

LOW NOISE AMPLIFIER APPLICATION.

FEATURES

- Excellent h_{FE} Linearity
 : $h_{FE(2)}=80(\text{Typ.})$ at $V_{CE}=-6V, I_C=-150mA$
 : $h_{FE(I_C=0.1mA)}/h_{FE(I_C=2mA)}=0.95(\text{Typ.})$
- Low Noise : $NF=0.2dB(\text{Typ.})$, $f=1kHz$.
- Complementary to KTC3198L.

MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-150	mA
Emitter Current	I_E	150	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C



ELECTRICAL CHARACTERISTICS (Ta=25°C)

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}	$V_{EB}=-5V, I_C=0$	-	-	-0.1	μA
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=-6V, I_C=-2mA$	70	-	400	
	$h_{FE(2)}$	$V_{CE}=-6V, I_C=-150mA$	25	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100mA, I_B=-10mA$	-	-0.1	-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100mA, I_B=-10mA$	-	-	-1.1	V
Transition Frequency	f_T	$V_{CE}=-10V, I_C=-1mA$	80	-	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$	-	4.0	7.0	pF
Base Intrinsic Resistance	$r_{bb'}$	$V_{CB}=-10V, I_E=1mA, f=30MHz$	-	30	-	Ω
Noise Figure	NF(1)	$V_{CE}=-6V, I_C=-0.1mA, f=100Hz, R_g=10k\Omega$	-	0.5	6.0	dB
	NF(2)	$V_{CE}=-6V, I_C=-0.1mA, f=1kHz, R_g=10k\Omega$	-	0.2	3.0	

Note : $h_{FE(1)}$ Classification O:70 ~ 140, Y:120 ~ 240, GR:200 ~ 400