

LOW NOISE AMPLIFIER APPLICATION.

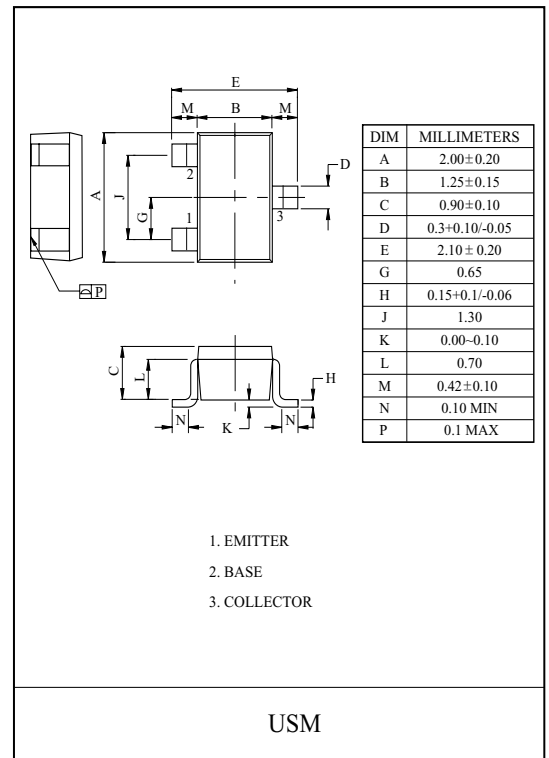
FEATURE

- High h_{FE} : $h_{FE}=600 \sim 3600$.
- Noise Figure : 0.5dB(Typ.) at $f=100\text{kHz}$.

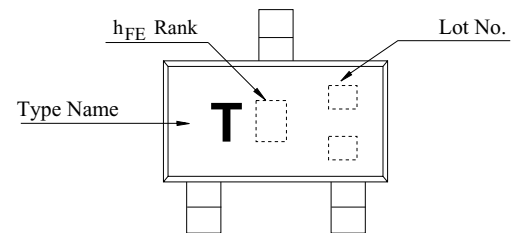
MAXIMUM RATING ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current	I_C	150	mA
Base Current	I_B	30	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ\text{C}$

* Package mounted on 99.5% alumina $10\text{mm} \times 8\text{mm} \times 0.6\text{mm}$



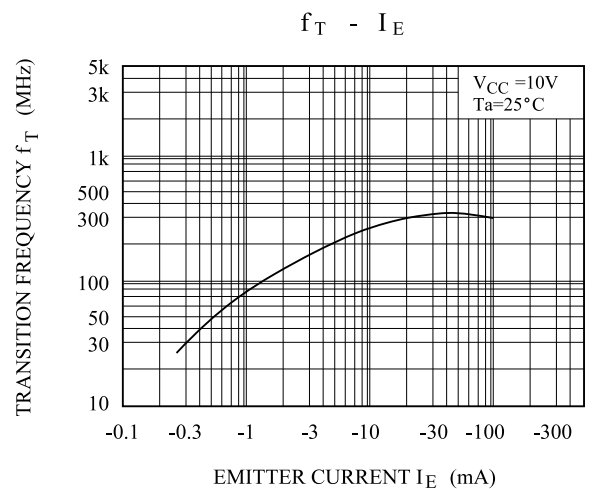
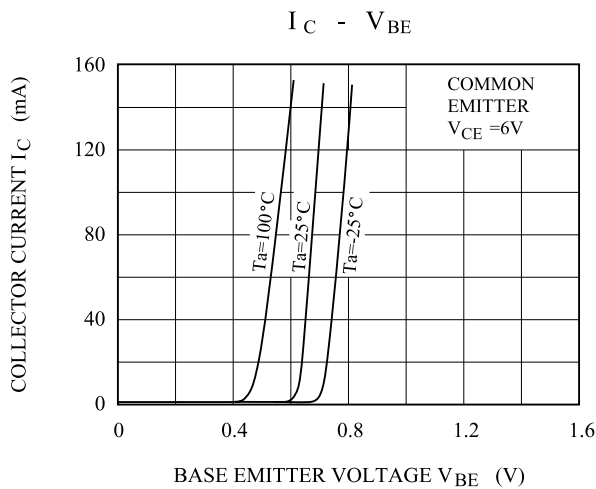
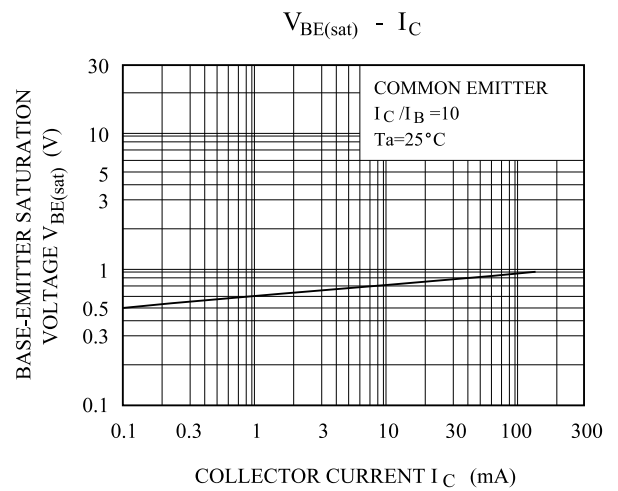
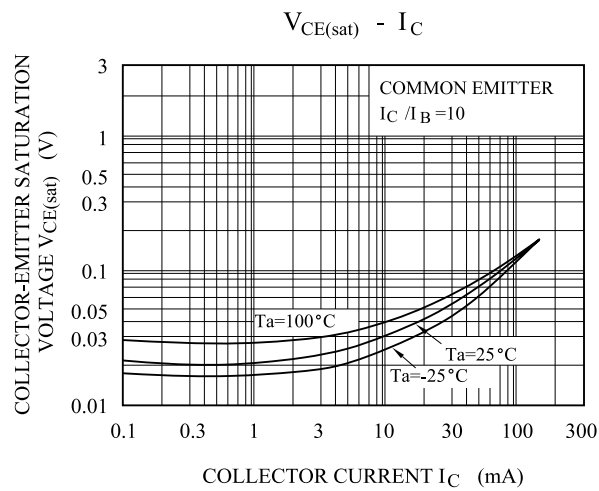
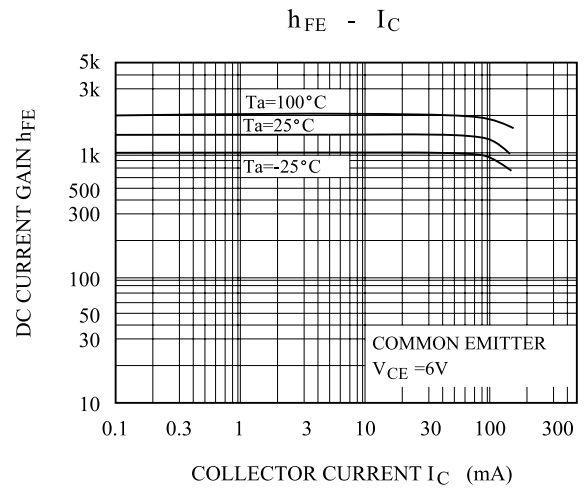
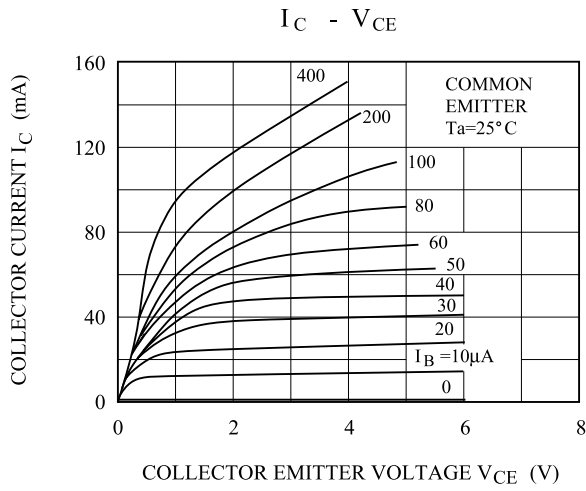
Marking



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=8\text{V}, I_C=0$	-	-	0.1	μA
DC Current Gain	$h_{FE} (1)(\text{Note})$	$V_{CE}=6\text{V}, I_C=2\text{mA}$	600	-	3600	
	$h_{FE} (2)$	$V_{CE}=5\text{V}, I_C=1\text{mA}$	500	-	3600	
	$h_{FE} (3)$	$V_{CE}=10\text{V}, I_C=2\text{mA}$	600	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}(1)$	$I_C=10\text{mA}, I_B=1\text{mA}$	-	0.05	0.15	V
	$V_{CE(sat)}(2)$	$I_C=50\text{mA}, I_B=5\text{mA}$	-	0.07	0.2	V
	$V_{CE(sat)}(3)$	$I_C=100\text{mA}, I_B=10\text{mA}$	-	0.12	0.25	V
Transition Frequency	f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}$	100	250	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	-	3.5	-	pF
Noise Figure	NF (1)	$V_{CE}=6\text{V}, I_C=0.1\text{mA},$ $f=100\text{kHz}, R_g=10\text{k}\Omega$	-	0.5	-	dB
	NF (2)	$V_{CE}=6\text{V}, I_C=0.1\text{mA},$ $f=1\text{kHz}, R_g=10\text{k}\Omega$	-	0.3	-	

Note : h_{FE} Classification A:600 1800 , B:1200 3600



KTC4666

