

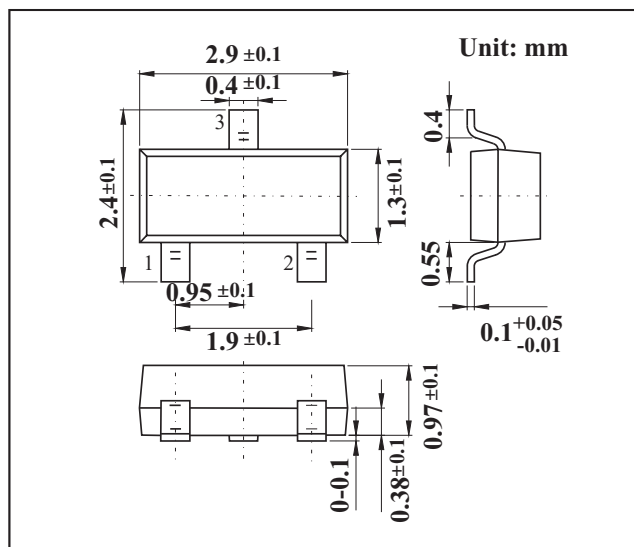
SOT-23 Plastic-Encapsulate Transistors

FEATURES

- Low $V_{CE(sat)}$
- High BV_{CEO} , $BV_{CEO}=80V$
- Power Transistor
- TRANSISTOR (NPN)

MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	0.5	A
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Parameter	Symbol	Test Conditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C=50\mu A$	80			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=2mA$	80			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=50\mu A$	5			V
Collector cutoff current	I_{CBO}	$V_{CB}=50V$			0.5	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=4V$			0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C/I_B=500mA/50mA$		0.2	0.5	V
DC current transfer ratio	h_{FE}	$V_{CE}=3V, I_C=100mA$	120		390	
Output capacitance	f_T	$V_{CE}=10V, I_E=-50mA, f=100MHz$		120		MHz
Transition frequency	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		7.5		pF

RATINGS AND CHARACTERISTIC CURVES

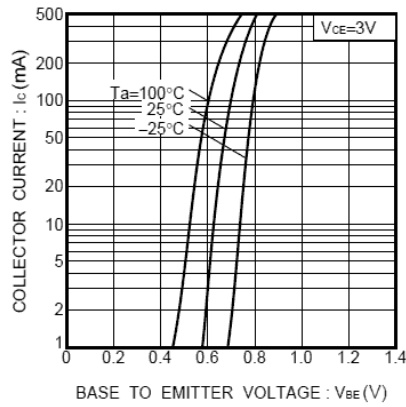


Fig.1 Grounded emitter propagation characteristics

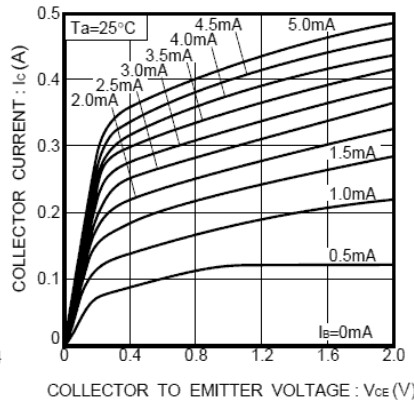


Fig.2 Grounded emitter output characteristics

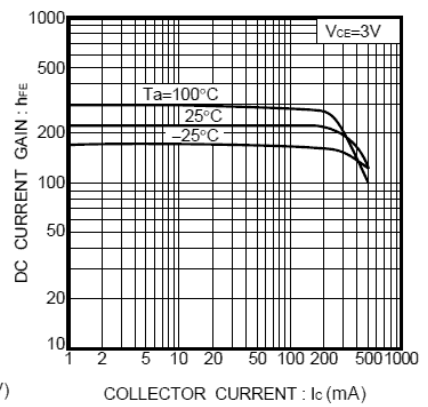


Fig.3 DC current gain vs. collector current

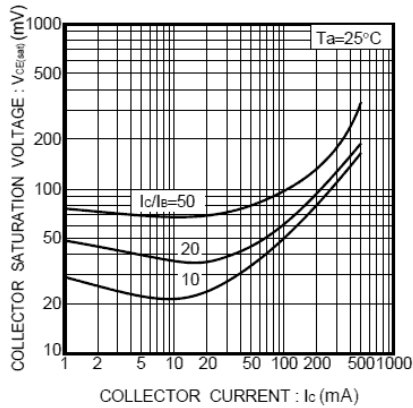


Fig.4 Collector-emitter saturation voltage vs. collector current (I)

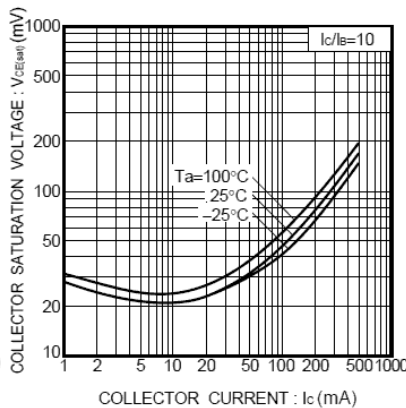


Fig.5 Collector-emitter saturation voltage vs. collector current (II)

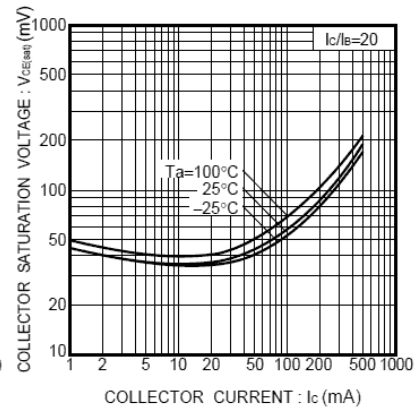


Fig.6 Collector-emitter saturation voltage vs. collector current (III)

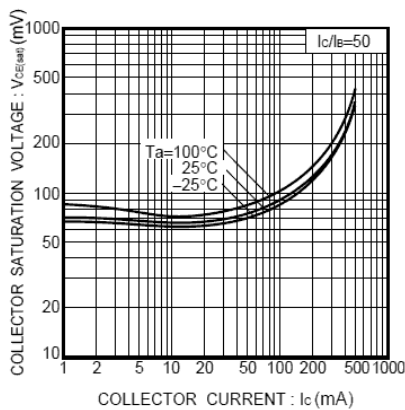


Fig.7 Collector-emitter saturation voltage vs. collector current (IV)

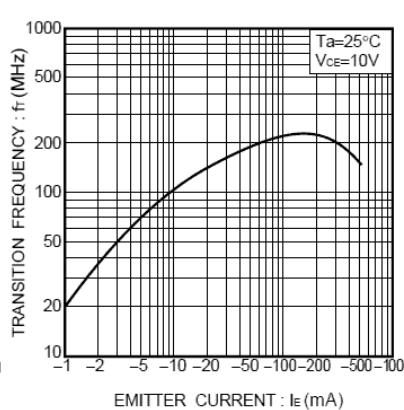


Fig.8 Gain bandwidth product vs. emitter current

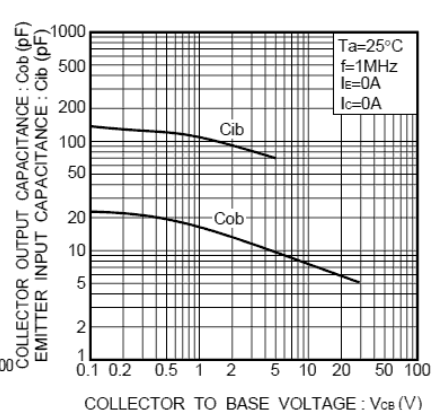


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage