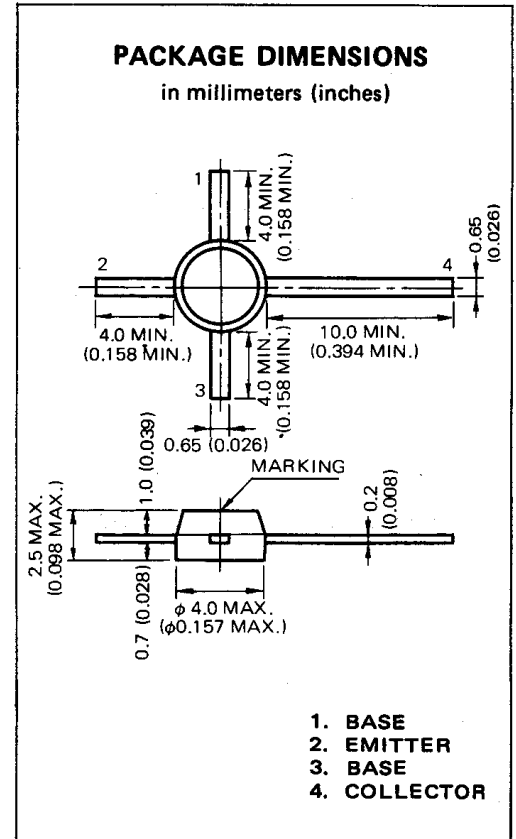


**DESCRIPTION** The 2SC2353 is specially designed for use as VHF and UHF mixer in a tuner of TV receiver. The influence of mirror effect is little by balanced base.

- 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	$\mu\text{A}$	

Classification of  $h_{FE}$

Rank	L	K
Range	60 - 120	90 - 180

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