SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

MARKING: 2A

Features

- As complementary type the NPN transistor S9014 is recommended
- Epitaxial planar die construction

Maximum Ratings

(Ratings at 25℃ ambient temperature unless otherwise specified.)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-100	mA
P_C	Total Device Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	625	℃/W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55 to +150	℃

Electrical Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified).

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V_{CBO}	I_C=-10μA, I_E=0	-50		V
Collector-emitter breakdown voltage	V_{CEO}	I_C=-1mA, I_B=0	-45		V
Emitter-base breakdown voltage	V_{EBO}	I_E=-10μA, I_C=0	-5		V
Collector cut-off current	I_{CBO}	V_{CB}=-50V, I_E=0		-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0		-0.1	μA
DC current gain	$h_{FE(2)}$	V_{CE}=-5V, I_C= -1mA	200	1000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100mA, I_B= -10mA		-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-100mA, I_B= -10mA		-1	V
Transition frequency	f_T	V_{CE}=-5V, I_C=-10mA,f=30MHz	150		MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	L	H
Range	200-450	450-1000

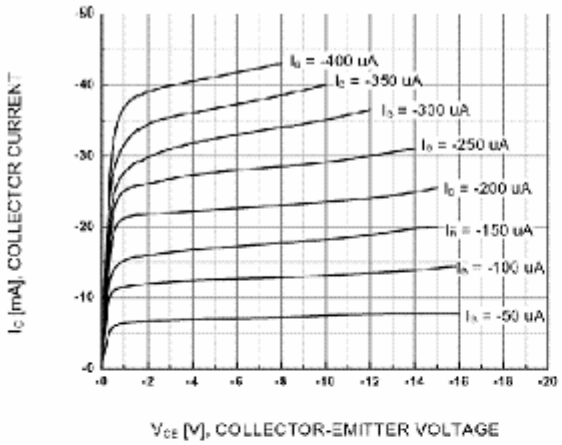

Figure 1. Static Characteristic

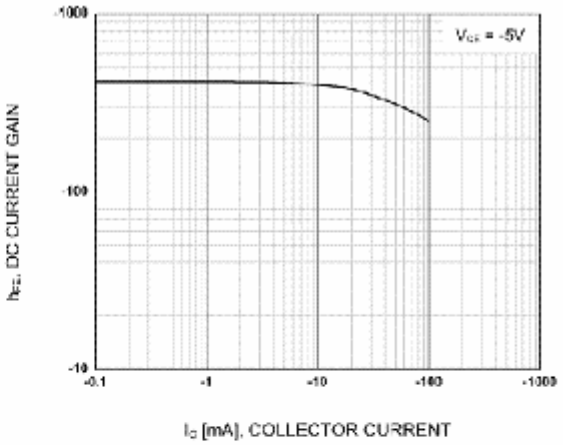

Figure 2. DC current Gain

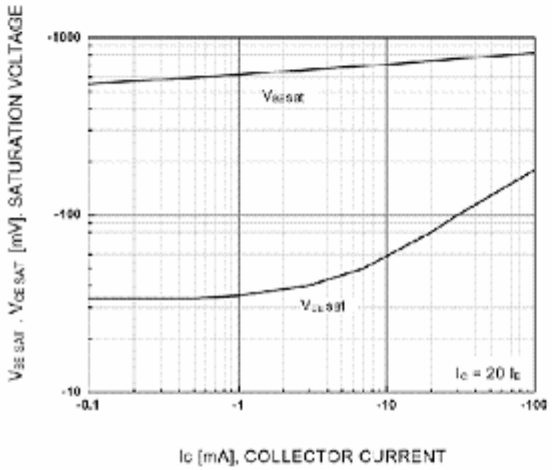

Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

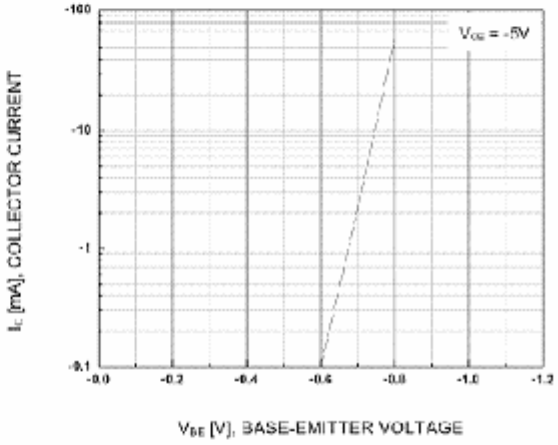

Figure 4. Base-Emitter On Voltage

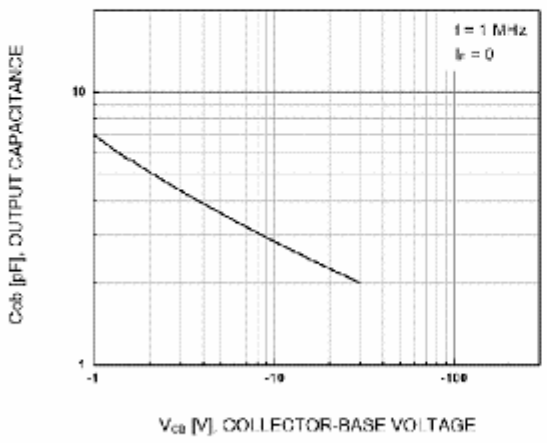

Figure 5. Collector Output Capacitance

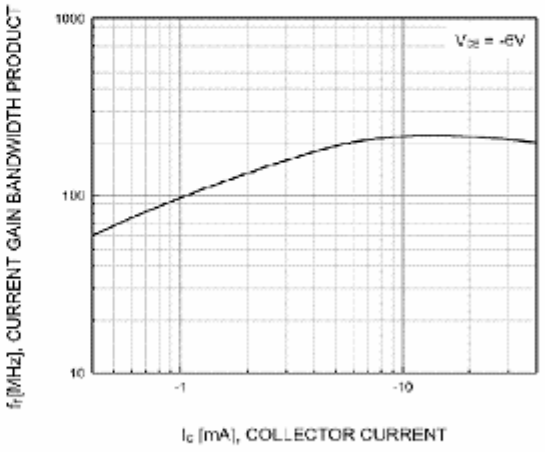

Figure 6. Current Gian Bandwidth Product