

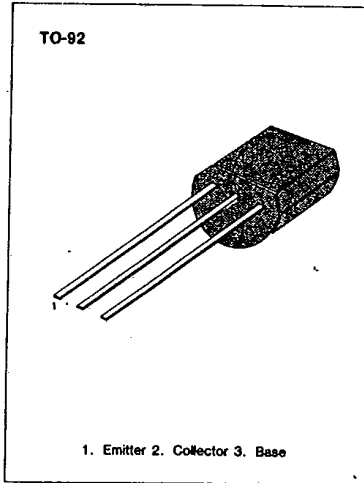
KSR2007

PNP EPITAXIAL SILICON TRANSISTOR

T-37-13

SWITCHING APPLICATION (Bias Resistor Built In)

- Switching Circuit, Inverter, Interface circuit
Driver circuit
- Built in bias Resistor ($R_1=22K\Omega$ $R_2=47K\Omega$)
- Complement to KSR1007



ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

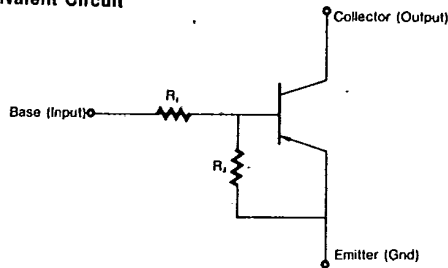
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-10	V
Collector Current	I_C	-100	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ 150	$^\circ\text{C}$

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ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -10\mu\text{A}, I_E = 0$	-50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -100\mu\text{A}, I_B = 0$	-50			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = -40\text{V}, I_E = 0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -5\text{V}, I_C = -5\text{mA}$	68			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$			-0.3	V
Current Gain-Bandwidth Product	Cob	$V_{CB} = -10\text{V}, I_E = 0$ $f = 1\text{MHz}$		5.5		pF
Current Gain-Bandwidth Product	f_T	$V_{CE} = -10\text{V}, I_C = -5\text{mA}$		200		MHz
Input Off Voltage	$V_i(\text{off})$	$V_{CE} = -5\text{V}, I_C = -100\mu\text{A}$	-0.4			V
Input On Voltage	$V_i(\text{on})$	$V_{CE} = -0.3\text{V}, I_C = -2\text{mA}$			-2.5	V
Input Resistor	R_1		15	22	29	$K\Omega$
Resistor Ratio	R_1/R_2		0.42	0.47	0.52	

Equivalent Circuit

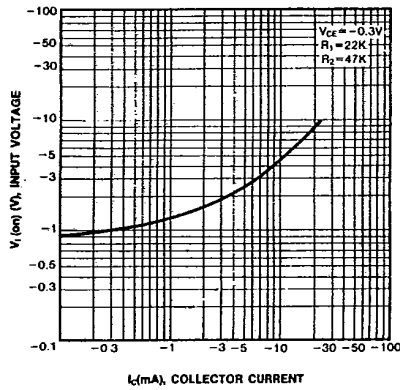


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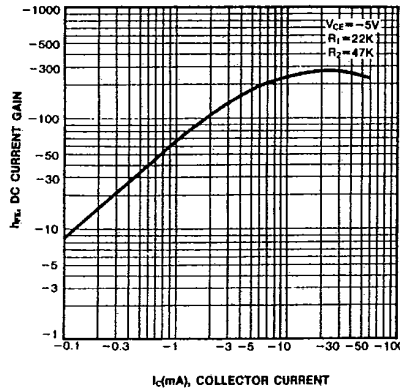
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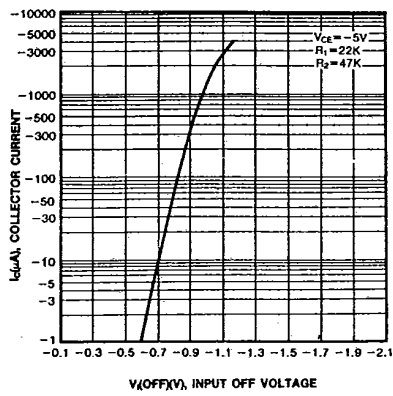
INPUT ON VOLTAGE



DC CURRENT GAIN



INPUT OFF VOLTAGE



POWER DERATING

