

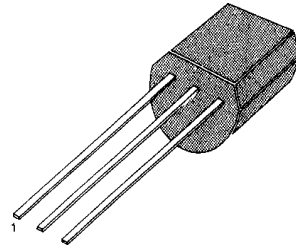
**LOW FREQUENCY AMPLIFIER**

- Collector-Base Voltage  $V_{CBO} = -60V$
- Complement to KSC945

**ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ C$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	-60	V
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-150	mA
Collector Dissipation	$P_C$	250	mW
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{STG}$	-55 ~ 150	$^\circ C$

TO-92



1. Emitter 2. Base 2. Collector

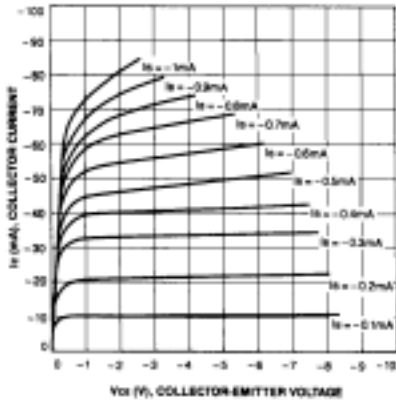
**ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ C$ )**

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = -100 \mu A, I_E = 0$	-60			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = -10 mA, I_B = 0$	-50			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = -10 \mu A, I_C = 0$	-5			V
Collector Cut-off Current	$I_{CBO}$	$V_{CE} = -25V, I_E = 0$			-100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -3V, I_C = 0$			-100	nA
DC Current Gain	$h_{FE}$	$V_{CE} = -6V, I_C = -1mA$	40		700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -20mA, I_B = -2mA$		-0.18	-0.3	V
Base-Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = -6V, I_C = -1mA$	-0.50	-0.62	-0.80	V
Current Gain-Bandwidth Product	$f_T$	$V_{CE} = -6V, I_C = -10mA$	50	180		MHz
Output Capacitance	$C_{OB}$	$V_{CB} = -10V, I_E = 0$ $f = 1MHz$		2.8		Pf
Noise Figure	NF	$V_{CE} = -6V, I_C = -0.3mA$ $f = 1MHz, R_s = 10K$		6.0	20	dB

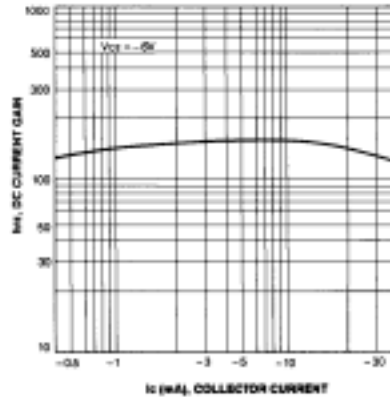
 **$h_{FE}$  CLASSIFICATION**

Classification	R	O	Y	G	L
$h_{FE}$	40-80	70-140	120-240	200-400	350-700

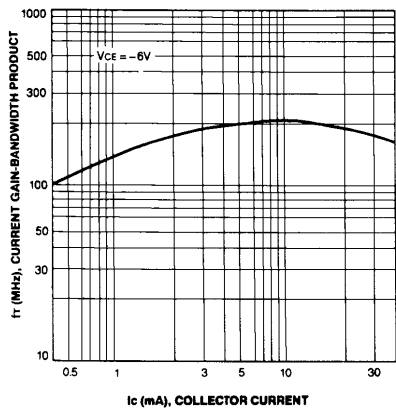
STATIC CHARACTERISTIC



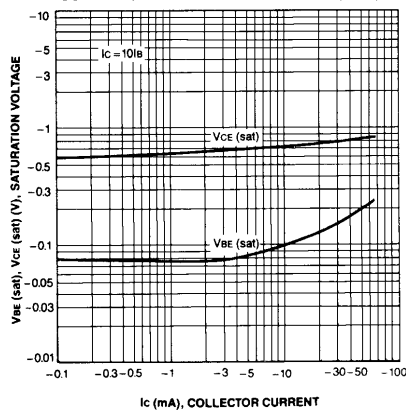
DC CURRENT GAIN



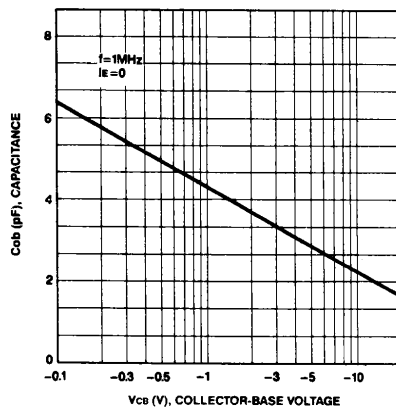
CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



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