FAIRCHILD

SEMICONDUCTOR®

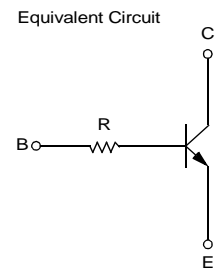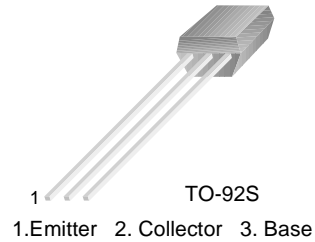# KSR1212

Switching Application (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor (R=47KΩ)
- Complement to KSR2212

TO-92S

1.Emitter 2. Collector 3. Base

Equivalent Circuit

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	100	mA
P_C	Collector Power Dissipation	300	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
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=100μA, I_E=0	40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_E=1mA, I_B=0	40			V
I_{CBO}	Collector Cut-off Current	V_{CB}=30V, I_E=0			0.1	μA
h_{FE}	DC Current Gain	V_{CE}=5V, I_C=1mA	100		600	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=10mA, I_B=1mA			0.3	V
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0 f=1MHz		3.7		pF
f_T	Current Gain Bandwidth Product	V_{CE}=10V, I_C=5mA		250		MHz
R	Input Resistor		32	47	62	KΩ

Package Demensions

TO-92S

4.00 ±0.20

3.70 ±0.20

(1.10)

0.66 MAX.

14.47 ±0.30

0.49 ±0.10

1.27TYP
[1.27±0.20]

1.27TYP
[1.27±0.20]

2.31 ±0.20

0.35 +0.10 −0.05

3.72 ±0.20

0.77 ±0.10

2.86 ±0.20
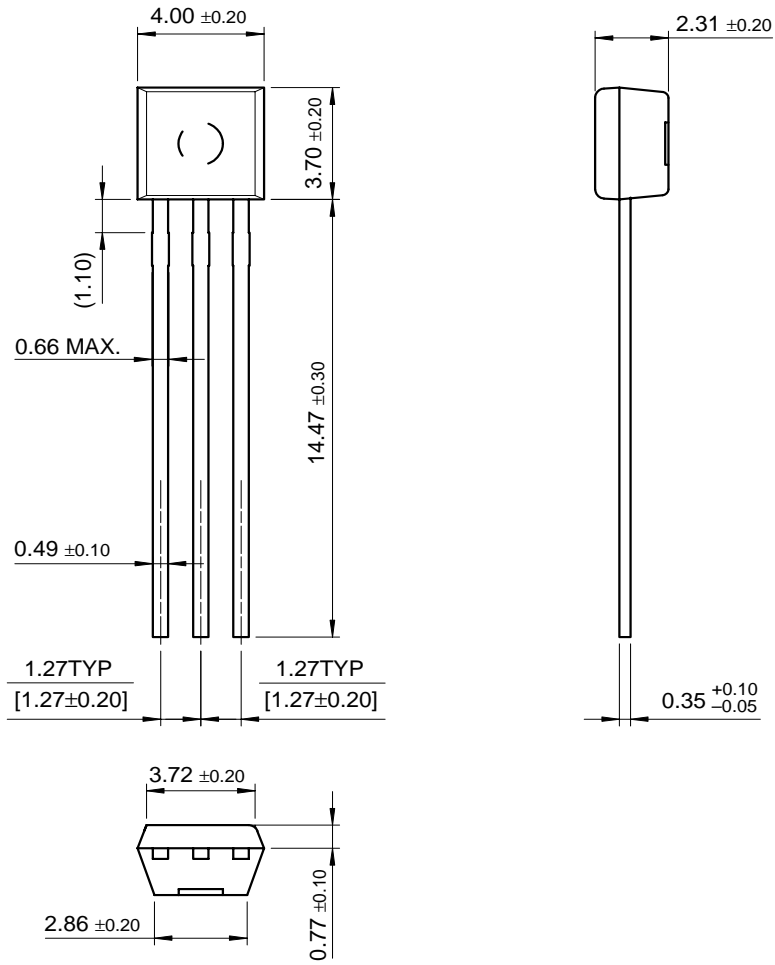
Dimensions in Millimeters

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FAST®	OPTOPLANAR™	STAR*POWER™
Bottomless™	FASTr™	PACMAN™	Stealth™
CoolFET™	FRFET™	POP™	SuperSOT™-3
CROSSVOLT™	GlobalOptoisolator™	Power247™	SuperSOT™-6
DenseTrench™	GTO™	PowerTrench®	SuperSOT™-8
DOME™	HiSeC™	QFET™	SyncFET™
EcoSPARK™	ISOPLANAR™	QS™	TruTranslation™
E²CMOS™	LittleFET™	QT Optoelectronics™	TinyLogic™
EnSigna™	MicroFET™	Quiet Series™	UHC™
FACT™	MICROWIRE™	SLIENT SWITCHER®	UltraFET®
FACT Quiet Series™	OPTOLOGIC™	SMART START™	VCX™

STAR*POWER is used under license

DISCLAIMER
FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.
As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

find products

[Products groups](#)

[Analog and Mixed Signal](#)
[Discrete](#)
[Interface](#)
[Logic](#)
[Microcontrollers](#)
[Non-Volatile Memory](#)
[Optoelectronics](#)
[Markets and applications](#)
[New products](#)
[Product selection and parametric search](#)
[Cross-reference search](#)

technical information

buy products

technical support

my Fairchild

company

KSR1212
NPN Epitaxial Silicon Transistor

Contents
[Features](#) | [Product status/pricing/packaging](#)

Features

Switching Application (Bias Resister Built In)

- Switchng circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor (R=47KΩ)
- Complement to KSR2212

[back to top](#)

Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
KSR1212BU	Full Production	$0.053	[TO-92S](#)	3	BULK
KSR1212TA	Full Production	$0.053	[TO-92S](#)	3	TAPE REEL

* 1,000 piece Budgetary Pricing

[back to top](#)

Datasheet
[Download this datasheet](#)

[PDF]

[e-mail this datasheet](#)

[E-

This page [Print version](#)

Related Links

[Request samples](#)
Dotted line
[How to order products](#)
Dotted line
[Product Change Notices (PCNs)](#)
Dotted line
[Support](#)
Dotted line
[Distributor and field sales representatives](#)
Dotted line
[Quality and reliability](#)
Dotted line
[Design tools](#)