



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

KEC

**SEMICONDUCTOR
TECHNICAL DATA**

KTC9018S

EPITAXIAL PLANAR NPN TRANSISTOR

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

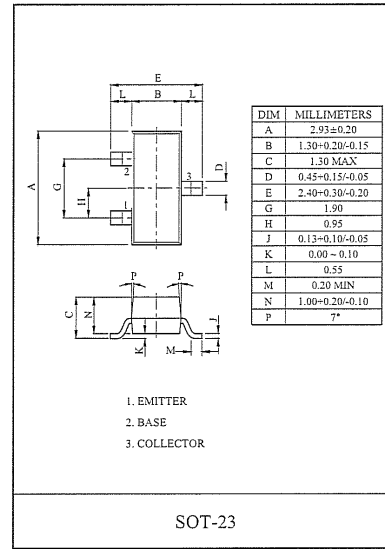
FEATURES

- 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 : $f_T=800\text{MHz(Typ.)}$.

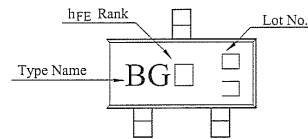
MAXIMUM RATING (Ta=25°C)

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	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$	-	-	0.1	μA
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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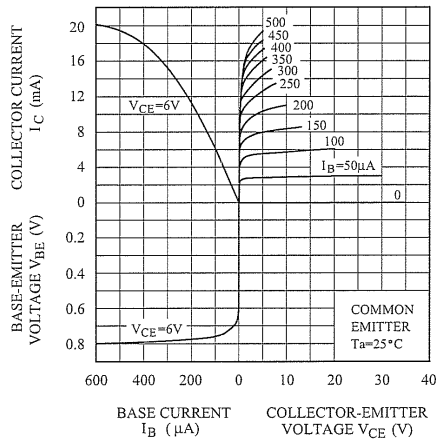
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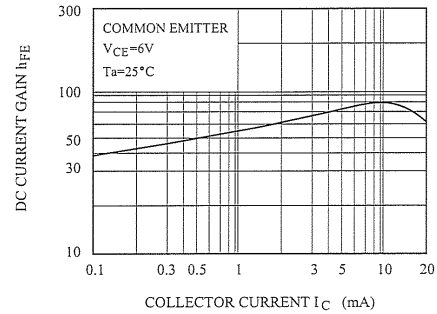
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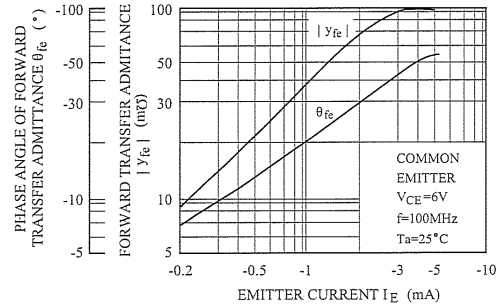
STATIC CHARACTERISTICS



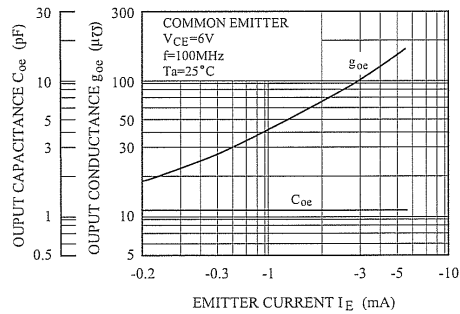
$h_{FE} - I_C$



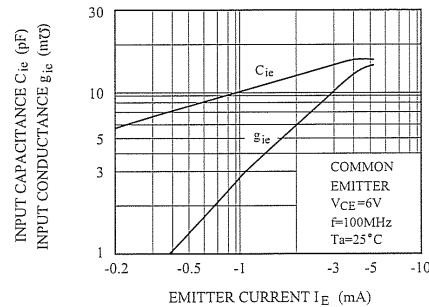
$|y_{fe}|, \theta_{fe} - I_E$



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



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





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