

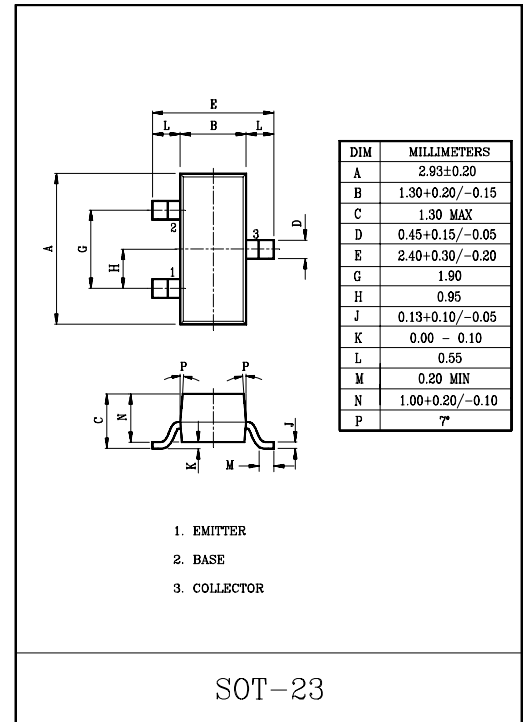
HIGH FREQUENCY LOW NOISE AMPLIFIER APPLICATION.
HF, VHF AMPLIFIER APPLICATION.

FEATURE

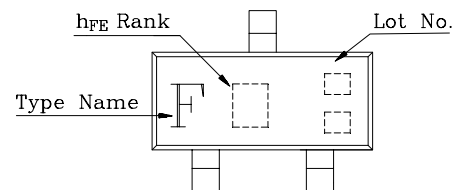
- Low Noise Figure : NF=3.5dB(Max.) (f=1MHz).

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CBO}	35	V
Collector-Emitter Voltage	V _{CEO}	30	V
Emitter-Base Voltage	V _{EBO}	4	V
Collector Current	I _C	100	mA
Emitter Current	I _E	-100	mA
Collector Power Dissipation	P _C	150	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C



Marking



ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} =20V, I _E =0	-	-	0.1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} =2V, I _C =0	-	-	1.0	μA
DC Current Gain	h _{FE} (Note)	V _{CE} =12V, I _C =2mA	40	-	240	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA	-	-	0.4	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =10mA, I _B =1mA	-	-	1.0	V
Transition Frequency	f _T	V _{CE} =10V, I _C =2mA	80	120	-	MHz
Reverse Transfer Capacitance	C _{re}	V _{CB} =10V, I _E =0, f=1MHz	-	2.2	3.0	pF
Collector-Base Time Constant	C _c ·r _{bb} '	V _{CE} =10V, I _E =-1mA, f=30MHz	-	30	50	pS
Noise Figure	NF	V _{CE} =10V, I _E =-1mA, f=1MHz, R _g =50Ω	-	2.0	3.5	dB

Note : h_{FE} Classification R:40~80 , O:70~140 , Y:120~240

KTC3878

y PARAMETERS (Typ.) (COMMON EMITTER $V_{CE}=6V$, $I_E=-1mA$, $f=1MHz$)

CHARACTERISTIC	SYMBOL	KTC3878-R	KTC3878-O	KTC3878-Y	UNIT
Input Conductance	g_{ie}	0.5	0.35	0.22	mS
Input Capacitance	C_{ie}	50	48	46	pF
Output Conductance	g_{oe}	4	5	6.5	μS
Output Capacitance	C_{oc}	3.7	3.4	3.2	pF
Forward Transfer Admittance	$ y_{fe} $	36	36	36	mS
Phase Angle of Forward Transfer Admittance	θ_{fe}	-1.6	-1.6	-1.6	$^\circ$
Reverse Transfer Admittance	$ y_{re} $	14	14	14	μS
Phase Angle of Reverse Transfer Admittance	θ_{re}	-90	-90	-90	$^\circ$

