

KSR2004

PNP EPITAXIAL SILICON TRANSISTOR

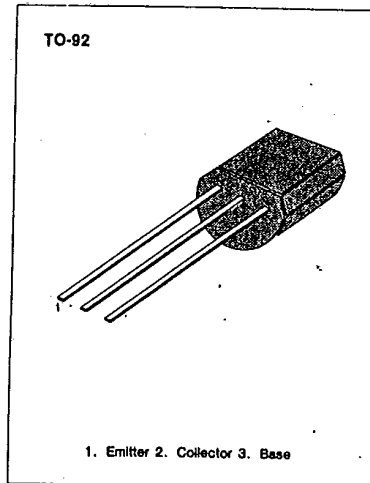
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SWITCHING APPLICATION (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit Driver circuit
- Built In bias Resistor ($R_1=47K\Omega$, $R_2=47K\Omega$)
- Complement to KSR1004

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

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	$^\circ C$
Storage Temperature	T_{stg}	-55~150	$^\circ C$

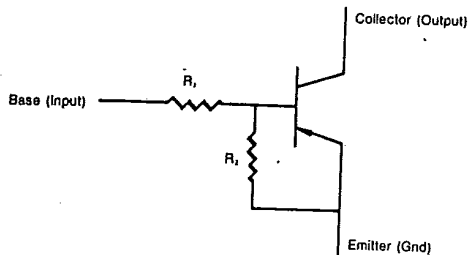


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ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=-10\mu A, I_E=0$	-50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=-100\mu A, I_B=0$	-50			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=-40V, I_E=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-5V, I_C=-5mA$	68			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10mA, I_B=-0.5mA$			-0.3	V
Current Gain-Bandwidth Product	f_T	$V_{CE}=-5mA, I_C=-10V$		200		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, I_E=0$ $f=1.0MHz$		5.5		pF
Input Off Voltage	$V_{I(off)}$	$V_{CE}=-5V, I_C=-100\mu A$	-0.5			V
Input On Voltage	$V_{I(on)}$	$V_{CE}=-0.3V, I_C=-10mA$			-3	V
Input Resistor	R_1		32	47	62	K Ω
Resistor Ratio	R_1/R_2		0.9	1	1.1	

Equivalent Circuit

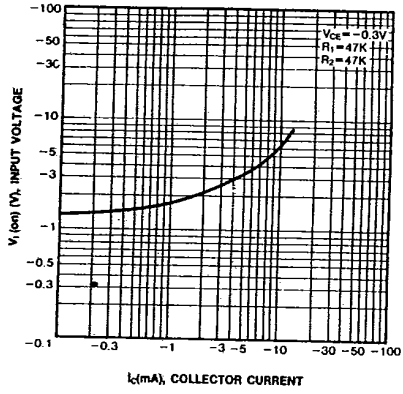


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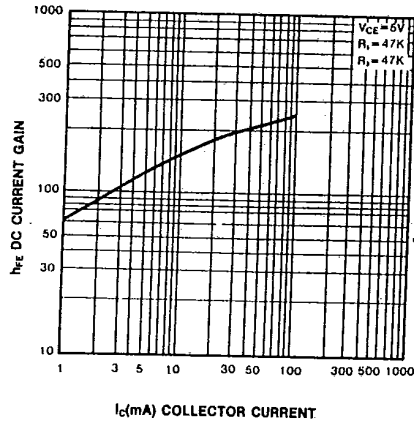
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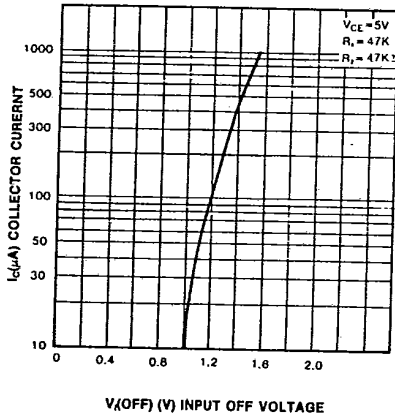
INPUT ON VOLTAGE



DC CURRENT GAIN



INPUT OFF VOLTAGE



POWER DERATING

