

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 : $\text{NF}=2.2\text{dB(Typ.)}$ at $f=100\text{MHz}$.
- High Transition Frequency : $f_T=800\text{MHz(Typ.)}$.

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

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	$*P_C$	625	mW
		400	
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

*Cu Lead-Frame : 625mW

Fe Lead-Frame : 400mW

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

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)	$V_{CE}=5\text{V}, I_C=1\text{mA}$	40	-	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 E:40 59, F:54 80, G:72 108, H:97 146, I:130 198

