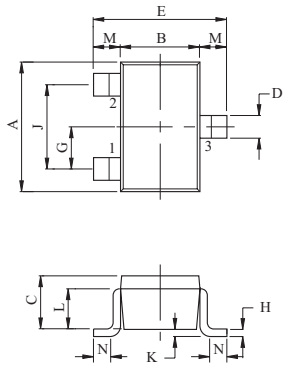
LOW NOISE AMPLIFIER APPLICATION.

FEATURE

· High h_{FE} : h_{FE}=600 3600.

· Noise Figure : 0.5dB(Typ.) at f=100kHz.



DIM	MILLIMETERS
A	2.00±0.20
B	1.25±0.15
C	0.90±0.10
D	0.3+0.10/-0.05
E	2.10± 0.20
G	0.65
H	0.15+0.1/-0.06
J	1.30
K	0.00-0.10
L	0.70
M	0.42±0.10
N	0.10 MIN

1. EMITTER
2. BASE
3. COLLECTOR

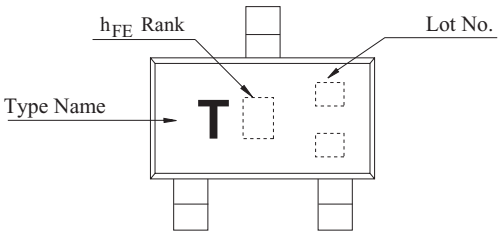
USM

MAXIMUM RATING (Ta=25℃)

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	℃
Storage Temperature Range	T_{stg}	-55 150	℃

* Package mounted on 99.5% alumina 10mm×8mm×0.6mm

Marking

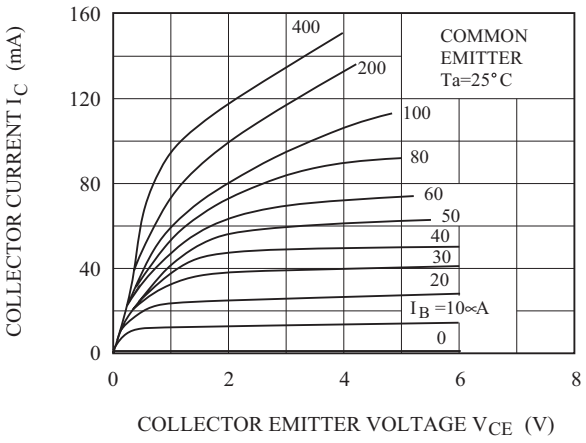


ELECTRICAL CHARACTERISTICS (Ta=25℃)

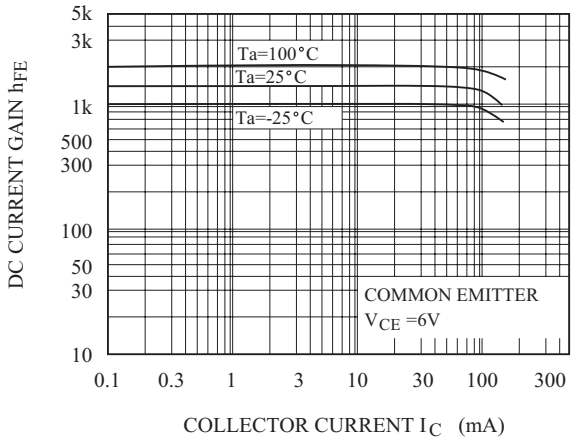
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, I_E=0	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=8V, I_C=0	-	-	0.1	μA
DC Current Gain	h_{FE} (1)(Note)	V_{CE}=6V, I_C=2mA	600	-	3600	
	h_{FE} (2)	V_{CE}=5V, I_C=1mA	500	-	3600	
	h_{FE} (3)	V_{CE}=10V,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

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

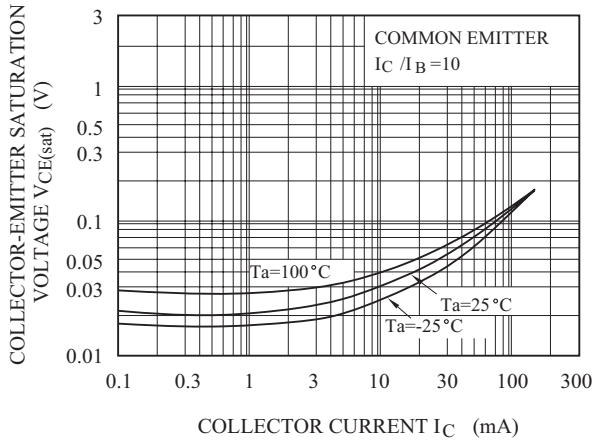
I_C - V_{CE}



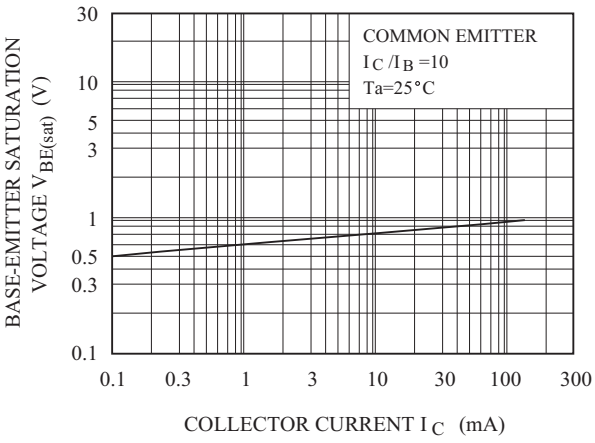
h_{FE} - I_C



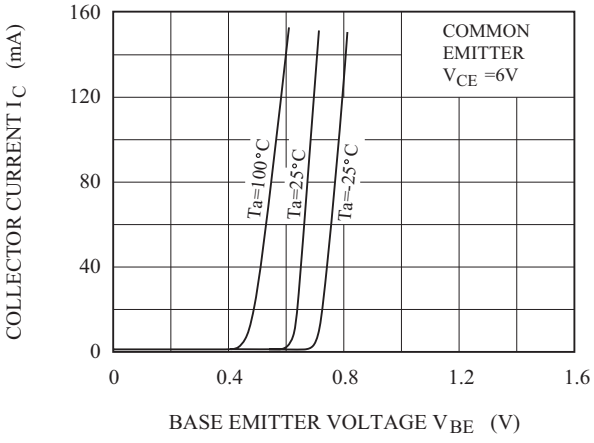
$V_{CE(sat)}$ - I_C



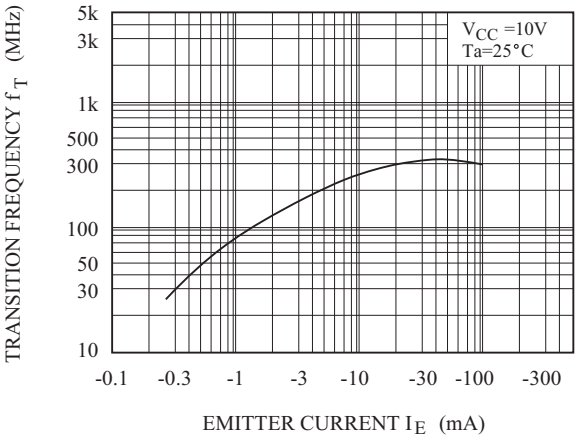
$V_{BE(sat)}$ - I_C



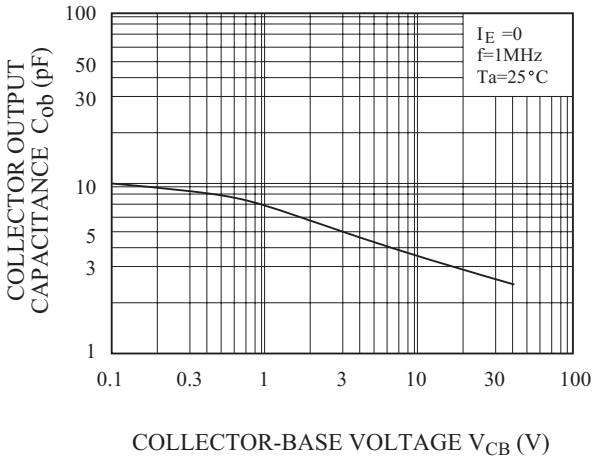
I_C - V_{BE}



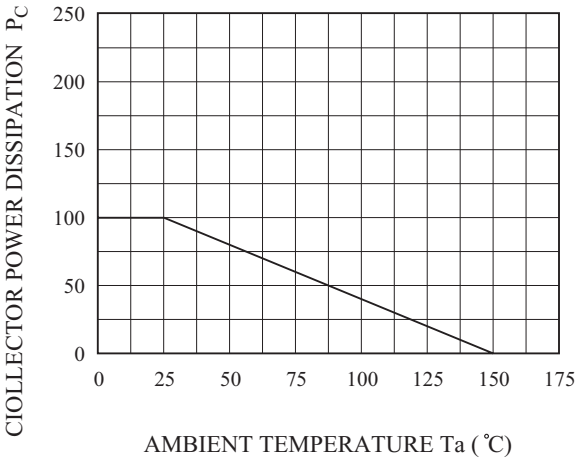
f_T - I_E



C_{ob} - V_{CB}


100
50
30
10
5
3
1
0.1
0.3
1
3
10
30
100
I_E =0
f=1MHz
Ta=25°C
COLLECTOR OUTPUT CAPACITANCE C_{ob} (pF)
COLLECTOR-BASE VOLTAGE V_{CB} (V)

P_C - Ta


250
200
150
100
50
0
0
25
50
75
100
125
150
175
CIOLLECTOR POWER DISSIPATION P_C (mW)
AMBIENT TEMPERATURE Ta (℃)