

Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Collector-emitter breakdown voltage	BV _{CEO}	60	–	–	V	I _C =1mA
Collector-base breakdown voltage	BV _{CBO}	60	–	–	V	I _C =100μA
Emitter-base breakdown voltage	BV _{EBO}	6	–	–	V	I _E =100μA
Collector cut-off current	I _{CBO}	–	–	1.0	μA	V _{CB} =40V
Emitter cut-off current	I _{EBO}	–	–	1.0	μA	V _{EB} =4V
Collector-emitter saturation voltage	V _{CE(sat)}	–	200	500	mV	I _C =2A I _B =200mA
DC current gain	h _{FE}	120	–	390	–	V _{CE} =2V I _C =100mA
Transition frequency	f _r	–	200	–	MHz	V _{CE} =10V I _E =–100mA f=10MHz
Corrector output capacitance	C _{ob}	–	20	–	pF	V _{CB} =10V I _E =0mA f=1MHz
Turn-on time	T _{on}	–	50	–	ns	I _C =3A I _{B1} =300mA
Storage time	T _{stg}	–	150	–	ns	I _{B2} =–300mA
Fall time	T _f	–	30	–	ns	V _{CC} ≒25V

*1 Non repetitive pulse

*2 See Switching characteristics measurement circuits

●h_{FE} RANK

Q	R
120–270	180–390

●Electrical characteristic curves

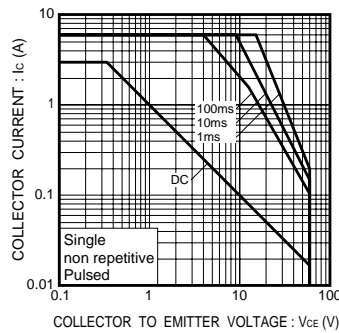


Fig.1 Safe Operating Area

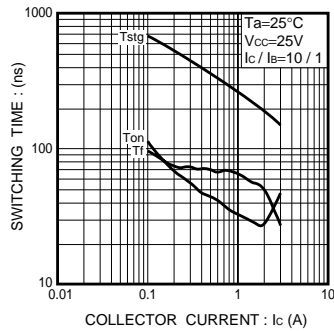


Fig.2 Switching Time

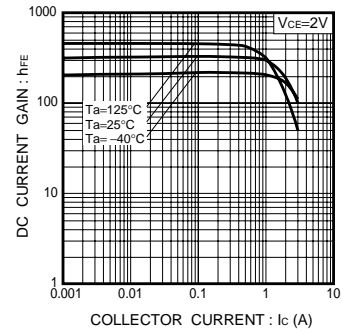


Fig.3 DC Current Gain vs. Collector Current (I)

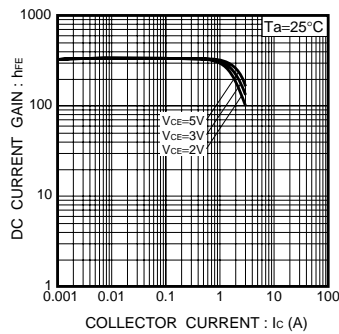


Fig.4 DC Current Gain vs. Collector Current (II)

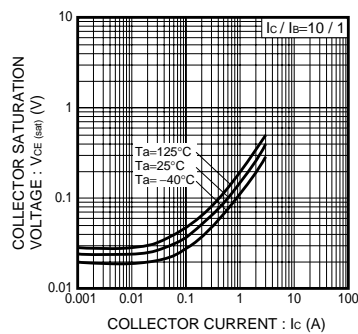


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current (I)

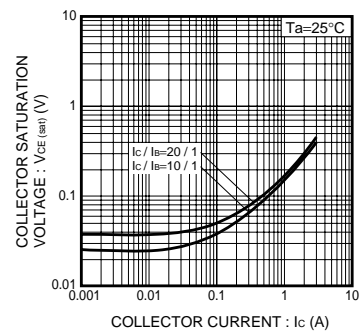


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current (II)

Transistors

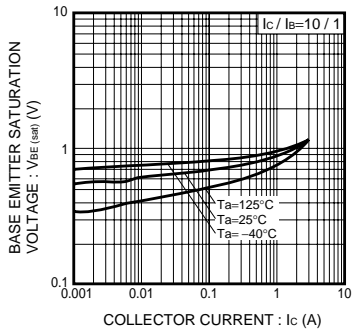


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

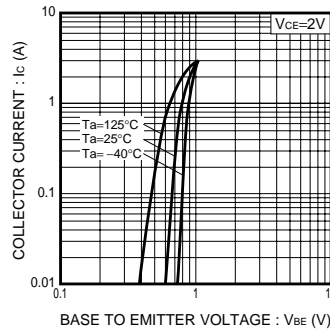


Fig.8 Grounded Emitter Propagation Characteristics

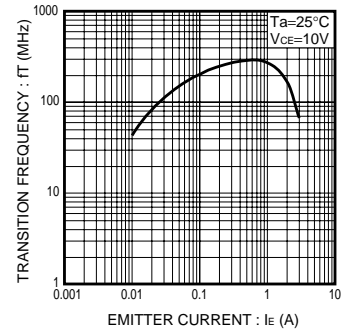


Fig.9 Transition Frequency

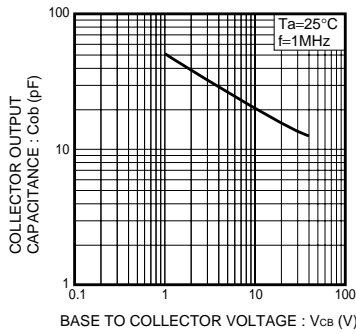
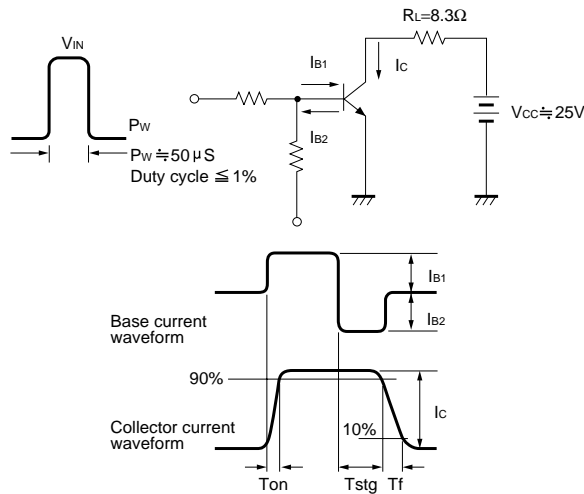


Fig.10 Collector Output Capacitance

●Switching characteristics measurement circuits



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