

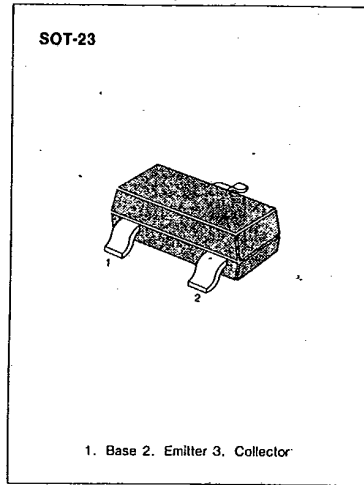
KSR1109 NPN EPITAXIAL SILICON TRANSISTOR

SWITCHING APPLICATION (Bias Resistor Built In)

- Switching Circuit, Inverter, Interface circuit Driver circuit
- Built in bias Resistor (R=4.7KΩ)
- Complement to KSR2109

ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	40	V
Collector-Emitter Voltage	V _{CE0}	40	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _c	100	mA
Collector Dissipation	P _c	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 ~ 150	°C

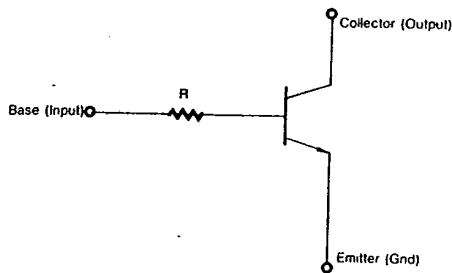


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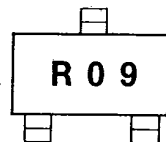
ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV _{CB0}	I _c = 100μA, I _E = 0	40			V
Collector-Emitter Breakdown Voltage	BV _{CE0}	I _c = 1mA, I _B = 0	40			V
Collector Cutoff Current	I _{CB0}	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	C _{ob}	V _{CB} = 10V, I _E = 0 f = 1MHz		3.70		pF
Current Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _c = 5mA		250		MHz
Input Resistor	R		3.2	4.7	6.2	KΩ

Equivalent Circuit



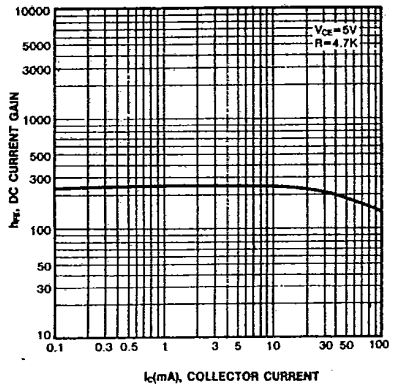
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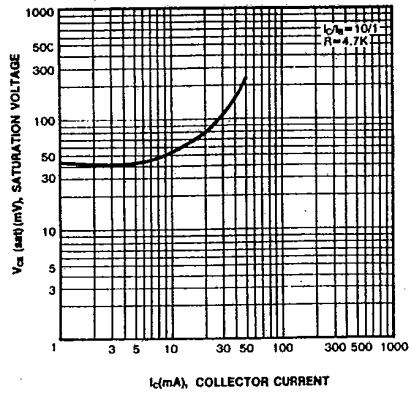
KSR1109

NPN EPITAXIAL SILICON TRANSISTOR

DC CURRENT GAIN



COLLECTOR-EMITTER SATURATION VOLTAGE



POWER DERATING

