

**KSC1188****NPN EPITAXIAL SILICON TRANSISTOR**

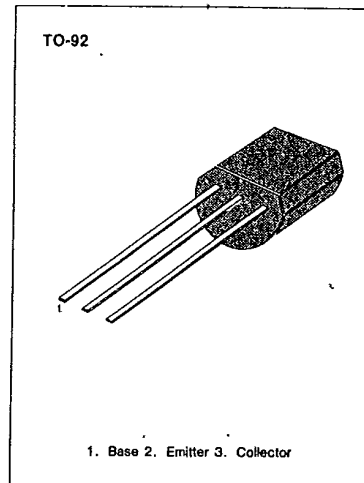
T-31-17

**TV PIF AMPLIFIER**

- High Current Gain Bandwidth Product  $f_T=700\text{MHz}$
- High Power Gain  $G_{pe}=25\text{dB}$  at 45MHz (Min)

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

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

**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	$BV_{CE0}$	$I_C=5\text{mA}, I_B=0$	20			V
Emitter-Base Breakdown Voltage	$BV_{EB0}$	$I_E=-10\mu\text{A}, I_C=0$	4			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=20\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=3\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=10\text{V}, I_C=2\text{mA}$	40		240	
Current Gain-Bandwidth Product	$f_T$	$V_{CE}=10, I_C=3\text{mA}$	400	700		MHz
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$		0.2	0.7	V
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0$ $f=1\text{MHz}$			1	pF
Power Gain	$G_{pe}$	$I_C=10\text{mA}, V_{CE}=6\text{V}$ $f=45\text{MHz}, R_s=50\Omega$	20	24		dB

 **$h_{FE}$  CLASSIFICATION**

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

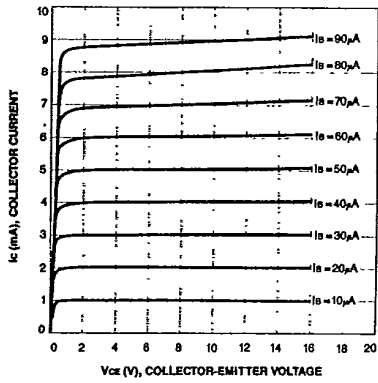


KSC1188

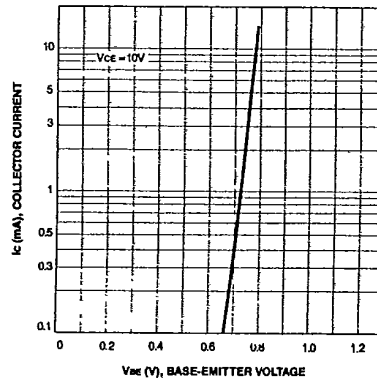
NPN EPITAXIAL SILICON TRANSISTOR

T-31-17

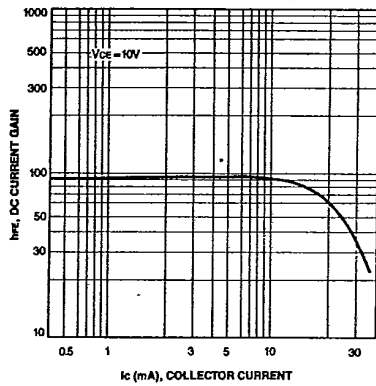
STATIC CHARACTERISTIC



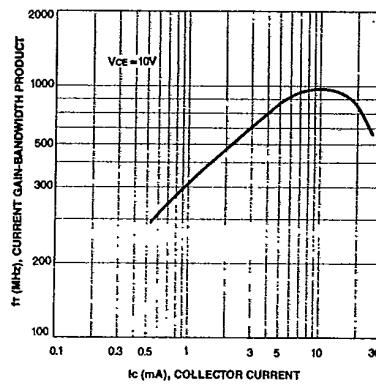
BASE-EMITTER ON VOLTAGE



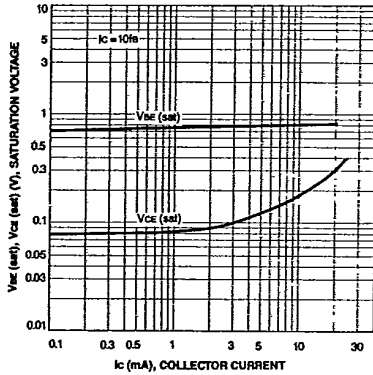
DC CURRENT GAIN



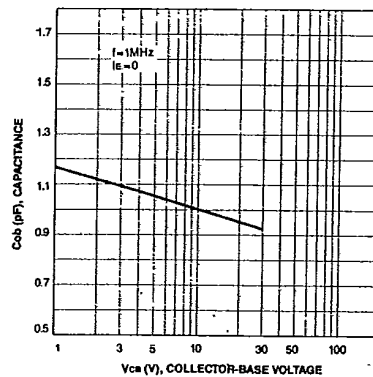
CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



3