



Transistor

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV <sub>CB0</sub>	-30	-	-	V	I <sub>c</sub> =-100μA
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	-30	-	-	V	I <sub>c</sub> =-1mA
Emitter-base breakdown voltage	BV <sub>EB0</sub>	-6	-	-	V	I <sub>E</sub> =-100μA
Collector cut-off current	I <sub>CB0</sub>	-	-	-1.0	μA	V <sub>CB</sub> =-20V
Emitter cut-off current	I <sub>EB0</sub>	-	-	-1.0	μA	V <sub>EB</sub> =-4V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	-	-150	-300	mV	I <sub>c</sub> =-500mA, I <sub>B</sub> =-50mA
DC current gain	h <sub>FE</sub>	120	-	390	-	V <sub>CE</sub> =-2V, I <sub>c</sub> =-100mA
Transition frequency	f <sub>r</sub>	-	350	-	MHz	V <sub>CE</sub> =-10V, I <sub>E</sub> =100mA, f=10MHz
Collector output capacitance	C <sub>ob</sub>	-	10	-	pF	V <sub>CB</sub> =-10V, I <sub>E</sub> =0mA, f=1MHz
Turn-on time	T <sub>on</sub>	-	30	-	ns	I <sub>c</sub> =-1.0A
Storage time	T <sub>stg</sub>	-	100	-	ns	I <sub>B1</sub> =-100mA I <sub>B2</sub> =100mA
Fall time	T <sub>f</sub>	-	20	-	ns	V <sub>CC</sub> =-25V

●h<sub>FE</sub> RANK

Q	R
120-270	180-390

●Electrical characteristic curves

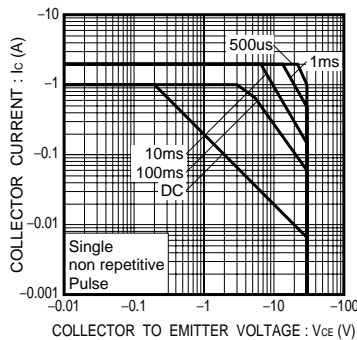


Fig.1 Safe Operating Area

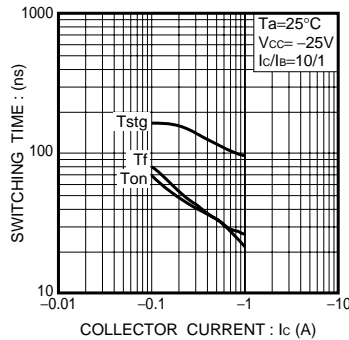


Fig.2 Switching Time

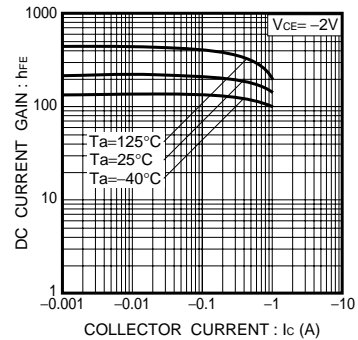


Fig.3 DC Current Gain vs. Collector Current (I)

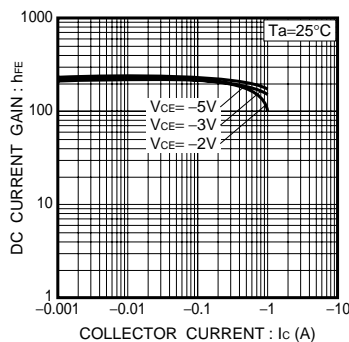


Fig.4 DC Current Gain vs. Collector Current (II)

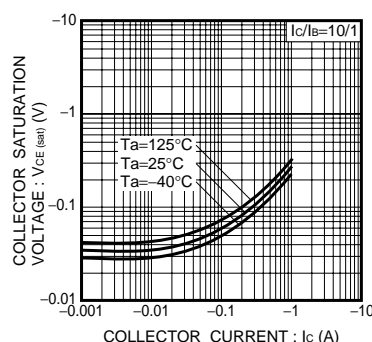


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current (I)

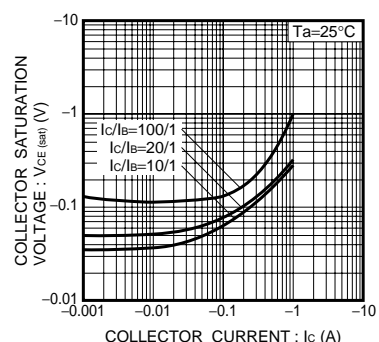


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current (II)

Transistor

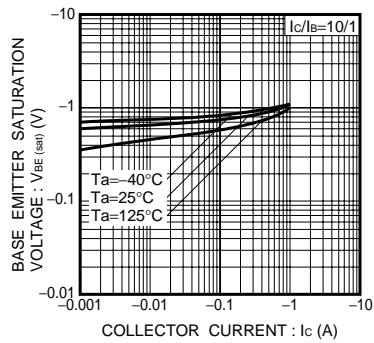


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

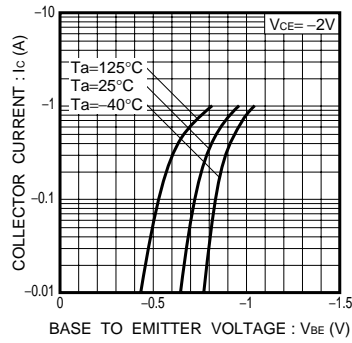


Fig.8 Grounded Emitter Propagation Characteristics

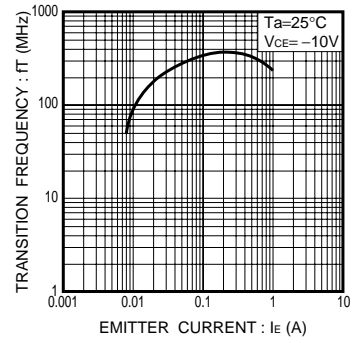


Fig.9 Transition Frequency

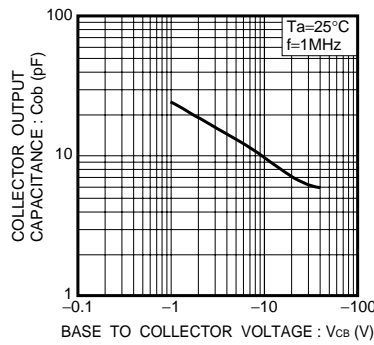


Fig.10 Collector Output Capacitance

●Switching characteristics measurement circuits

