

KSC2002/2003**NPN EPITAXIAL SILICON TRANSISTOR**

T-29-21

AUDIO FREQUENCY AMPLIFIER

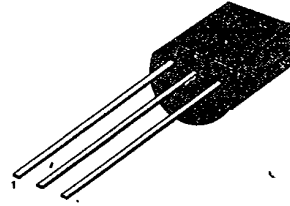
• Complement to KSA953/KSA954

ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage : KSC2002	V _{CB0}	60	V
: KSC2003		80	V
Collector-Emitter Voltage : KSC2002	V _{CE0}	60	V
: KSC2003		80	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current (DC)	I _C	300	mA
• Collector Current (Pulse)	I _C	500	mA
Collector Dissipation	P _C	600	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55~150	°C

• PW≤10ms, Duty Cycle ≤50%

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1. Emitter 2. Collector 3. Base

ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current: KSC2002	I _{CB0}	V _{CB} =60V, I _E =0			100	nA
: KSC2003		V _{CB} =80V, I _E =0			100	nA
Emitter Cutoff Current	I _{EB0}	V _{EB} =5V, I _C =0			100	nA
• DC Current Gain	h _{FE1}	V _{CE} =1V, I _C =50mA	90	200	400	
	h _{FE2}	V _{CE} =2V, I _C =300mA	30	80		
Base-Emitter On Voltage	V _{BE (on)}	V _{CE} =6V, I _C =10mA	600	645	700	mV
• Collector-Emitter Saturation Voltage	V _{CE (sat)}	I _C =300mA, I _B =30mA		0.15	0.6	V
• Base Emitter Saturation Voltage	V _{BE (sat)}	I _C =300mA, I _B =30mA		0.86	1.2	V
Current Gain-Bandwidth Product	f _T	V _{CE} =6V, I _E =-10mA	50	140		MHz
Output Capacitance	C _{ob}	V _{CB} =6V, I _E =0, f=1MHz		7	15	pF

• Pulse Test: PW≤350μs, Duty Cycle≤2% Pulsed

h_{FE} (1) CLASSIFICATION

Classification	O	Y	G
h _{FE} (1)	90-180	135-270	200-400

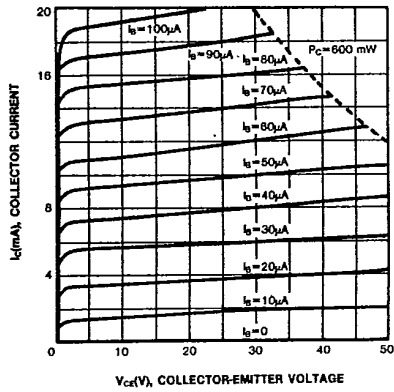


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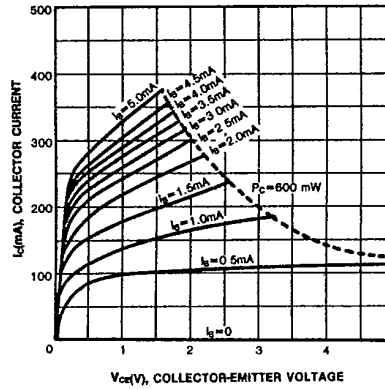
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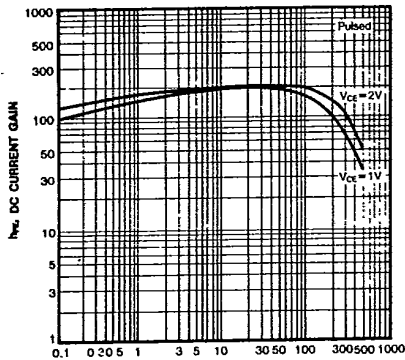
STATIC CHARACTERISTIC



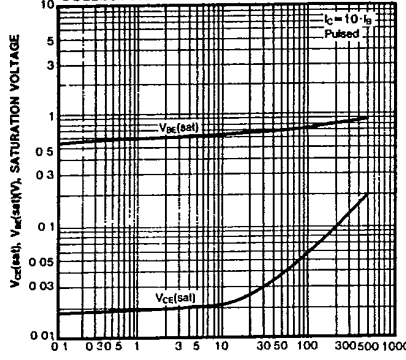
STATIC CHARACTERISTIC



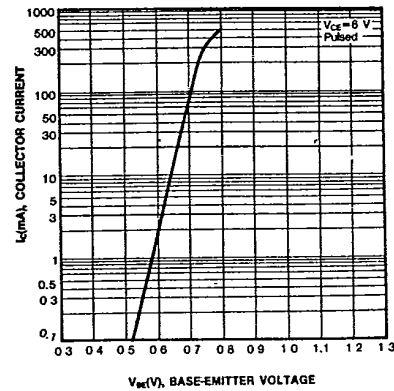
DC CURRENT GAIN



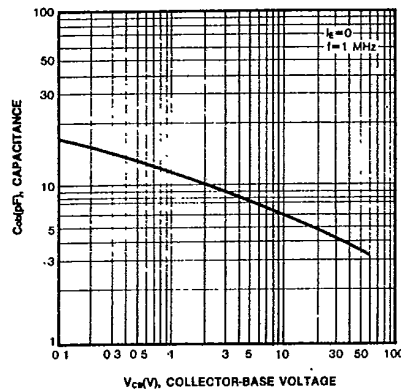
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



BASE-EMITTER ON VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



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