

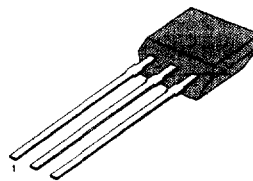
SWITCHING APPLICATION (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor ($R_1 = 4.7k\Omega$, $R_2 = 47k\Omega$)
- Complement to KSR2214

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	$^\circ C$

TO-92S



1. Emitter 2. Collector 3. Base

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_{CB0}	$V_{CB} = 40V$, $I_E = 0$			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	$V_{I(on)}$	$V_{CE} = 0.2V$, $I_C = 5mA$			1.3	V
Input Resistor	R_1		3.2	4.7	6.2	$k\Omega$
Resistor Ratio	R_1/R_2		0.09	0.1	0.11	

Equivalent Circuit

