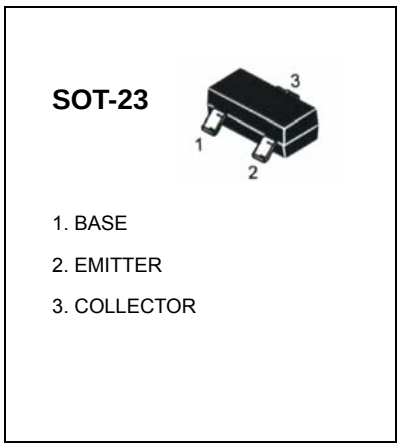
TRANSISTOR(NPN)



FEATURES

- Low saturation medium current application
- Extremely low collector saturation voltage
- Suitable for low voltage large current drivers
- High DC current gain and large current capability
- Low on resistance : R_{ON}=0.6Ω(Max.) (I_B=1mA)

Marking:123

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	6.5	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Power Dissipation	350	mW
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)\ CBO}$	I_C=50μA, I_E=0	20			V
Collector-emitter breakdown voltage	$V_{(BR)\ CEO}$	I_C =1mA, I_B=0	15			V
Emitter-base breakdown voltage	$V_{(BR)\ EBO}$	I_E= 50μA, I_C=0	6.5			V
Collector cut-off current	I_{CBO}	V_{CB}= 20 V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 6V, I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=1V, I_C= 100mA	150			
Collector-emitter saturation voltage	V_{CE} (sat)	I_C=500mA, I_B= 50mA			0.3	V
Transition frequency	f_T	V_{CE}=5V, I_C=50mA		260		MHz
Collector output capacitance	Cob	V_{CB}=10V, I_E=0, f=1MHz		5		pF
On resistance	R_{ON}	f=1KHz,I_B=1mA, V_{IN}=0.3V		0.6		Ω

Fig. 1 P_C-T_a

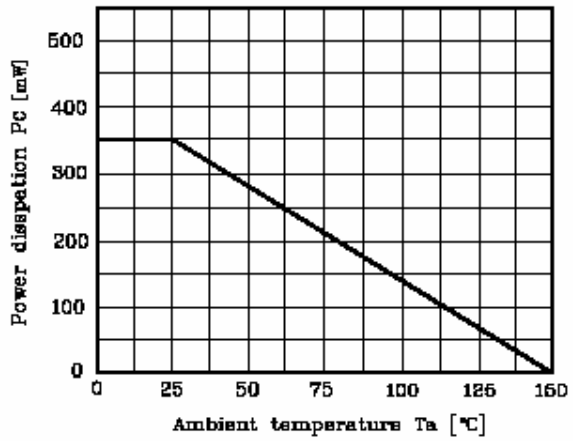


Fig. 2 $V_{CE(sat)}$-I_C

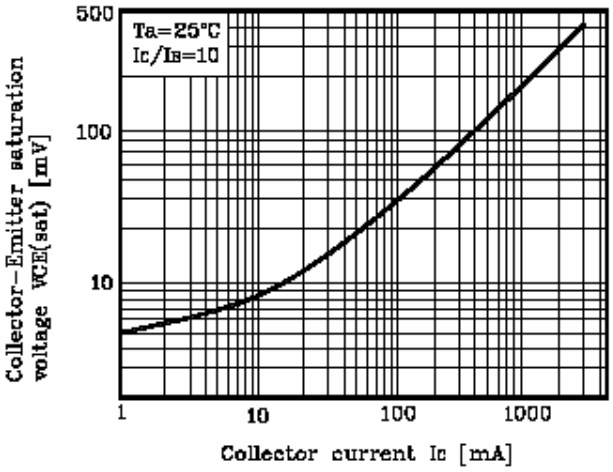


Fig. 2 C_{ob}-V_{CB}

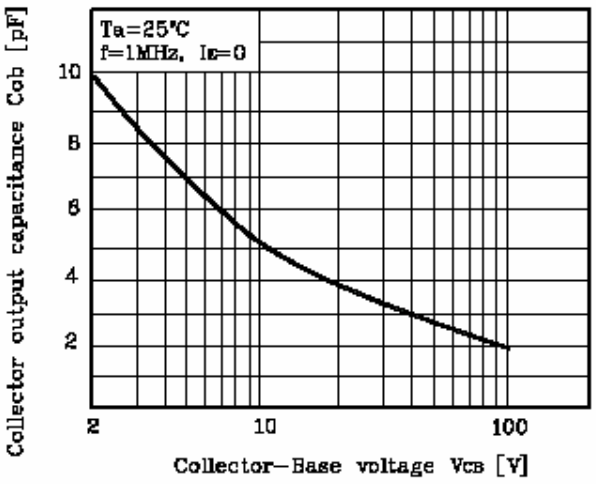


Fig. 4 h_{FE}-I_C

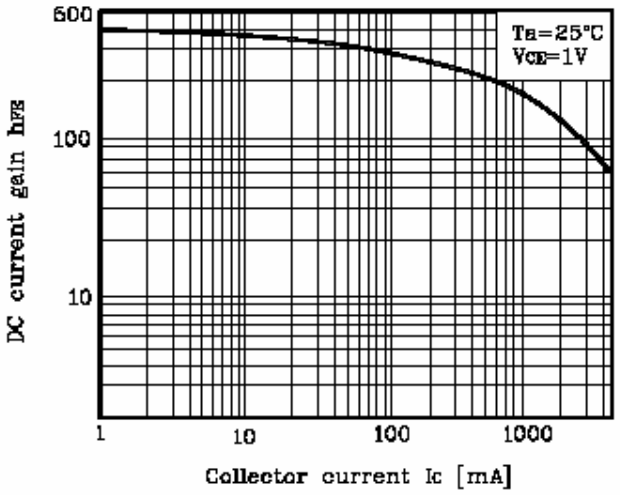


Fig. 5 R_{ON}-I_B