

HIGH FREQUENCY LOW NOISE AMPLIFIER APPLICATION.  
VHF BAND AMPLIFIER APPLICATION.

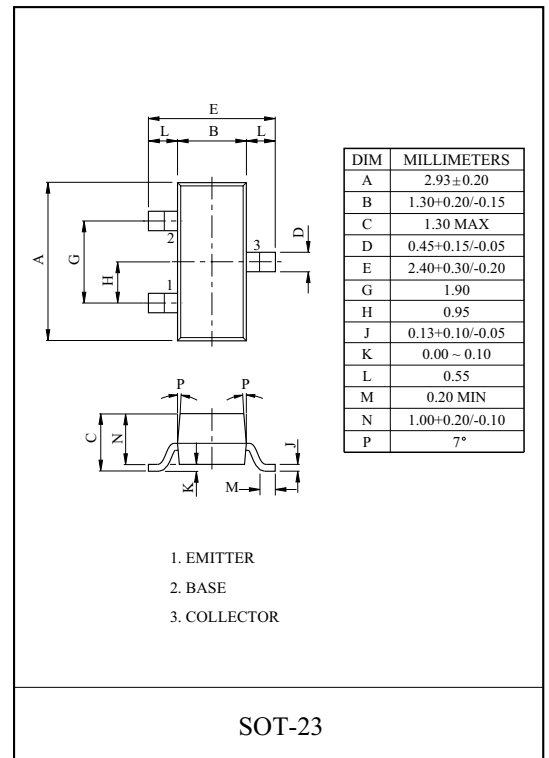
### FEATURES

- Small Reverse Transfer Capacitance  
:  $C_{re}=0.65\text{pF(Typ.)}$ .
- Low Noise Figure :  $NF=2.2\text{dB(Typ.)}$  at  $f=100\text{MHz}$ .
- High Transition Frequency :  $f_T=800\text{MHz(Typ.)}$ .

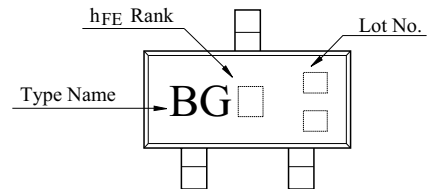
### MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	40	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	20	mA
Emitter Current	$I_E$	-20	mA
Collector Power Dissipation	$P_C^*$	350	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

\*  $P_C$  : Package Mounted On 99.5% Alumina (10 × 8 × 0.6mm)



### Marking



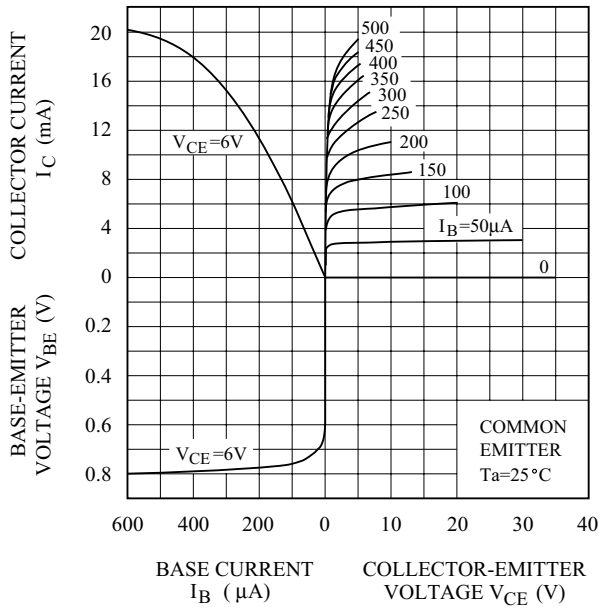
### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=40\text{V}, I_E=0$	-	-	0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$	-	-	0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$ (Note)	$V_{CE}=5\text{V}, I_C=1\text{mA}$	54	-	198	
Reverse Transfer Capacitance	$C_{re}$	$V_{CE}=6\text{V}, f=1\text{MHz}, I_E=0$	-	-	1.0	pF
Transition Frequency	$f_T$	$V_{CE}=10\text{V}, I_C=8\text{mA}, f=100\text{MHz}$	500	800	-	MHz
Collector-Base Time Constant	$C_C \cdot r_{bb'}$	$V_{CE}=6\text{V}, I_E=-1\text{mA}, f=30\text{MHz}$	-	-	30	pS
Noise Figure	NF	$V_{CE}=6\text{V}, I_E=-1\text{mA}, f=100\text{MHz}$	-	-	4.0	dB
Power Gain	$G_{pe}$		15	-	-	

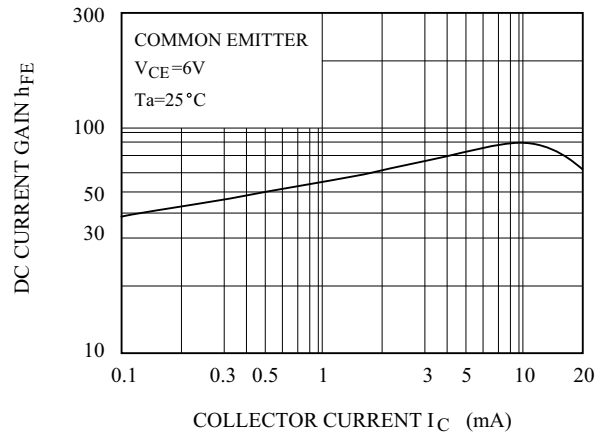
Note :  $h_{FE}$  Classification F:54 ~ 80, G:72 ~ 108, H:97 ~ 146, I:130 ~ 198

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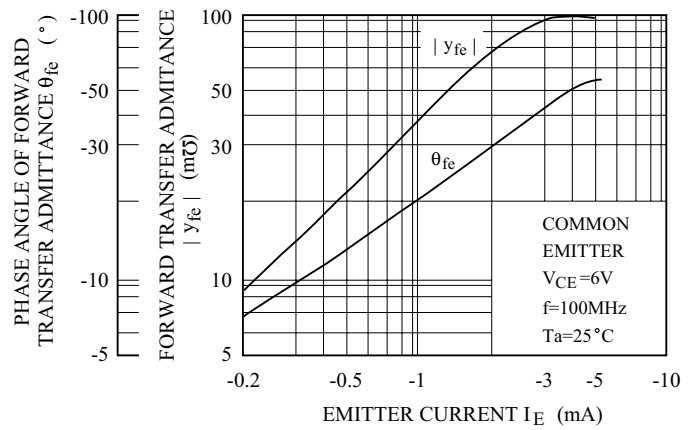
## STATIC CHARACTERISTICS



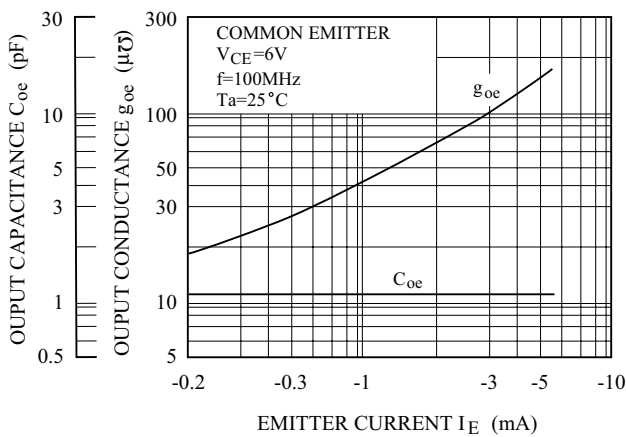
## $h_{FE} - I_C$



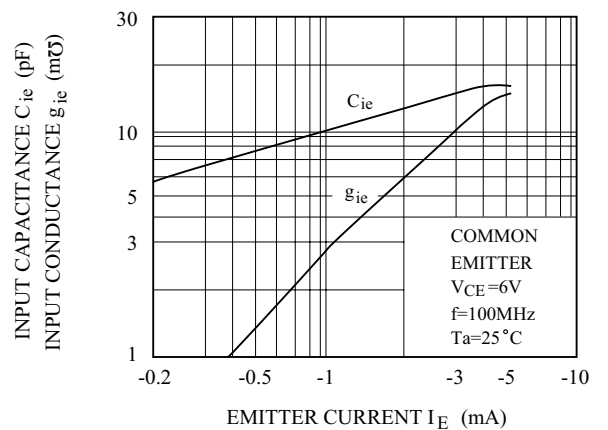
## $|y_{fe}|, \theta_{fe} - I_E$



## $C_{oe}, g_{oe} - I_E$



## $C_{ie}, g_{ie} - I_E$



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