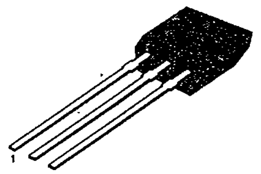
KSC2784 NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY LOW NOISE AMPLIFIER

- **Complement to KSA1174**

TO-92S



1. Emitter 2. Collector 3. Base

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Base Current	I_B	10	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55～150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C)

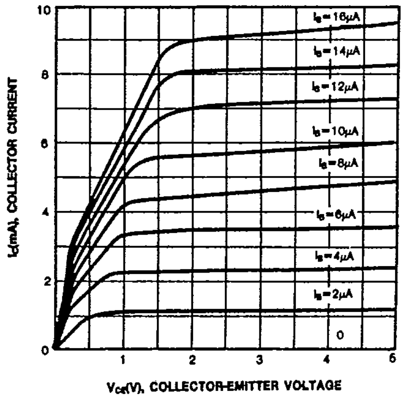
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB}=120V, I_E=0			50	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			50	nA
DC Current Gain	h_{FE1}	V_{CE}=6V, I_C=0.1mA	150	580		
	h_{FE2}	V_{CE}=6V, I_C=1mA	200	600	1200	
Base Emitter On Voltage	V_{BE} (on)	V_{CE}=6V, I_C=1mA	0.55	0.59	0.65	V
Collector Emitter Saturation Voltage	V_{CE} (sat)	I_C=10mA, I_B=1mA		0.07	0.3	V
Current Gain Bandwidth Product	f_T	V_{CE}=6V, I_E=−1mA	50	110		MHz
Output Capacitance	Cob	V_{CB}=30V, I_E=0 f=1MHz		1.6	2.5	pF
Noise Voltage	NV			25	40	mV

h_{FE}(2) CLASSIFICATION

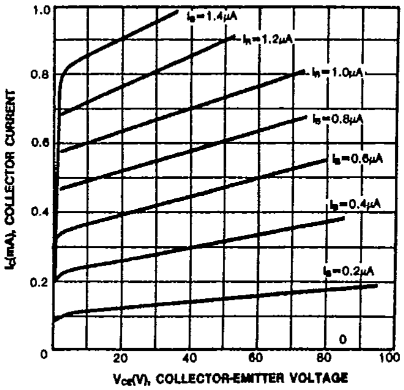
Classification	P	F	E	U
h_{FE}(2)	200-400	300-600	400-800	600-1200

T-29-17

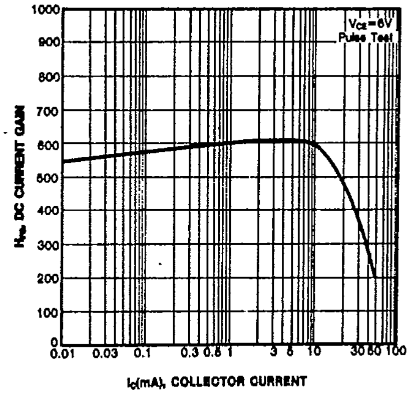
STATIC CHARACTERISTIC



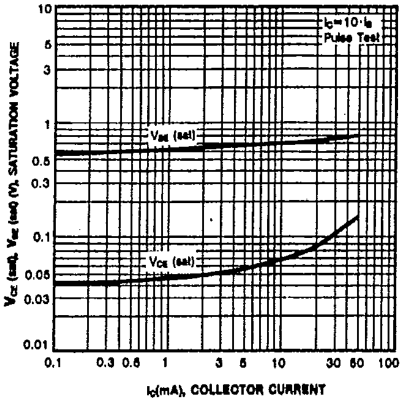
STATIC CHARACTERISTIC



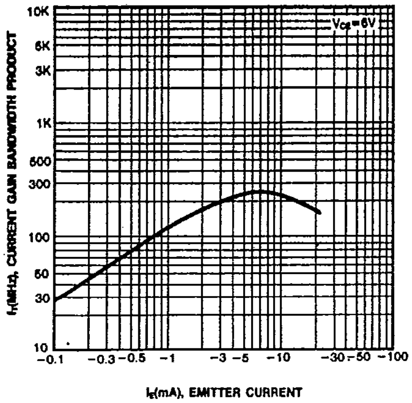
DC CURRENT GAIN



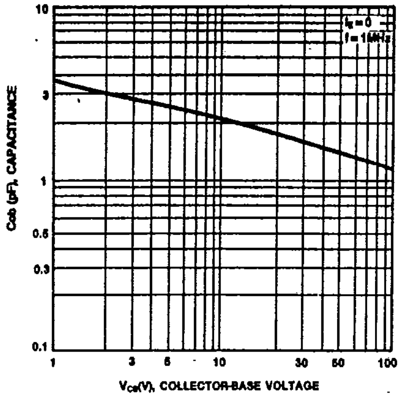
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR OUTPUT CAPACITANCE



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