PNP small signal transistor

BCX17

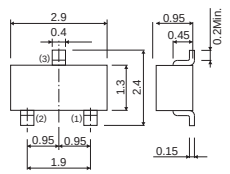
Small load switch transistor with high gain and Low saturation voltage.

●Features

(1) High gain and low saturation voltage.
(2) Ideal for small load switching applications.
Complements the BCX19

●Dimensions (Unit : mm)

SST3



(1)Emitter
(2)Base
(3)Collector

Each lead has same dimensions

Abbreviated symbol : GT1

●Packaging specifications

Type	Package	Taping
	Code	T116
	Basic ordering unit (pieces)	3000
BCX17		○

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-emitter voltage (V_{BE}=0)	V_{CES}	–50	V	
Collector-emitter voltage (open base)	V_{CEO}	–45	V	
Emitter-base voltage	V_{EBO}	–5	V	
Collector current	I_C	–0.5	A	
Collector current (peak value)	I_{CM}	–1	A	
Collector power dissipation	P_C	0.2	W	
		0.35	W	*
		0.425	W	*2
Junction temperature	Tj	150	°C	
Storage temperature	Tstg	–65 to 150	°C	

* Mounted on a 7×5×0.6 mm CERAMIC SUBSTRATE
*2 Mounted on a 15×15×0.6 mm CERAMIC SUBSTRATE

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CES}	–50	–	–	V	I_C= –50μA
Collector-emitter breakdown voltage	BV_{CEO}	–45	–	–	V	I_C= –10mA
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	I_E= –50μA
Collector-base cutoff current	I_{CBO}	–	–	–0.1	μA	V_{CB}= –20V
Emitter-base cutoff current	I_{EBO}	–	–	–10	μA	V_{EB}= –5V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	–0.62	V	I_C/I_B= –500mA/ –50mA
Base-emitter voltage	$V_{BE(on)}$	–	–	–1.2	V	V_{CE}/I_C= –1V/ –500mA
DC current transfer ratio	h_{FE}	100	–	600	–	V_{CE}= –1V, I_C= –100mA
		70	–	–		V_{CE}= –1V, I_C= –300mA
		40	–	–		V_{CE}= –1V, I_C= –500mA
Transition frequency	f_T	–	200	–	MHz	V_{CE}= –5V, I_E= –20mA, f=100MHz
Collector-base cutoff current	I_{CBO}	–	–	–5	μA	V_{CB}= –20V, Ta=150°C

●Electrical characteristics curves

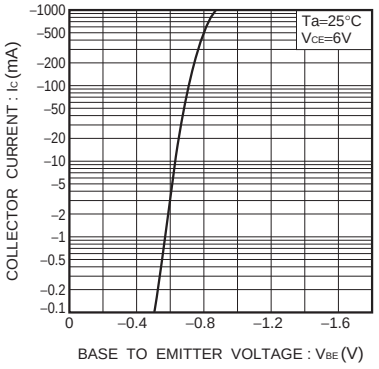


Fig.1 Grounded emitter propagation characteristics

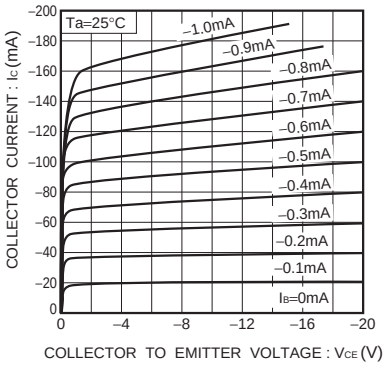


Fig.2 Grounded emitter output characteristics (I)

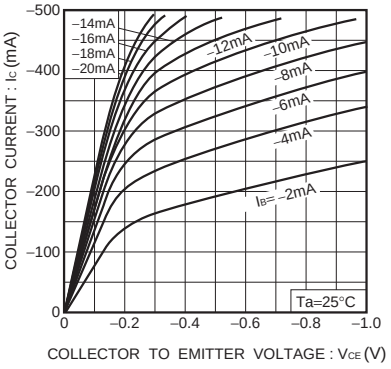


Fig.3 Grounded emitter output characteristics (II)

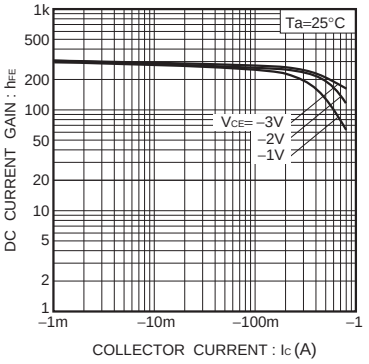


Fig.4 DC current gain vs. collector current

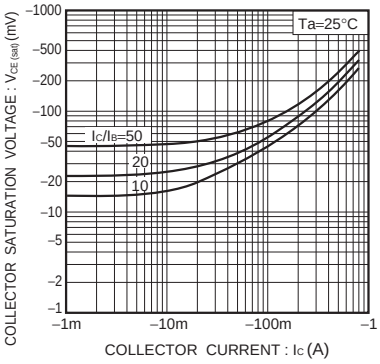


Fig.5 Collector-emitter saturation voltage vs. collector current

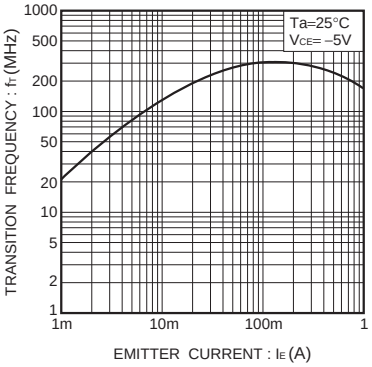


Fig.6 Gain bandwidth product vs. emitter current

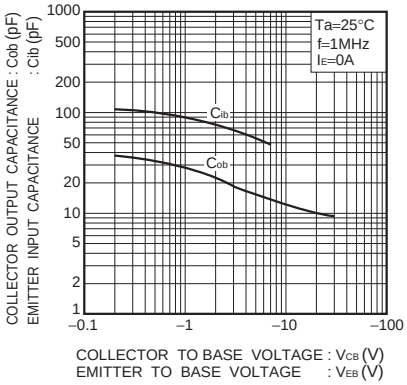


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

Notes

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