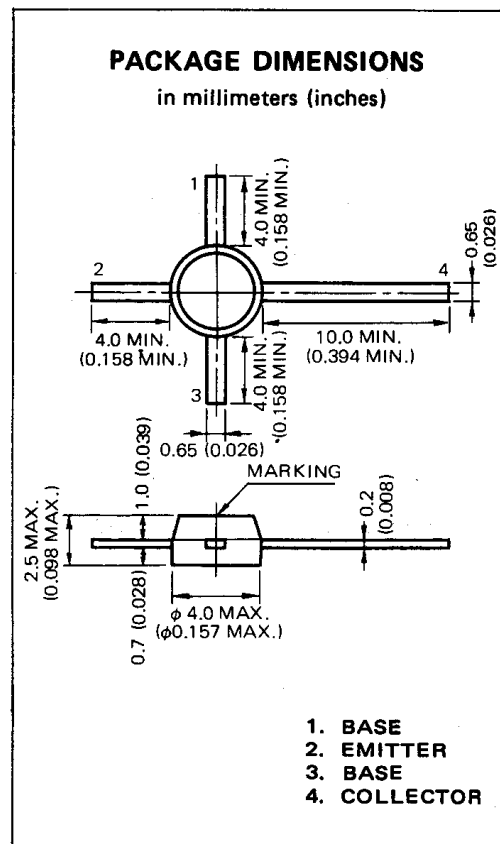


DESCRIPTION The 2SC2353 is specially designed for use as VHF and UHF mixer in a tuner of TV receiver. The influence of mirror effect is little by balanced base.

- FEATURES**
- Packaged in tiny plastic mold package.
 - Low noise. NF : 4.0 dB (TYP.)
 - High conversion gain. G_{cb} : 12.5 dB (TYP.)
 - Balanced base.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures	
Storage Temperature -55 to +125 °C
Junction Temperature +125 °C Maximum
Maximum Power Dissipation (Ta=25 °C)	
Total Power Dissipation 200 mW
Maximum Voltages and Currents (Ta=25 °C)	
V_{CBO} Collector to Base Voltage 30 V
V_{CEO} Collector to Emitter Voltage 14 V
V_{EBO} Emitter to Base Voltage 3.0 V
I_C Collector Current 50 mA
I_B Base Current 10 mA



ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE}	DC Current Gain	60	100	180		$V_{CE}=10\text{ V}, I_C=5.0\text{ mA}$
f_T	Gain Bandwidth Product	1.5	2.3		GHz	$V_{CE}=10\text{ V}, I_E=-5.0\text{ mA}$
C_{ob}	Output Capacitance		0.85	1.0	pF	$V_{CB}=10\text{ V}, I_E=0, f=1\text{ MHz}$
NF	Noise Figure		4.0	5.0	dB	$V_{CB}=10\text{ V}, I_E=-5.0\text{ mA}, f=900\text{ MHz}$
G_{pb}	Power Gain	14	16		dB	$V_{CB}=10\text{ V}, I_E=-5.0\text{ mA}, f=900\text{ MHz}$
G_{cb}	Conversion Gain	10	12.5		dB	$f_{RF}=900\text{ MHz}, f_{LOC}=930\text{ MHz}$ $V_{CB}=10\text{ V}, I_E=-5.0\text{ mA}$ Local level=110 mV $V_{CB}=15\text{ V}, I_E=0$
I_{CBO}	Collector Cutoff Current			0.1	μA	

Classification of h_{FE}

Rank	L	K
Range	60 - 120	90 - 180

h_{FE} Test Conditions : $V_{CE}=10\text{ V}, I_C=5.0\text{ mA}$