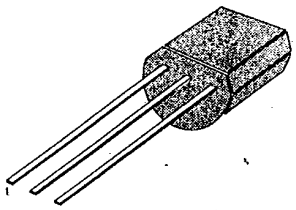
KSR1010 NPN EPITAXIAL SILICON TRANSISTOR

SWITCHING APPLICATION (Bias Resistor Built In)

- Switching Circuit, Inverter, Interface circuit Driver circuit
- Built in bias Resistor (R=10KΩ)
- Complement to KSR2010

TO-92



1. Emitter 2. Collector 3. Base

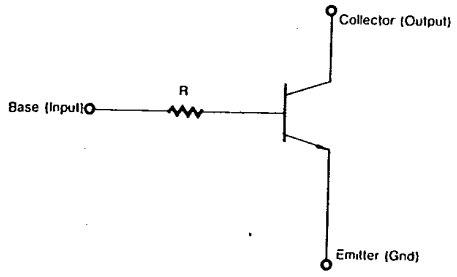
ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55 ~ 150	°C

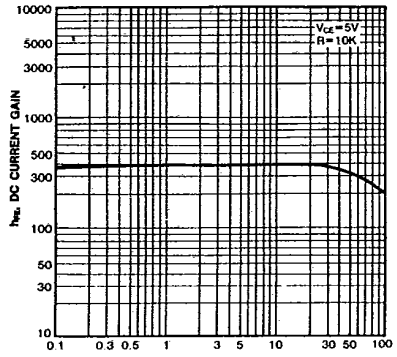
ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA, I_E=0	40			V
Emitter-Emitter Breakdown Voltage	BV_{CEO}	I_E=1mA, I_B=0	40			V
Collector Cutoff Current	I_{CBO}	V_{CB}=30V, I_E=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=1mA	100		600	
Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C=10mA, I_B=1mA			0.3	V
Output Capacitance	Cob	V_{CB}=10V, I_E=0 f=1MHz		3.7		pF
Current Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=5mA		250		MHz
Input Resistor	R		7	10	13	KΩ

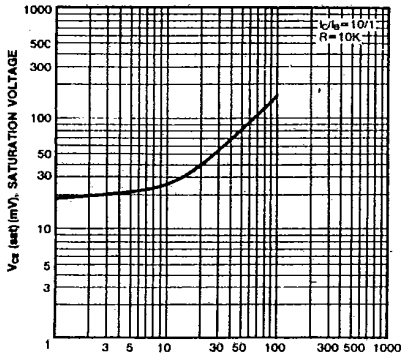
Equivalent Circuit



DC CURRENT GAIN



COLLECTOR-EMITTER SATURATION VOLTAGE



POWER DERATING