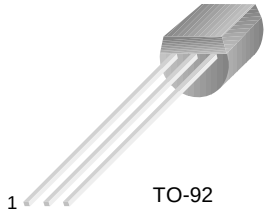
FAIRCHILD
SEMICONDUCTOR®

KSC2001

General Purpose Applications

- High h_{FE} and Low V_{CE} (sat)



TO-92

1. Emitter 2. Collector 3. Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	700	mA
I_B	Base Current	150	mA
P_C	Collector Power Dissipation	600	mW
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.	Typ.	Max.	Units
V_{BE} (on)	* Base Emitter On Voltage	V_{CE}=6V, I_C=10mA	600	640	700	mV
I_{CBO}	Collector Cut-off Current	V_{CB}=30V, I_E=0			100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}=5V, I_C=0			100	nA
h_{FE1} h_{FE2}	* DC Current Gain	V_{CE}=1V, I_C=100mA V_{CE}=1V, I_C=700mA	90 50	200 140	400	
V_{CE} (sat)	* Collector-Emitter Saturation Voltage	I_C=700mA, I_B=70mA		0.2	0.6	V
V_{BE} (sat)	* Base-Emitter Saturation Voltage	I_C=700mA, I_B=70mA		0.95	1.2	V
C_{ob}	Output Capacitance	V_{CB}=6V, I_E=0, f=1MHz		13	25	pF
f_T	Current Gain Bandwidth Product	V_{CE}=6V, I_C=10mA	50	170		MHz

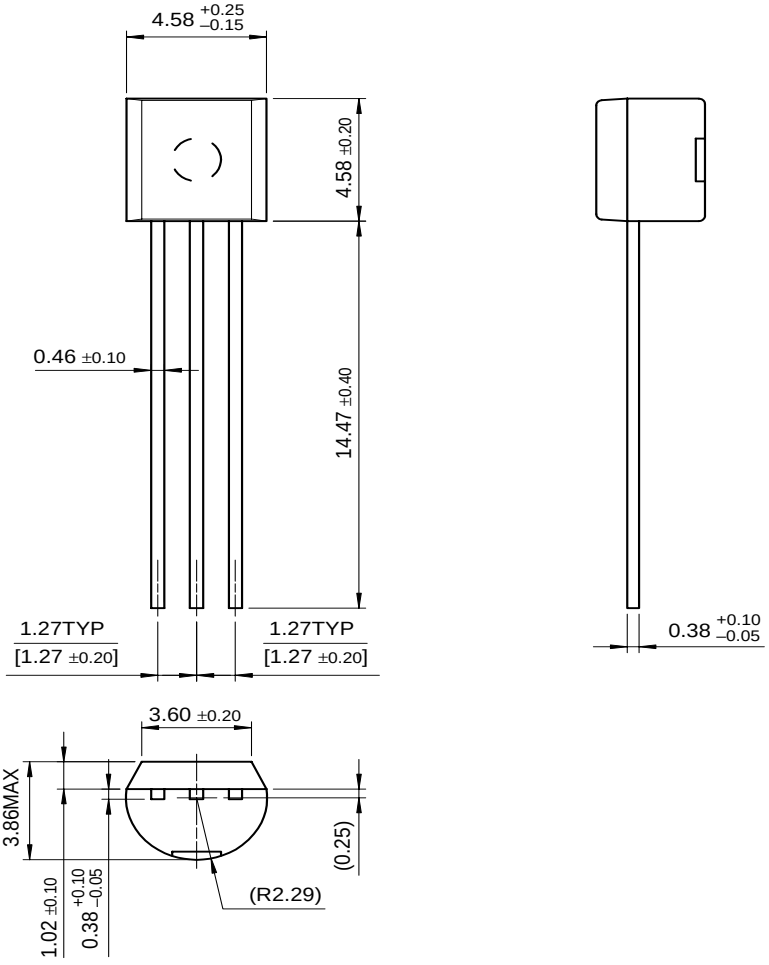
* Pulse test: PW≤350μs, Duty cycle≤2%

h_{FE} Classification

Classification	O	Y	G
h_{FE1}	90 ~ 180	135 ~ 270	200 ~ 400

Package Dimensions

TO-92



Dimensions in Millimeters

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CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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