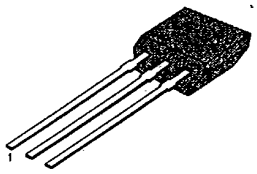
KSR2205 PNP EPITAXIAL SILICON TRANSISTOR

T-37-13

SWITCHING APPLICATION (Bias Resistor Built In)

- Switching Circuit, Inverter, Interface circuit Driver circuit
- Built in bias Resistor (R_1=4.7KΩ, R_2=10KΩ)
- Complement to KSR1205

TO-92S



1. Emitter 2. Collector 3. Base

3

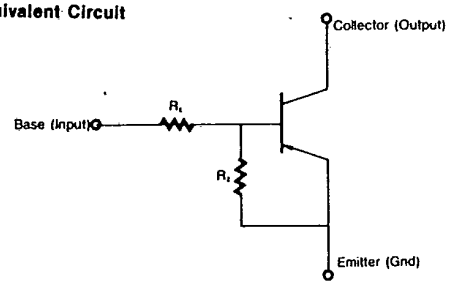
ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	−50	V
Collector-Emitter Voltage	V_{CEO}	−50	V
Emitter-Base Voltage	V_{EBO}	−10	V
Collector Current	I_C	−100	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-Base Breakdown Voltage	BV_{CBO}	I_C=−10μA, I_E=0	−50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=−100μA, I_B=0	−50			V
Collector Cutoff Current	I_{CBO}	V_{CB}=−40V, I_E=0			−0.1	μA
DC Current Gain	h_{FE}	V_{CE}=−5V, I_C=−5mA	30			
Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C=−10mA, I_B=−0.5mA			−0.3	V
Current Gain-Bandwidth Product	Cob	V_{CB}=−10V, I_E=0 f=1MHz		5.5		pF
Current Gain-Bandwidth Product	f_T	V_{CE}=−10V, I_C=−5mA		200		MHz
Input Off Voltage	Vi(off)	V_{CE}=−5V, I_C=−100μA	−0.3			V
Input On Voltage	Vi(on)	V_{CE}=−0.3V, I_C=−20mA			−2.5	V
Input Resistor	R_1		3.2	4.7	6.2	KΩ
Resistor Ratio	R_1/R_2		0.42	0.47	0.52	

Equivalent Circuit



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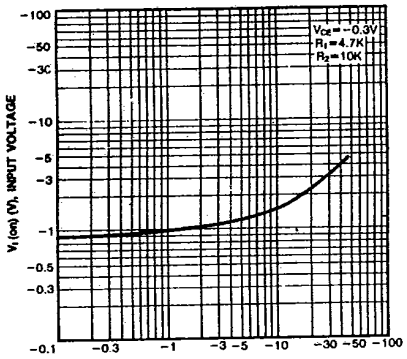
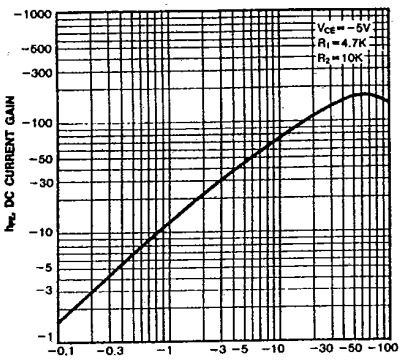
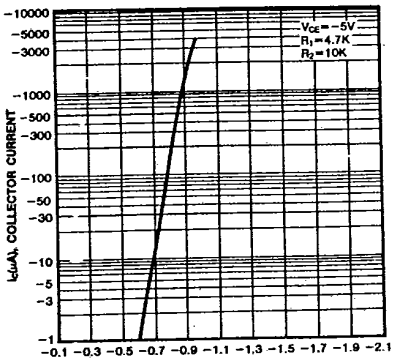
INPUT ON VOLTAGE



DC CURRENT GAIN



INPUT OFF VOLTAGE



POWER DERATING