

KSD1021

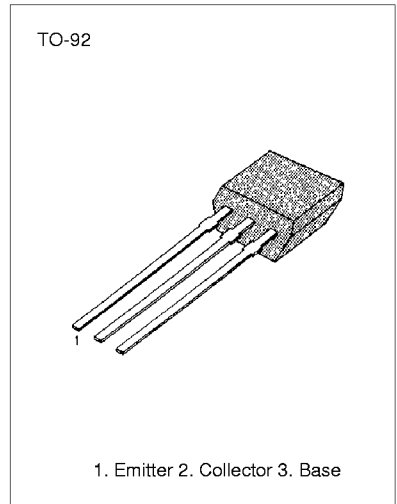
NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY POWER AMPLIFIER

- Complement to KSB811
- Collector Current $I_C=1A$
- Collector Dissipation $P_C=350mW$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Collector Dissipation	P_C	350	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ C$



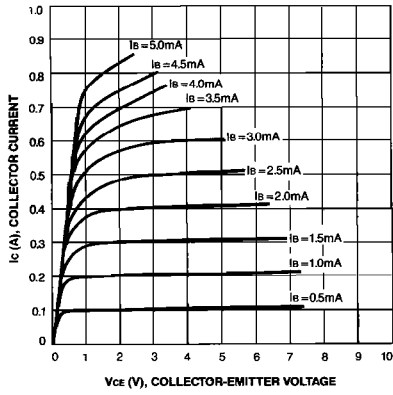
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ C$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=10mA, I_B=0$	30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=30V, I_E=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=1V, I_C=100mA$	70		400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=0.1A$			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=0.1A$			1.2	V
Current Gain-Band Width Product	f_T	$V_{CE}=6V, I_C=10mA$		130		MHz
Output Capacitance	C_{OB}	$V_{CB}=6V, I_E=0, f=1MHz$		16		pF

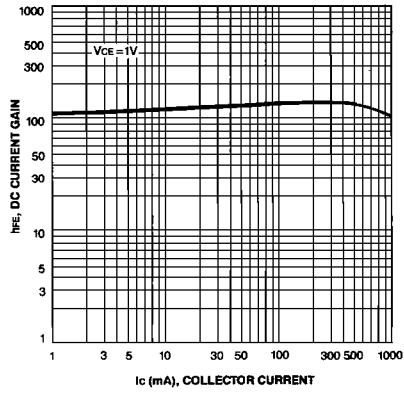
h_{FE} CLASSIFICATION

Classification	O	Y	G
h_{FE}	70-140	120-240	200-400

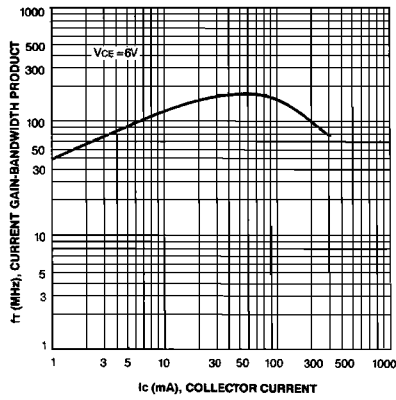
STATIC CHARACTERISTIC



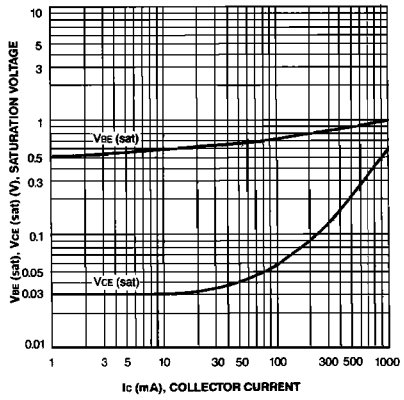
DC CURRENT GAIN



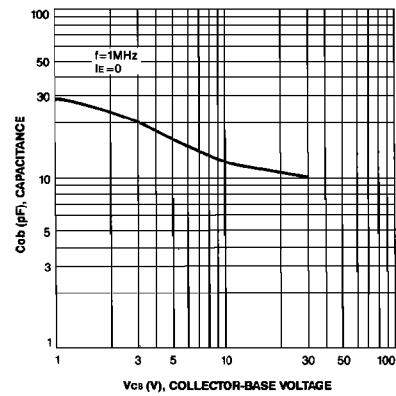
CURRENT GAIN-BANDWIDTH PRODUCT



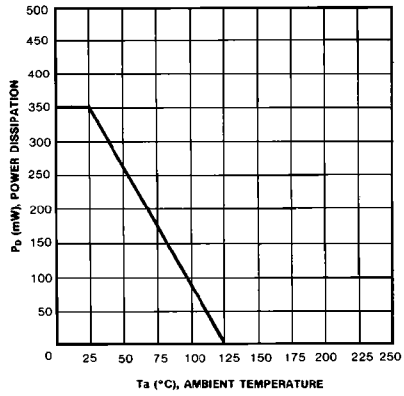
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



POWER DERATING



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