

SAMSUNG SEMICONDUCTOR INC

14E D

7964142 0007139 0

KSR2203

PNP EPITAXIAL SILICON TRANSISTOR

T-37-13

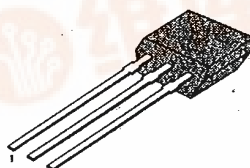
SWITCHING APPLICATION (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit Driver circuit
- Built in bias Resistor ($R = 22K\Omega$, $R_1 = 22K\Omega$)
- Complement to KSR1203

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-50	V
Collector-Emitter Voltage	V_{CE0}	-50	V
Emitter-Base Voltage	V_{EB0}	-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	$^\circ\text{C}$

TO-92S



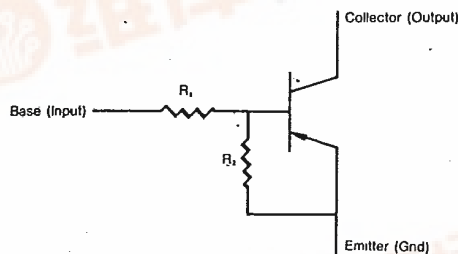
1. Emitter 2. Collector 3. Base

3

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = -10\mu\text{A}$, $I_E = 0$	-50			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = -100\mu\text{A}$, $I_B = 0$	-50			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = -40\text{V}$, $I_E = 0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -5\text{V}$, $I_C = -5\text{mA}$	56			
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	f_T	$V_{CE} = -5\text{mA}$, $I_C = -10\text{V}$		200		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$ $f = 1.0\text{MHz}$		5.5		pF
Input Off Voltage	$V_i(\text{off})$	$V_{CE} = -5\text{V}$, $I_C = -100\mu\text{A}$	-0.5			V
Input On Voltage	$V_i(\text{on})$	$V_{CE} = -0.2\text{V}$, $I_C = -5\text{mA}$			-3.0	V
Input Resistor	R_1		15	22	29	K Ω
Resistor Ratio	R_1/R_2		0.9	1	1.1	

Equivalent Circuit



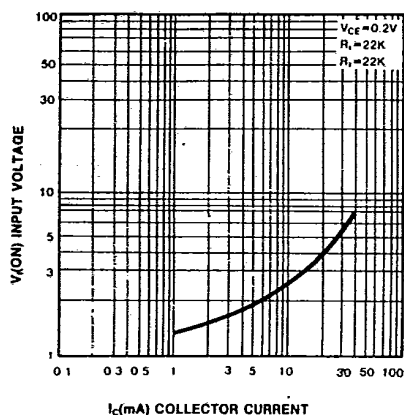
SAMSUNG SEMICONDUCTOR

KSR2203

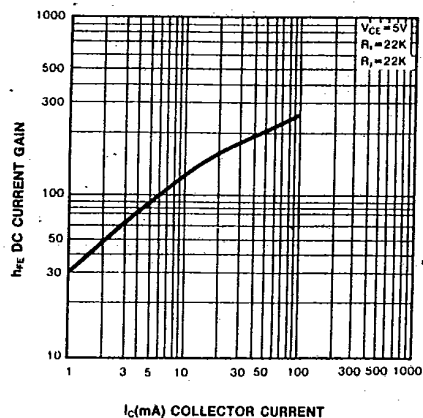
PNP EPITAXIAL SILICON TRANSISTOR

T-37-13

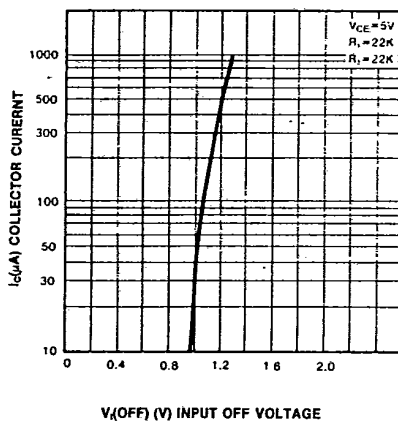
INPUT ON VOLTAGE



DC CURRENT GAIN



INPUT OFF VOLTAGE



POWER DERATING

