

Transistors

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CBO}	-60	—	—	V	I _C =-50μA
Collector-emitter breakdown voltage	BV _{CEO}	-50	—	—	V	I _C =-1mA
Emitter-base breakdown voltage	BV _{EBO}	-6	—	—	V	I _E =-50μA
Collector cutoff current	I _{CBO}	—	—	-0.1	μA	V _{CB} =-60V
Emitter cutoff current	I _{EBO}	—	—	-0.1	μA	V _{EB} =-5V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	-0.5	V	I _C /I _E =-50mA/-5mA
DC current transfer ratio	h _{FE}	120	—	560	—	V _{CE} =-6V, I _C =-1mA
Transition frequency	f _T	—	140	—	MHz	V _{CE} =-12V, I _E =2mA, f=100MHz
Output capacitance	C _{ob}	—	3	4.5	PF	V _{CB} =-12V, I _E =0A, f=1MHz

●Packaging specifications

Type	Package	Taping		
	Code	T2R	TR	T148
	Basic ordering unit (pieces)	8000	3000	3000
EMS1	○	—	—	—
UMS1N	—	○	—	—
FMS1A	—	—	—	○

●Electrical characteristic curves

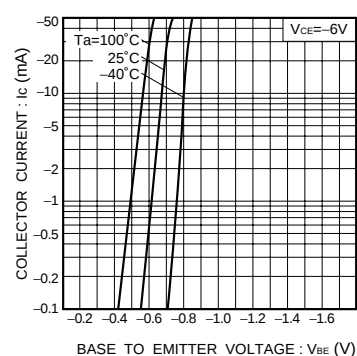


Fig.1 Grounded emitter propagation characteristics

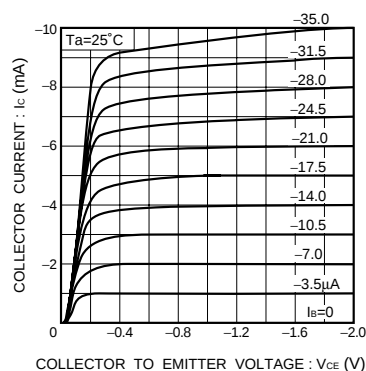


Fig.2 Grounded emitter output characteristics (I)

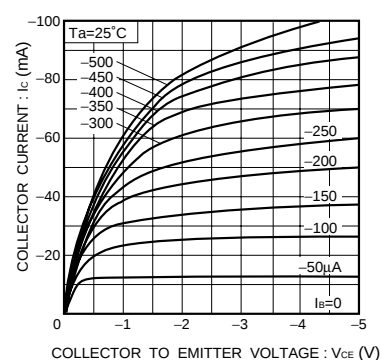


Fig.3 Grounded emitter output characteristics (II)

Transistors

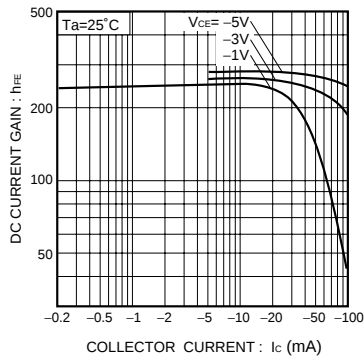


Fig.4 DC current gain vs. collector current (I)

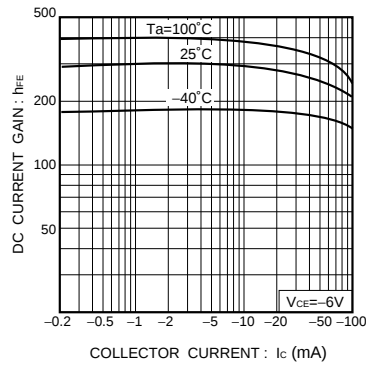


Fig.5 DC current gain vs. collector current (II)

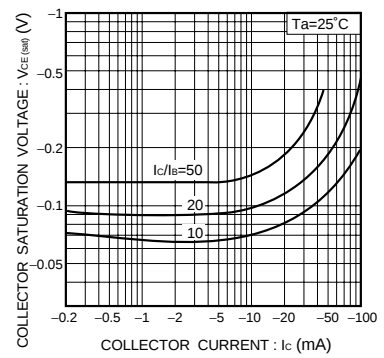


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

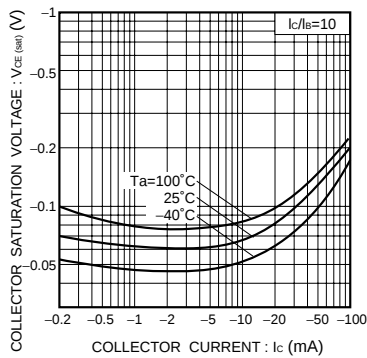


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

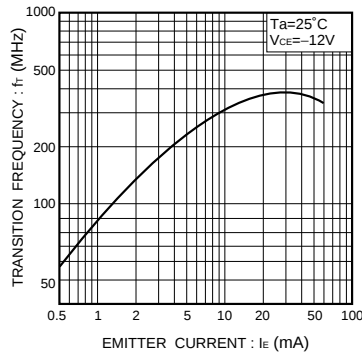
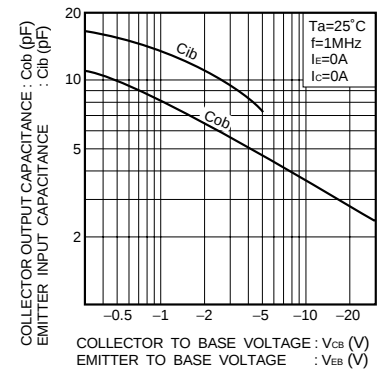


Fig.8 Gain bandwidth product vs. emitter current

Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage