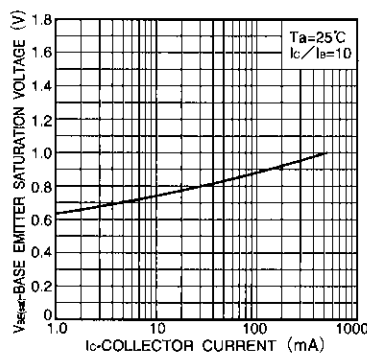
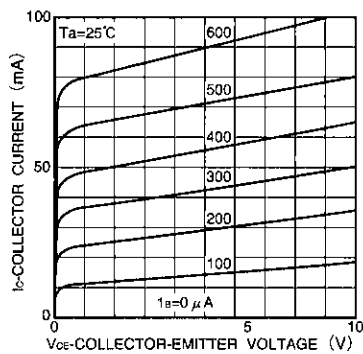


●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CEO}	-60	—	—	V	I _C =10 μA
Collector-emitter breakdown voltage	BV _{CE0}	-60	—	—	V	I _C =10mA
Emitter-base breakdown voltage	BV _{EB0}	-5	—	—	V	I _E =10 μA
Collector cutoff current	I _{CBO}	—	—	-100	nA	V _{CE} =-50V
	I _{CES}	—	—	-100	nA	V _{CE} =-30V
Emitter cutoff current	I _{EB0}	—	—	-100	nA	V _{EB} =-3V
	I _{ES}	—	—	-100	nA	V _{EB} =-3V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	-0.4	V	I _C /I _B =-150mA/-15mA
	V _{CE(sat)}	—	—	-1.6	V	I _C /I _B =-500mA/-50mA
Base-emitter saturation voltage	V _{BE(sat)}	0.6	—	-1.3	V	I _C /I _B =-150mA/-15mA
	V _{BE(sat)}	—	—	-2.6	V	I _C /I _B =-500mA/-50mA
DC current transfer ratio	h _{FE}	75	—	—	—	V _{CE} =-10V, I _C =-0.1mA
		100	—	—		V _{CE} =-10V, I _C =-1mA
		100	—	—		V _{CE} =-10V, I _C =-10mA
		100	—	300		V _{CE} =-10V, I _C =-150mA
		50	—	—		V _{CE} =-10V, I _C =-500mA
Transition frequency	f _T	200	—	—	MHz	V _{CE} =-20V, I _C =-50mA, f=100MHz
Output capacitance	C _{ob}	—	—	8	pF	V _{CE} =-10V, f=100kHz
Emitter input capacitance	C _{ib}	—	—	30	pF	V _{EB} =-2V, f=100kHz
Turn-on time	t _{on}	—	—	50	ns	V _{CC} =-30V, V _{BE(OFF)} =-1.5V, I _C =-150mA, I _{B1} =-15mA
Delay time	t _d	—	—	10	ns	V _{CC} =-30V, V _{BE(OFF)} =-1.5V, I _C =-150mA, I _{B1} =-15mA
Rise time	t _r	—	—	40	ns	V _{CC} =-30V, V _{BE(OFF)} =-1.5V, I _C =-150mA, I _{B1} =-15mA
Turn-off time	t _{off}	—	—	100	ns	V _{CC} =-30V, I _C =-150mA, I _{B1} =I _{B2} =-15mA
Storage time	t _{stg}	—	—	80	ns	V _{CC} =-30V, I _C =-150mA, I _{B1} =I _{B2} =-15mA
Fall time	t _f	—	—	30	ns	V _{CC} =-30V, I _C =-150mA, I _{B1} =I _{B2} =-15mA

●Electrical characteristic curves



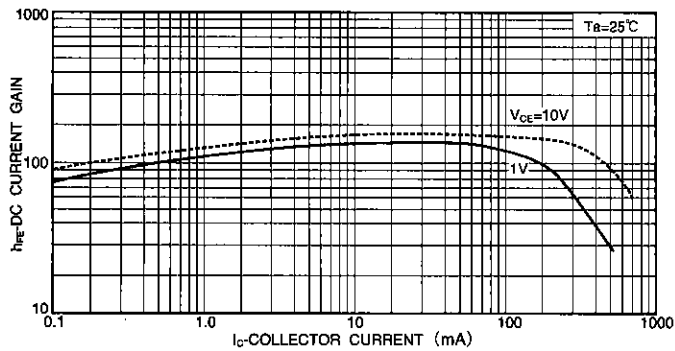


Fig.3 DC current gain vs. collector current (I)

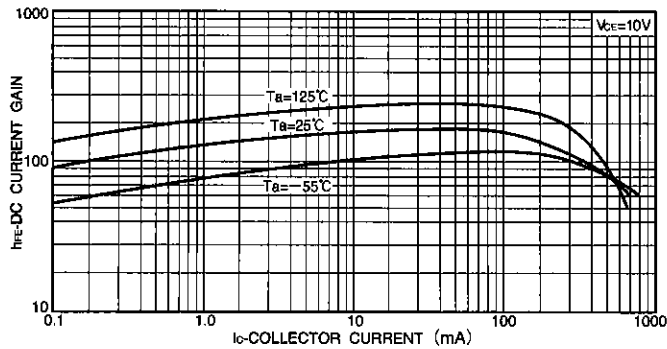


Fig.4 DC current gain vs. collector current (II)

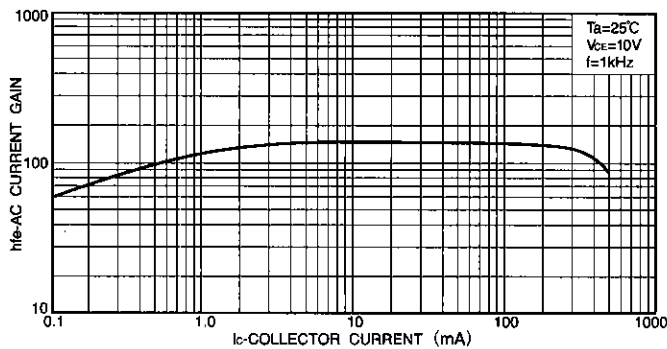


Fig.5 AC current gain vs. collector current

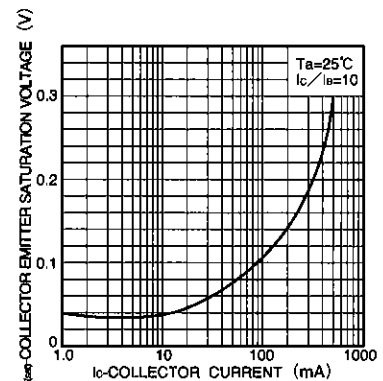


Fig.6 Collector-emitter saturation voltage vs. collector current

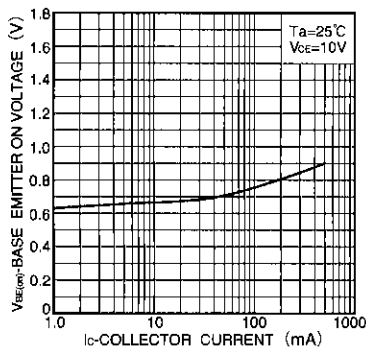


Fig.7 Grounded emitter propagation characteristics

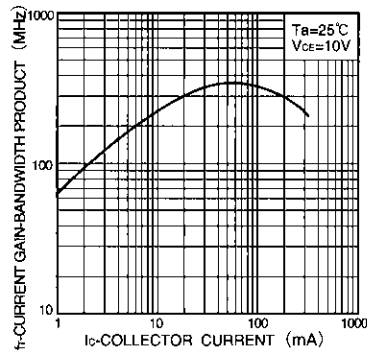


Fig.8 Gain bandwidth product vs. collector current

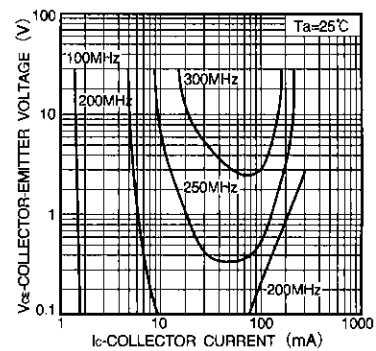


Fig.9 Gain bandwidth product

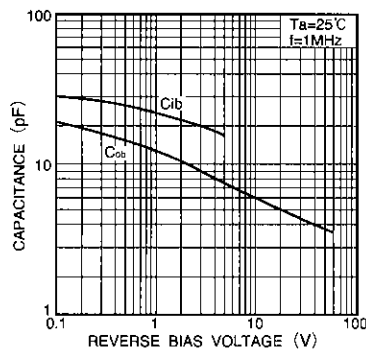


Fig.10 Input/output capacitance vs. voltage

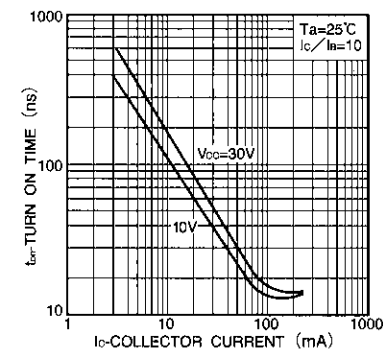


Fig.11 Turn-on time vs. collector current

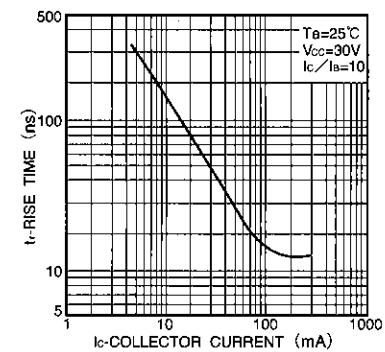


Fig.12 Rise time vs. collector current

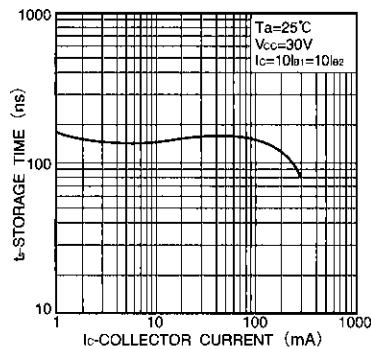


Fig.13 Storage time vs. collector current

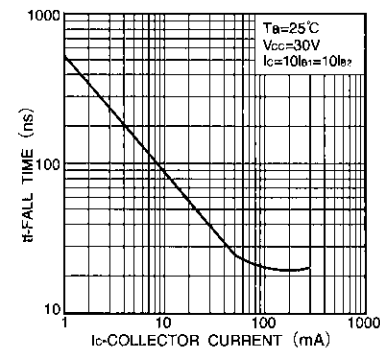


Fig.14 Fall time vs. collector current

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