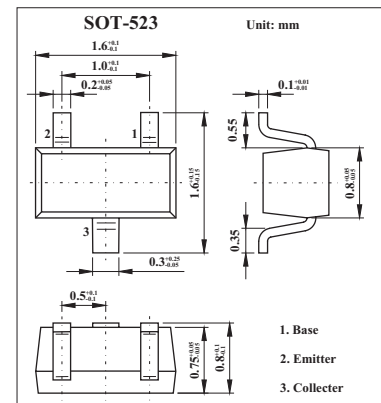


General purpose transistor

2SC4617

■ Features

- Low C_{ob} : $C_{ob}=2.0\text{pF}$ (Typ.)
- NPN silicon transistor

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	0.15	A
Collector power dissipation	P_C	0.15	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=50\mu\text{A}$	60			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=1\text{mA}$	50			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=50\mu\text{A}$	7			V
Collector cutoff current	I_{CBO}	$V_{CB}=60\text{V}$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=7\text{V}$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6\text{V}, I_C=1\text{mA}$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C/I_B=50\text{mA}/5\text{mA}$			0.4	V
Output capacitance	C_{ob}	$V_{CE}=12\text{V}, I_E=0\text{A}, f=1\text{MHz}$		2	3.5	pF
Transition frequency	f_T	$V_{CE}=12\text{V}, I_E=-2\text{mA}, f=100\text{MHz}$		180		MHz

■ h_{FE} Classification

Marking	BQ	BR	BS
Rank	Q	R	S
h_{FE}	120~270	180~390	270~560

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Typical Characteristics

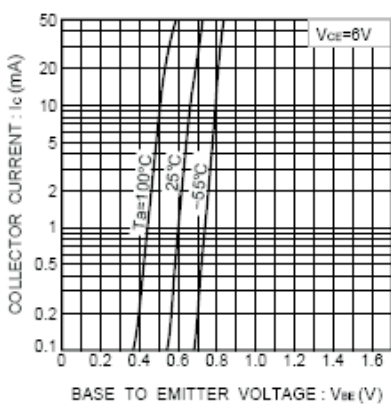


Fig.1 Grounded Emitter Propagation Characteristics

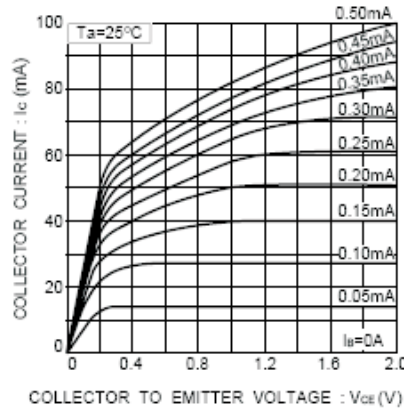


Fig.2 Grounded Emitter Output Characteristics

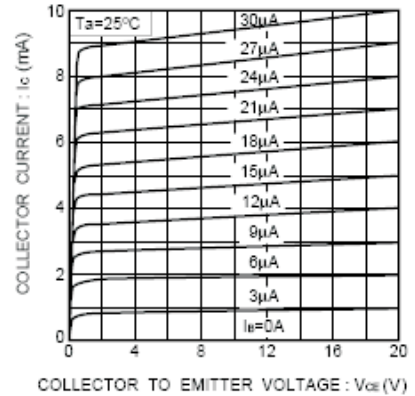


Fig.3 Grounded Emitter Output Characteristics

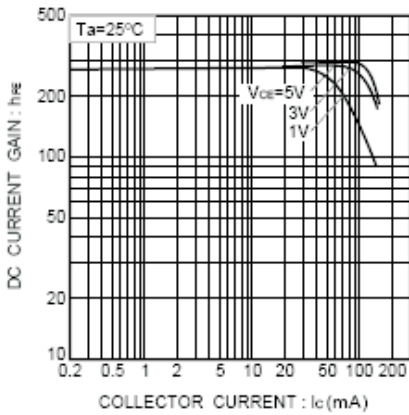


Fig.4 DC Current Gain vs. Collector Current

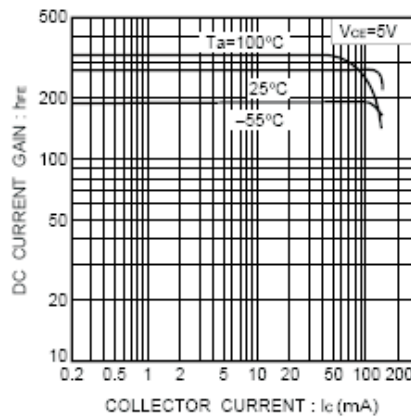


Fig.5 DC Current Gain vs. Collector Current

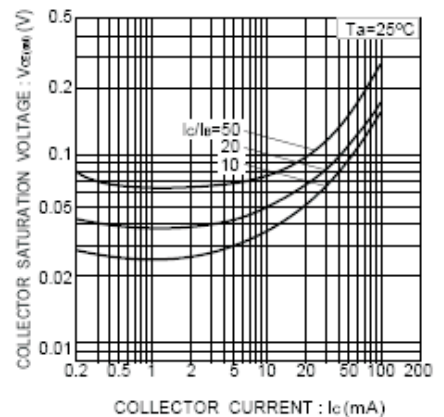


Fig.6 Collector Emitter Saturation Voltage vs. Collector Current

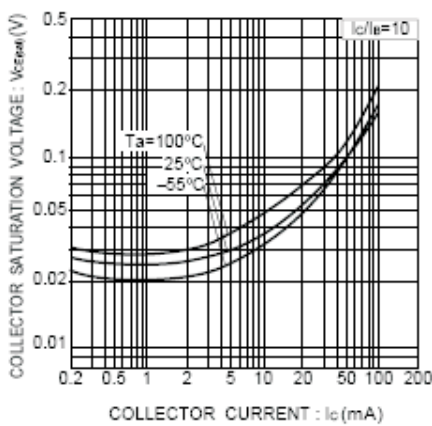


Fig.7 Collector Emitter Saturation Voltage vs. Collector Current

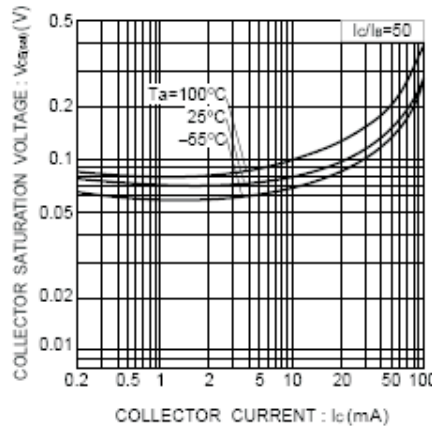


Fig.8 Collector Emitter Saturation Voltage vs. Collector Current

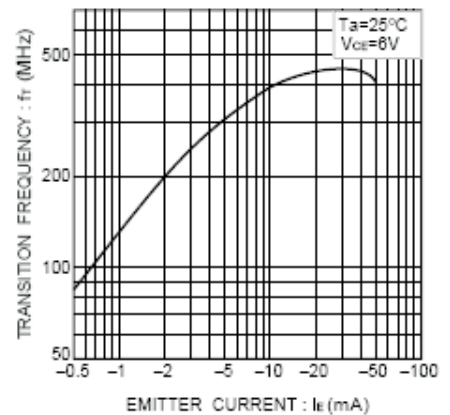


Fig.9 Gain Bandwidth Product vs. Emitter Current

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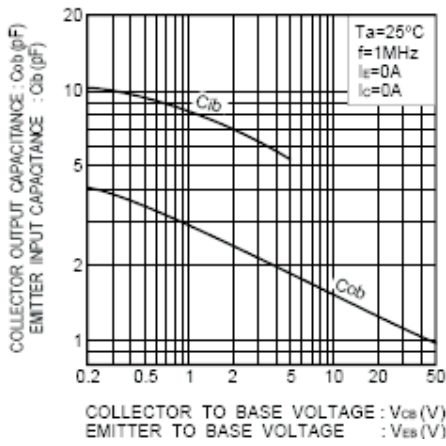


Fig.10 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage

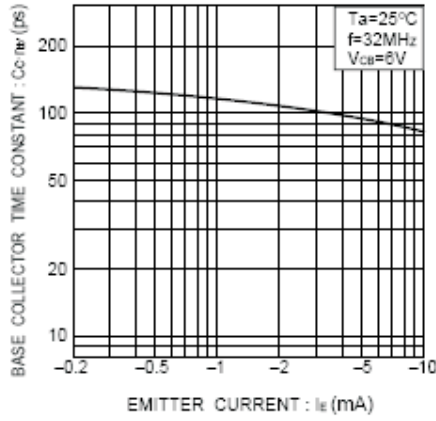


Fig.11 Base-Collector Time Constant vs. Emitter Current