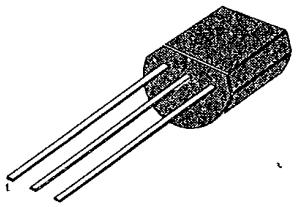
KSC1188 NPN EPITAXIAL SILICON TRANSISTOR

T-31-17

TV PIF AMPLIFIER

- **High Current Gain Bandwidth Product f_T=700MHz**
- **High Power Gain Gpe=25dB at 45MHz (Min)**

TO-92



1. Base 2. Emitter 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	30	mA
Collector Dissipation	P_C	250	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55~150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=10μA, I_E=0	30			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=5mA, I_B=0	20			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=−10μA, I_C=0	4			V
Collector Cut-off Current	I_{CBO}	V_{CB}=20V, I_E=0			0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=3V, I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=10V, I_C=2mA	40		240	
Current Gain-Bandwidth Product	f_T	V_{CE}=10, I_C=3mA	400	700		MHz
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=10mA, I_B=1mA		0.2	0.7	V
Output Capacitance	Cob	V_{CB}=10V, I_E=0 f=1MHz			1	pF
Power Gain	Gpe	I_C=10mA, V_{CE}=6V f=45MHz, Rs=50Ω	20	24		dB

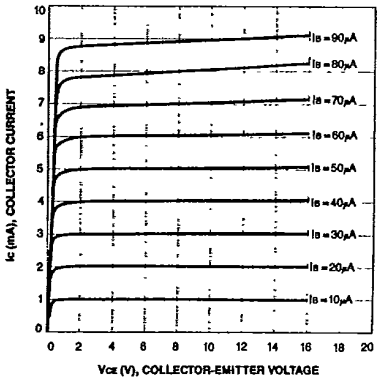
h_{FE} CLASSIFICATION

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

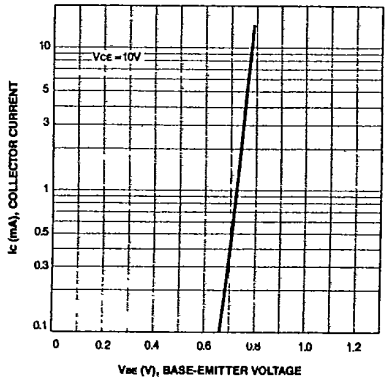
KSC1188 NPN EPITAXIAL SILICON TRANSISTOR

T-31-17

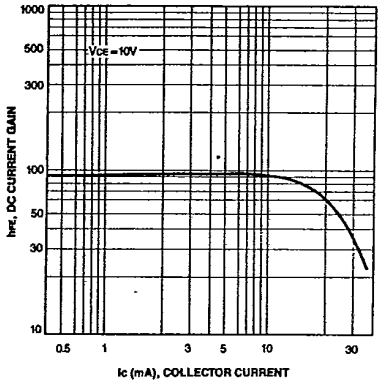
STATIC CHARACTERISTIC



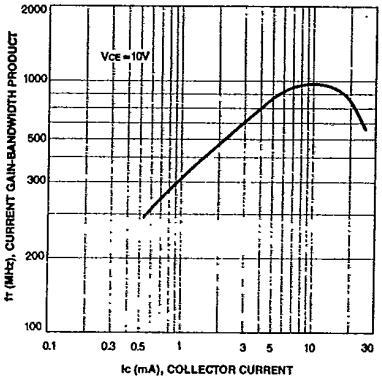
BASE-EMITTER ON VOLTAGE



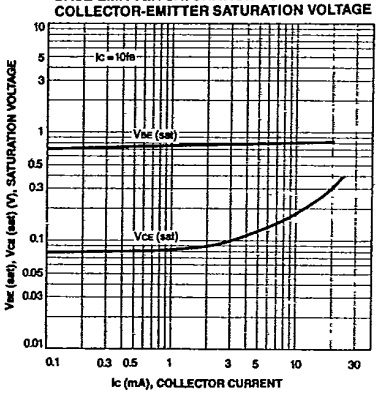
DC CURRENT GAIN



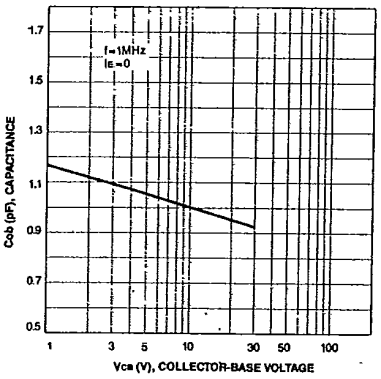
CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



3