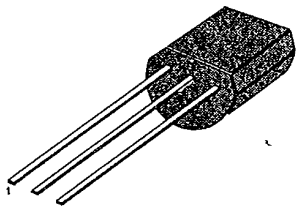
KSA709 PNP EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE AMPLIFIER

- Collector-Base Voltage V_{CBO} = −160V
- Collector Dissipation P_C = 800mW
- Complement to KSC1009

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	−160	V
Collector-Emitter Voltage	V_{CEO}	−150	V
Emitter-Base Voltage	V_{EBO}	−8	V
Collector Current	I_C	−700	mA
Collector Dissipation	P_C	800	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 = −100μA, I_E = 0	−160			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = −10mA, I_B = 0	−150			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E = −100μA, I_C = 0	−8			V
Collector Cut-off Current	I_{CBO}	V_{CB} = −100V, I_E = 0			−0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = −5V, I_C = 0			−0.1	μA
DC Current Gain	h_{FE}	V_{CE} = −2V, I_C = −50mA*	40		240	
Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C = −200mA, I_B = −20mA*		−0.3	−0.4	V
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C = −200mA, I_B − 20mA*		−0.9	−1.0	V
Current Gain-Bandwidth Product	f_T	V_{CE} = −10V, I_C = −50mA		50		MHz
Output Capacitance	Cob	V_{CB} = −10V, I_E = 0 f = 1MHz			10	pF

* pulse measured PW ≤ 350μs, duty cycle ≤ 2%

h_{FE} CLASSIFICATION

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

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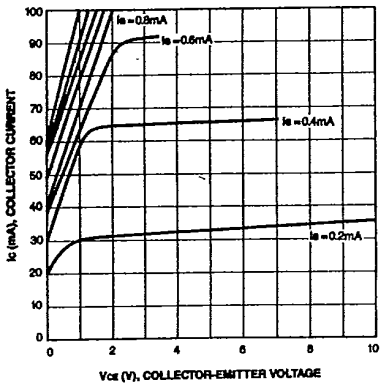
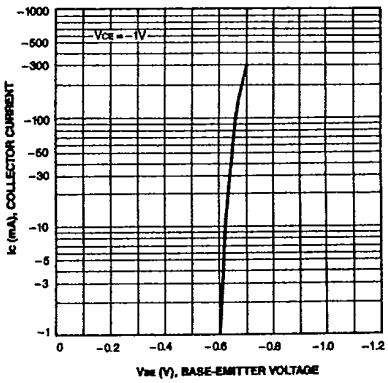
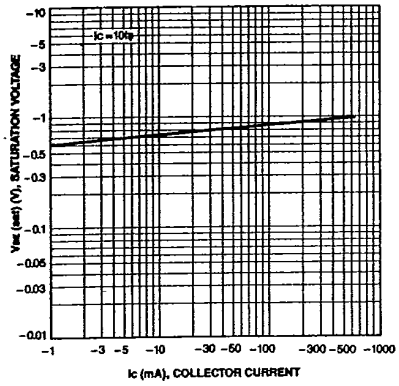
STATIC CHARACTERISTIC



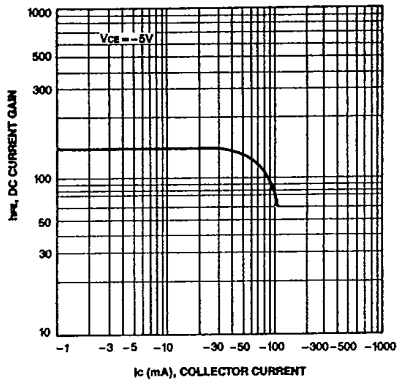
BASE-EMITTER ON VOLTAGE



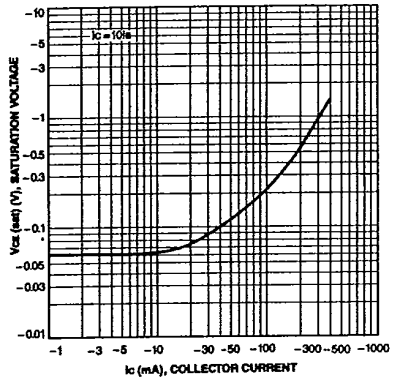
BASE-EMITTER SATURATION VOLTAGE



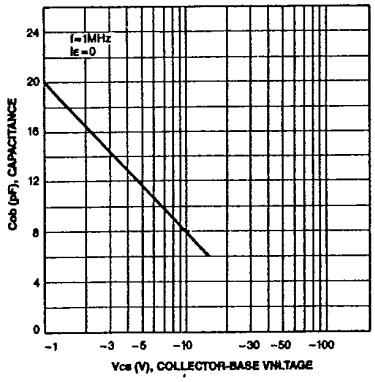
DC CURRENT GAIN



COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



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