

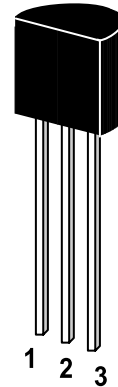
# ST 2SC1393

## NPN Silicon Epitaxial Planar Transistor

### TV VHF TUNER RF AMPLIFIER (FORWARD AGC)

The transistor is subdivided into three group, R、O and Y, according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.

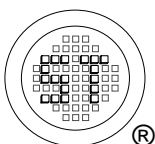


1. Emitter 2. Collector 3. Base

TO-92 Plastic Package  
Weight approx. 0.19g

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	30	V
Collector Emitter Voltage	$V_{CEO}$	30	V
Emitter Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	20	mA
Collector Dissipation	$P_{tot}$	250	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +150	$^\circ\text{C}$



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ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
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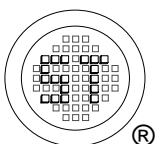
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Dated : 16/06/2004

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## Characteristics at $T_{amb}=25^{\circ}\text{C}$

		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=10\text{V}$ , $I_C=2\text{mA}$	R	$h_{FE}$	40	-	80	-
	O	$h_{FE}$	60	-	140	
	Y	$h_{FE}$	90	-	180	
Collector Base Breakdown Voltage at $I_C=10\mu\text{A}$		$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C=5\text{mA}$		$V_{(BR)CEO}$	30	-	-	V
Emitter Base Breakdown Voltage at $I_E=10\mu\text{A}$		$V_{(BR)EBO}$	4	-	-	V
Collector Cutoff Current at $V_{CB}=20\text{V}$		$I_{CBO}$	-	-	0.1	$\mu\text{A}$
AGC Current $I_E$ at $G_{pe}=-30\text{dB}$ , $f=200\text{MHz}$		$I_{AGC}$	-	-10	-12	mA
Reverse Transfer Capacitance at $V_{CB}=10\text{V}$ , $f=1\text{MHz}$		$C_{re}$	-	0.35	0.5	pF
Current Gain Bandwidth Product at $V_{CE}=10\text{V}$ , $I_C=3\text{mA}$		$f_T$	400	700	-	MHz
Power Gain at $V_{CE}=10\text{V}$ , $f=200\text{MHz}$ , $R_S=50\Omega$ , $I_E=-3\text{mA}$		$G_{pe}$	20	24	-	dB
Noise Figure at $V_{CE}=10\text{V}$ , $I_E=-3\text{mA}$ $f=200\text{MHz}$ , $R_S=50\Omega$		NF	-	2.0	3.0	dB



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