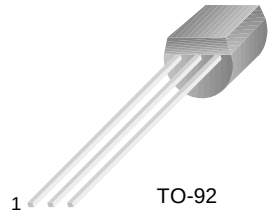
FAIRCHILD
SEMICONDUCTOR®

KSP5179

High Frequency Transistor



1 TO-92

1. Emitter 2. Base 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

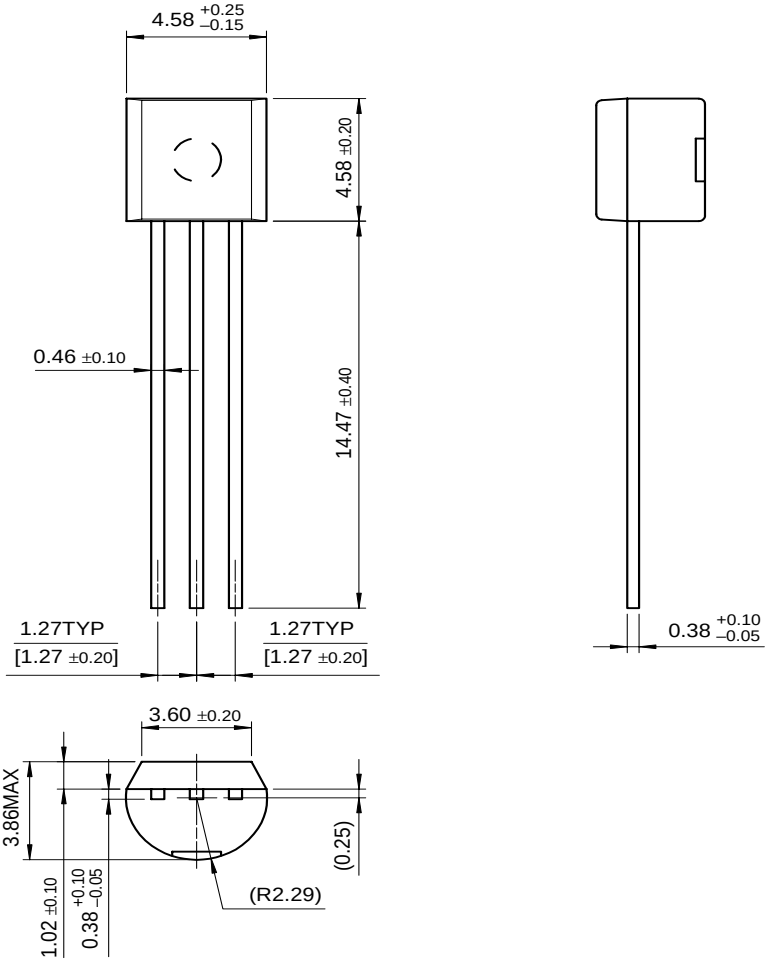
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	2.5	V
I_C	Collector Current	50	mA
P_C	Collector Power Dissipation (T_a=25°C)	200	mW
	Derate above 25°C	1.6	mW/°C
P_C	Collector Power Dissipation (T_C=25°C)	300	mW
	Derate above 25°C	2.4	mW/°C
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
V_{CEO} (sus)	Collector-Emitter Sustaining Voltage	I_C=3mA, I_B=0	12		V
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=10μA, I_E=0	20		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=10μA, I_C=0	2.5		V
I_{CBO}	Collector Cut-off Current	V_{CB}=15V, I_E=0 V_{CB}=15V, I_E=0, Ta=150°C		0.02 1	μA μA
h_{FE}	DC Current Gain	V_{CB}=1V, I_C=3mA	25	250	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=10mA, I_B=1mA		0.4	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C=10mA, I_B=1mA		1	V
f_T	Current Gain Bandwidth Product	V_{CE}=6V, I_C=5mA	900	2000	MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=0.1 to1 MHz		1	pF
h_{fe}	Small Signal Current Gain	V_{CE}=6V, I_C=2mA, f=1KHz	25	300	
$C_{c \cdot rbb'}$	Collector Base Time Constant	V_{CE}=6V, I_E=2mA, f=31.9MHz	3	14	ps
NF	Noise Figure	V_{CE}=6V, I_C=1.5mA, f=200MHz R_S=50Ω		4.5	dB

Package Dimensions

TO-92



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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