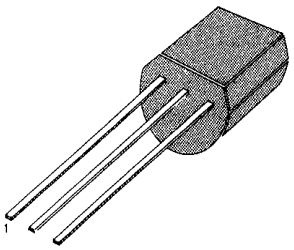
KSP5179 NPN EPITAXIAL SILICON TRANSISTOR

HIGH FREQUENCY TRANSISTOR

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_A=25℃)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter-Base Voltage	V_{EBO}	2.5	V
Collector Current	I_C	50	mA
Collector Dissipation (T_A=25℃)	P_C	200	mW
Derate above 25℃		1.14	mW/℃
Collector Dissipation (T_C=25℃)	P_C	300	mW
Derate above 25℃		1.71	mW/℃
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~150	℃

ELECTRICAL CHARACTERISTICS (T_A=25℃)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Emitter Sustaining Voltage	V_{CEO} (sus)	I_C=3mA, I_B=0	12		V
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=0.001mA, I_E=0	20		V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=0.01, I_C=0	2.5		V
Collector Cut-off Current	I_{CBO}	V_{CB}=15V, I_E=0		0.02	㎂
		V_{CB}=15V, I_E=0, Ta=150℃		1	㎂
DC Current Gain	h_{FE}	V_{CB}=1V, I_C=3mA	25	250	
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=10mA, I_B=1mA		0.4	V
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C=10mA, I_B=1mA		1	V
Current Gain Bandwidth Product	f_T	V_{CE}=6V, I_C=5mA	900	2000	MHz
Collector-Base Capacitance	C_{CB}	V_{CB}=10V, I_E=0, f=0.1 to MHz		1	pF
Small Signal Current Gain	h_{FE}	V_{CE}=6V, I_C=2mA, f=1KHz	25	300	
Collector Base Time Constant	Cc ·rbb ´	V_{CE}=6V, I_E=2mA, f=31.9MHz	3	14	ps
Noise Figure	NF	V_{CE}=6V, I_C=1.5mA, f=200MHz R_S=50Ω		4.5	dB
Common Emitter Amplifier Power Gain	G_{PE}	V_{CE}=6V, I_C=5mA, f=200MHz	15		dB

SAMSUNG ELECTRONICS