

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°C ambient temperature unless otherwise specified.)

Symbol	Parameter	Value	Units
V_{CB0}	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	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 to +150	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V_{CB0}	$I_C = -10\mu A, I_E = 0$	-50		V
Collector-emitter breakdown voltage	V_{CEO}	$I_C = -1mA, I_B = 0$	-45		V
Emitter-base breakdown voltage	V_{EBO}	$I_E = -10\mu A, I_C = 0$	-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

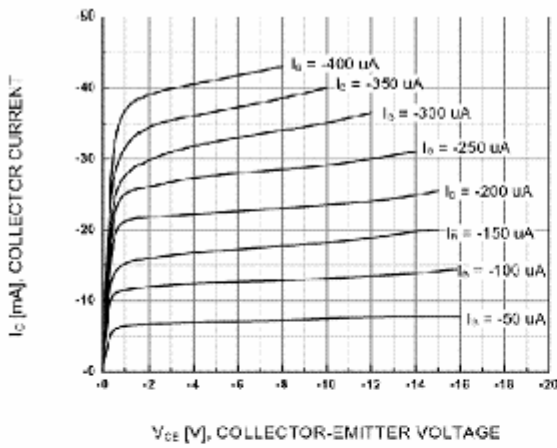


Figure 1. Static Characteristic

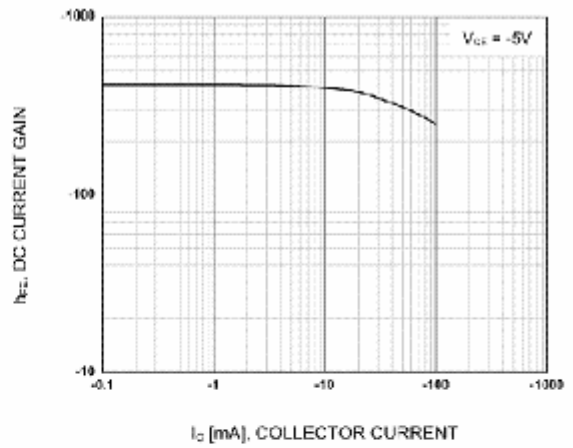
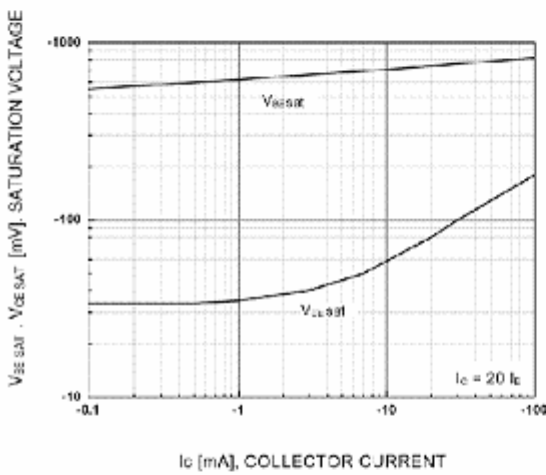


Figure 2. DC current Gain



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

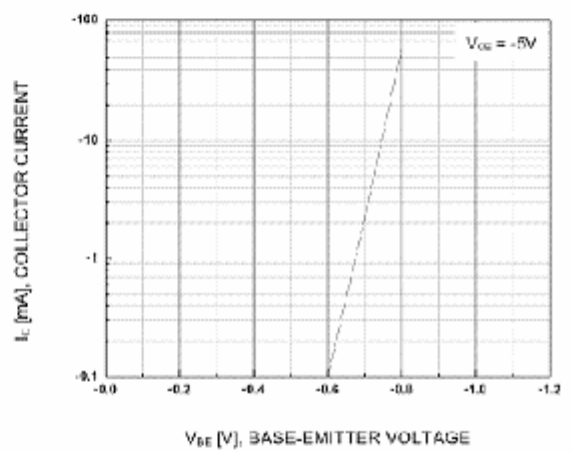


Figure 4. Base-Emitter On Voltage

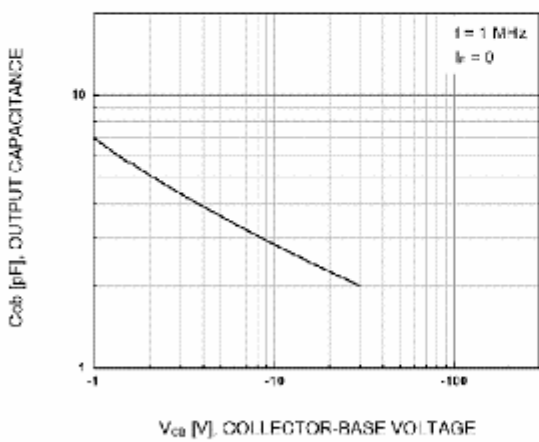


Figure 5. Collector Output Capacitance

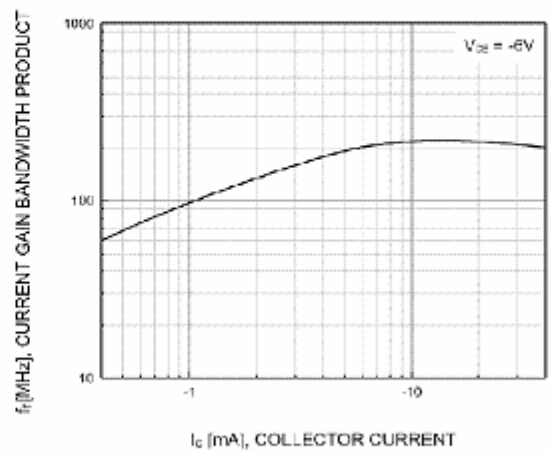


Figure 6. Current Gain Bandwidth Product

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