

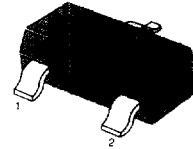
SWITCHING APPLICATION (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor ($R_1 = 2.2k\Omega$, $R_2 = 47k\Omega$)
- Complement to KSR2113

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

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

SOT-23



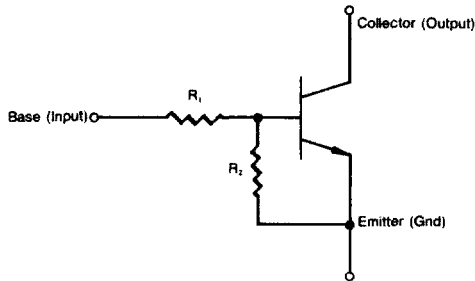
1. Base 2. Emitter 3. Collector

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = 10\mu A, I_E = 0$	50			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = 100\mu A, I_B = 0$	50			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 40V, I_E = 0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 5mA$	68			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 0.5mA$			0.3	V
Current Gain-Bandwidth Product	f_T	$V_{CE} = 5mA, I_C = 10V$		250		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0$ $f = 1.0MHz$		3.7		pF
Input Off Voltage	$V_i(off)$	$V_{CE} = 5V, I_C = 100\mu A$	0.5			V
Input On Voltage	$V_i(on)$	$V_{CE} = 0.2V, I_C = 5mA$			1.1	V
Input Resistor	R_1		15	22	2.9	$k\Omega$
Resistor Ratio	R_1/R_2		0.042	0047	0.052	

Equivalent Circuit



Marking

