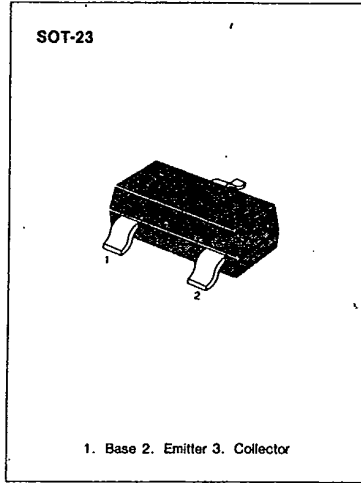


**MIXER FOR UHF TV TUNER**

$G_{CE} = 17\text{dB}$  (TYP)  
 $C_{re} = 0.8\text{pF}$  (TYP)

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )**

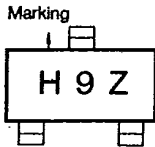
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	15	V
Emitter-Base Voltage	$V_{EBO}$	3	V
Collector Current	$I_C$	50	mA
Base Current (DC)	$I_B$	25	mA
Collector Dissipation ( $T_a = 25^\circ\text{C}$ )	$P_C$	150	mW
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~125	$^\circ\text{C}$



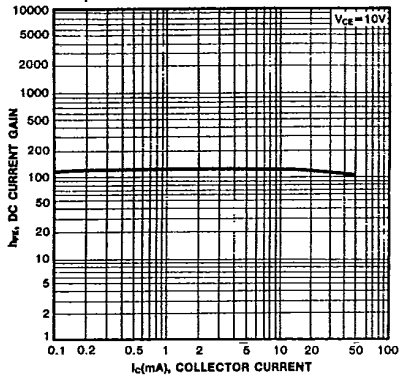
3

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

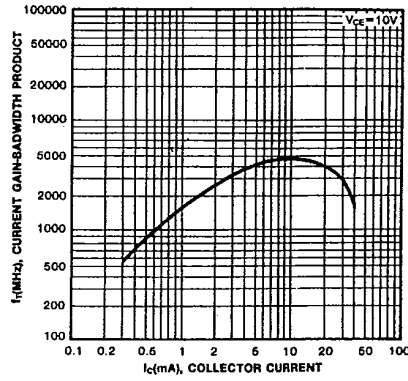
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1\text{mA}, I_B = 0$	15			V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 30\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 2\text{V}, I_C = 0$			1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$	40	100	200	
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 2\text{mA}$	1500	2400		MHz
Reverse Transfer Capacitance	$C_{re}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		0.6	0.9	pF
Conversion Gain	$G_{ce}$	$V_{CC} = 10\text{V}, I_C = 2\text{mA}$ $f = 800\text{MHz}, f_L = 830\text{MHz}$	12	17		dB
Noise Figure	NF	$V_{CC} = 10\text{V}, I_C = 2\text{mA}$ $f = 800\text{MHz}, f_L = 830\text{MHz}$		8		dB



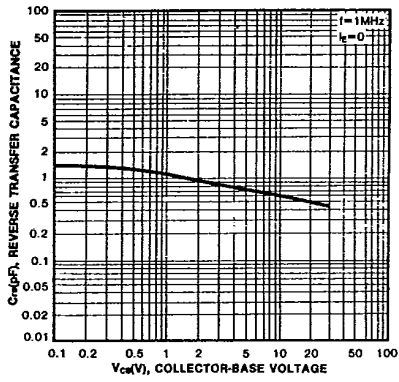
DC CURRENT GAIN



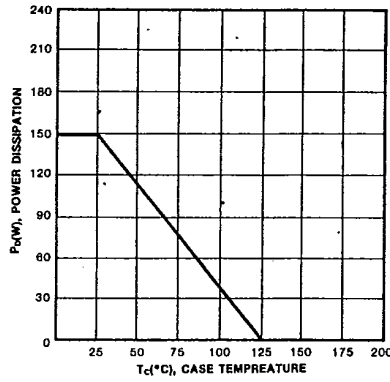
CURRENT GAIN BANDWIDTH PRODUCT



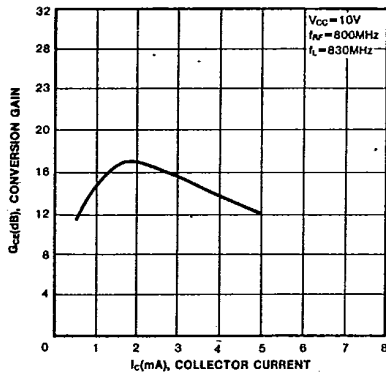
Cre-Vcb CHARACTERISTIC



POWER DERATING



Gc-IC CHARACTERISTIC



OSC LEVEL

