

SAMSUNG SEMICONDUCTOR INC

14E D

7964142 0006890 1

KSC1395**NPN EPITAXIAL SILICON TRANSISTOR**

T-31-17

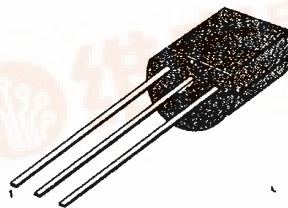
TV VHF TUNER OSCILLATOR

- High Current-Gain Bandwidth Product $f_T=600\text{MHz}$ (Min)
- Output Capacitance $C_{ob}=1.5\text{pF}$ (Max)

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	30	V
Collector-Emitter Voltage	V_{CE0}	15	V
Emitter-Base Voltage	V_{EB0}	4	V
Collector Current	I_C	20	mA
Collector Dissipation	P_C	250	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ 150	$^\circ\text{C}$

TO-92



1. Emitter 2. Base 3. Collector

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C=10\mu\text{A}, I_E=0$	30			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C=5\text{mA}, I_B=0$	15			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E=-10\mu\text{A}, I_C=0$	4			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=12\text{V}, I_E=0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$			0.1	V
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}, I_C=5\text{mA}$	40		240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.5	V
Current-Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=5\text{mA}$	600	1100		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}, I_E=0$			1.5	pF

 h_{FE} CLASSIFICATION

Classification	R	O	Y
h_{FE}	40-80	70-140	120-240



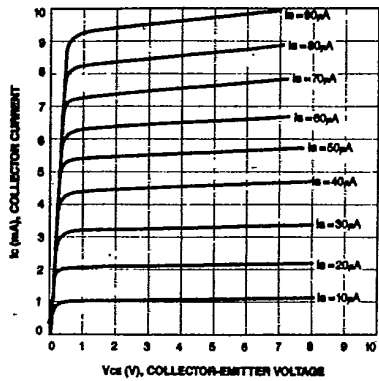
SAMSUNG SEMICONDUCTOR

KSC1395

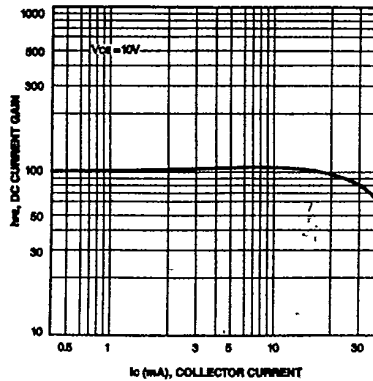
NPN EPITAXIAL SILICON TRANSISTOR

T-31-17

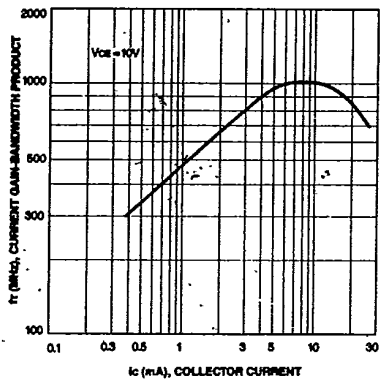
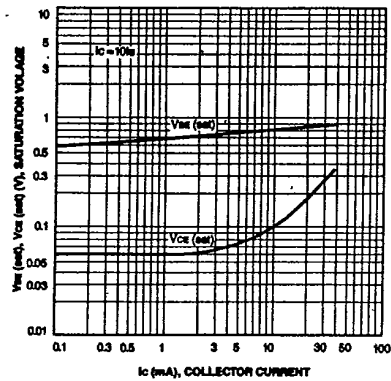
STATIC CHARACTERISTIC



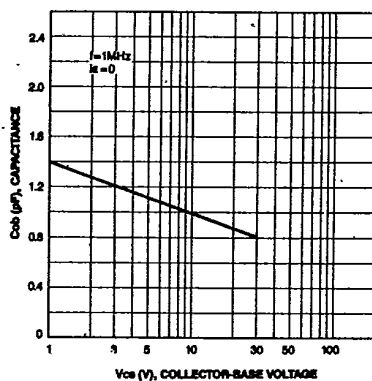
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT

BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE

COLLECTOR OUTPUT CAPACITANCE



3

