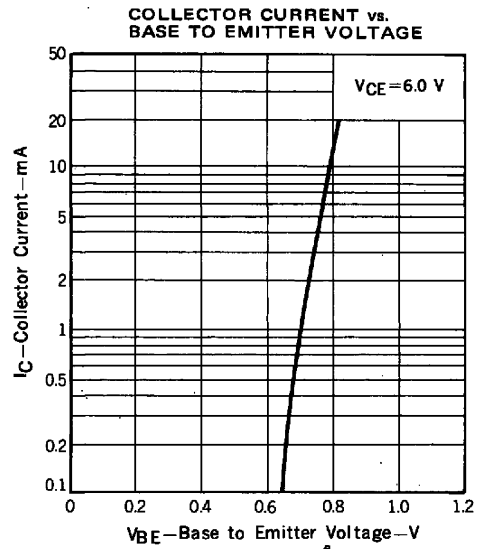
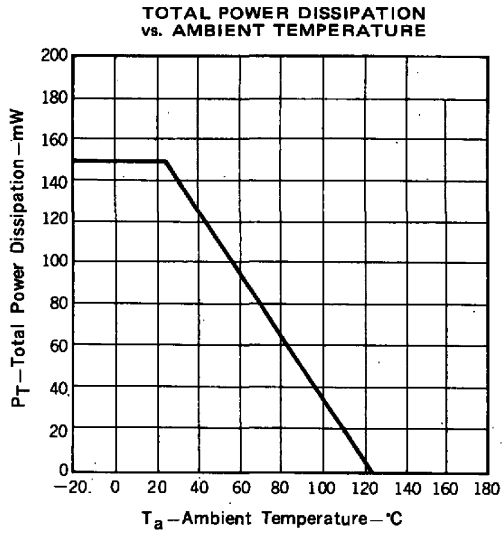
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_c= 100 \mu\text{A}, I_E= 0$	30			V
Collector- emitter breakdown voltage	V_{CEO}	$I_c= 1 \text{ mA}, I_B= 0$	20			
Emitter - base breakdown voltage	V_{EBO}	$I_E= 100 \mu\text{A}, I_C= 0$	4			
Collector-base cut-off current	I_{CBO}	$V_{CB}= 25 \text{ V}, I_E= 0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}= 3 \text{ V}, I_C= 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10 \text{ mA}, I_B=1\text{mA}$			0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C=10 \text{ mA}, I_B=1\text{mA}$			1.2	
Base - emitter voltage	V_{BE}	$V_{CE}= 6 \text{ V}, I_C= 1 \text{ mA}$		0.72		
DC current gain	h_{FE}	$V_{CE}= 6 \text{ V}, I_C= 1 \text{ mA}$	40		180	
Noise Figure	NF	$V_{CE}= 6 \text{ V}, I_E= -1\text{mA}, R_G=50\Omega, f=100\text{MHz}$		3		dB
Collector output capacitance	C_{ob}	$V_{CB}= 6 \text{ V}, I_E= 0, f=1\text{MHz}$		1		pF
Collector to base time constant	$C_{crb/b}$	$V_{CE}= 6 \text{ V}, I_E= -1\text{mA}, f=31.9\text{MHz}$		12		pS
Transition frequency	f_T	$V_{CE}= 6 \text{ V}, I_E= -1\text{mA}$	400	600		MHz

■ Classification of h_{fe}

Type	2SC2223-F12	2SC2223-F13	2SC2223-F14
Range	40-80	60-120	90-180
Marking	F12	F13	F14

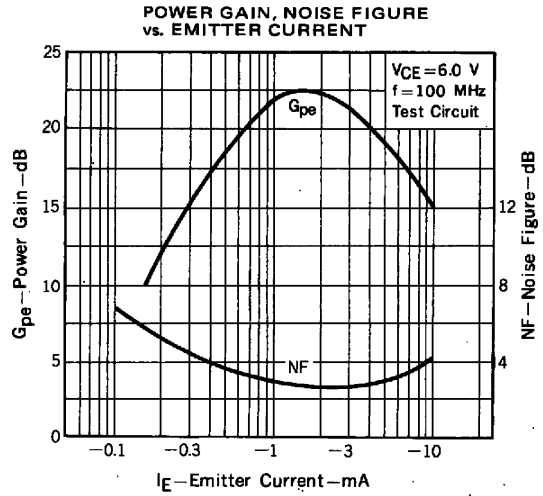
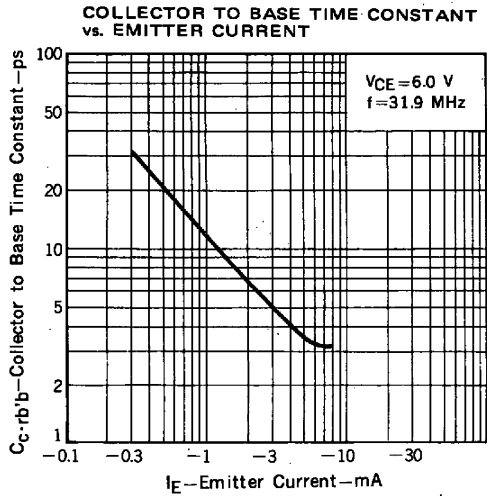
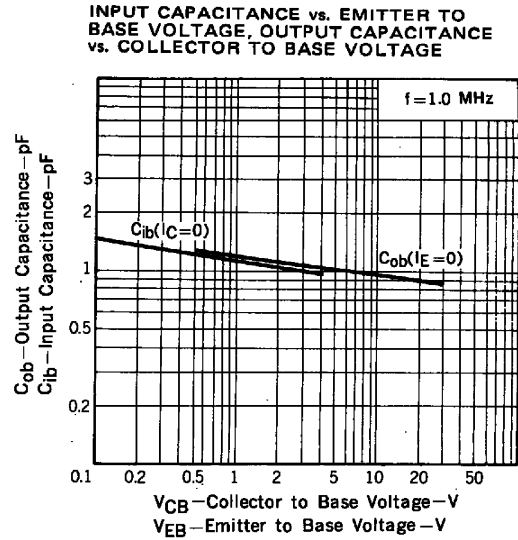
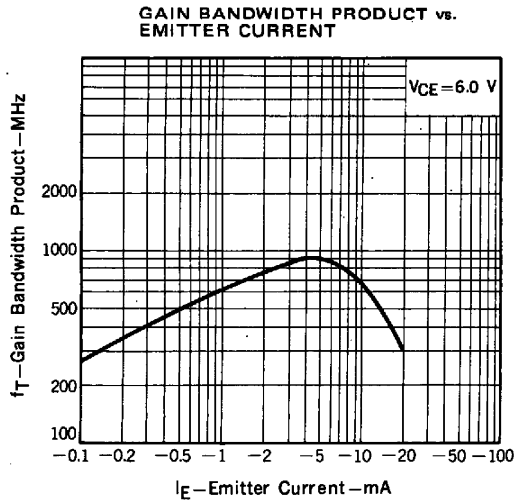
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Typical Characteristics



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Typical Characteristics



100 MHz G_{pe} , NF TEST CIRCUIT

