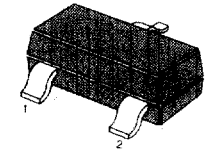
SWITCHING APPLICATION (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor (R_1 =4.7kΩ, R_2=10kΩ)
- Complement to KSR2105

SOT-23



1. Base 2. Emitter 3. Collector

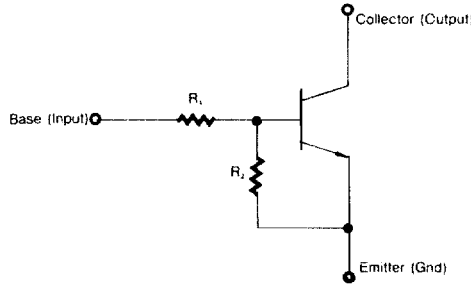
ABSOLUTE MAXIMUM RATINGS (T_A=25℃)

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 (max)	I_C	100	mA
Collector Dissipation	P_C	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

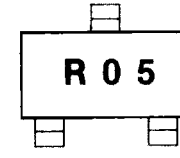
ELECTRICAL CHARACTERISTICS (T_A=25℃)

Characteristic	Symbol	Test Conditions	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 Cut-off 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
Output Capacitance	C_{OB}	V_{CB}=10V, I_E=0 f=1.0MHz		3.7		pF
Current Gain-Bandwidth Product	f_T	V_{CE}=10mA, I_C=5mA		250		MHz
Input Off Voltage	V_I(off)	V_{CE}=5V, I_C=100μA	0.3			V
Input On Voltage	V_I(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

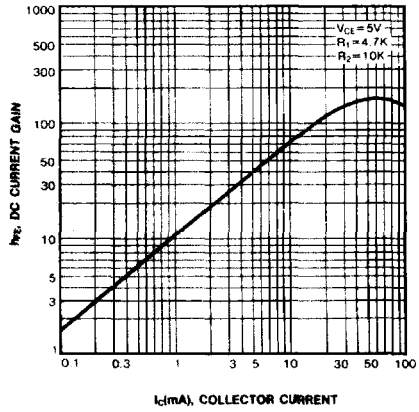


Marking

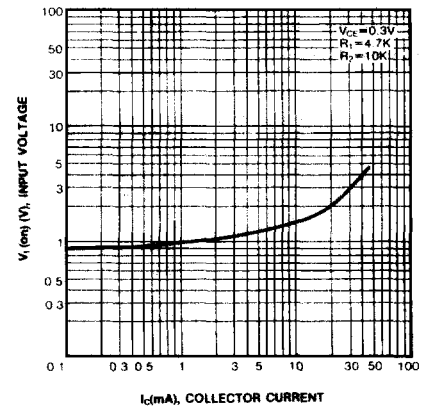


SAMSUNG ELECTRONICS

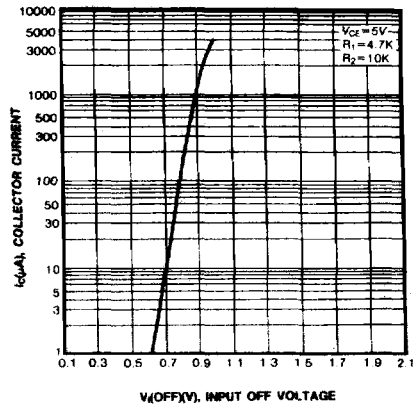
DC CURRENT GAIN



INPUT ON VOLTAGE



INPUT OFF VOLTAGE



POWER DERATING