

Is Now Part of



ON Semiconductor®

To learn more about ON Semiconductor, please visit our website at www.onsemi.com

Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild <a href="general-regarding-numbers-n

ON Semiconductor and the ON Semiconductor logo are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of ON Semiconductor's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using ON Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by ON Semiconductor. "Typical" parameters which may be provided in ON Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ON Semiconductor does not convey any license under its patent rights nor the rights of others. ON Semiconductor products are not designed, intended, or authorized for use as a critical component in life support systems or any EDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use ON Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold ON Semiconductor and its officer



March 2013

KSD471A NPN Epitaxial Silicon Transistor

Features

- Audio Frequency Power Amplifier
- Complement to KSB564A
- Collector Current: I_C = 1 A
- Collector Power Dissipation: P_C = 800 mW
- Suffix "-C" means Center Collector
 (1. Emitter 2. Collector 3. Base)



Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^{\circ}\text{C}$ unless otherwise noted.

Symbol	Parameter	Ratings	Unit	
V _{CBO}	Collector-Base Voltage	40	V	
V _{CEO}	Collector-Emitter Voltage	30	V	
V _{EBO}	Emitter-Base Voltage 5			
I _C	Collector Current	1	Α	
P_{C}	Collector Power Dissipation	800	mW	
T_J	Junction Temperature	150	°C	
T _{STG}	Storage Temperature	-55 to +150	°C	

1

Electrical Characteristics

Values are at $T_A = 25$ °C unless otherwise noted.

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Unit
BV _{CBO}	Collector-Base Breakdown Voltage	In Voltage $I_C = 100 \mu A, I_E = 0$				V
BV _{CEO}	Collector-Emitter Breakdown Voltage	ector-Emitter Breakdown Voltage $I_C = 10 \text{ mA}, I_B = 0$				V
BV _{EBO}	Emitter-Base Breakdown Voltage	$I_E = 100 \mu A, I_C = 0$	5			V
I _{CBO}	Collector Cut-off Current	$V_{CB} = 30 \text{ V}, I_{E} = 0$			0.1	μΑ
h _{FE}	DC Current Gain	$V_{CE} = 1 \text{ V, } I_{C} = 100 \text{ mA}$	120		400	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C = 1 A, I _B = 0.1 A			0.5	V
V _{BE} (sat)	Base-Emitter Saturation Voltage	I _C = 1 A, I _B = 0.1 A			1.2	V
f _T	Current Gain BandWidth Product	$V_{CE} = 6 \text{ V}, I_{C} = 10 \text{ mA}$		130		MHz
C _{ob}	Output Capacitance	V _{CB} = 6 V, I _E = 0, f = 1 MHz		16		pF

h_{FE} Classification

Classification	Y	G
h _{FE}	120 ~ 240	200 ~ 400

Typical Performance Characteristics

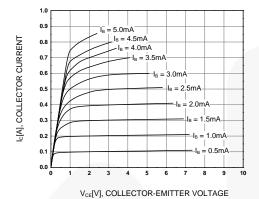


Figure 1. Static Characteristic

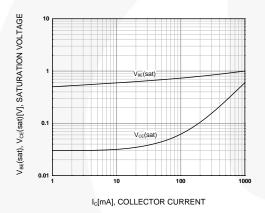


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

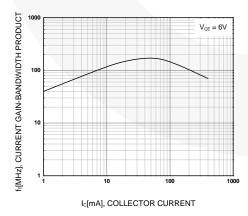


Figure 5. Current Gain Bandwidth Product

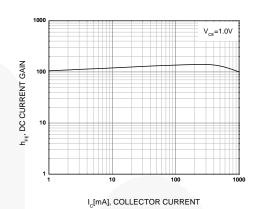


Figure 2. DC current Gain

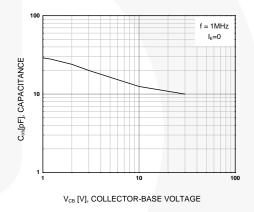
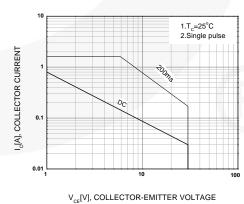


Figure 4. Collector Output Capacitance



Physical Dimensions

TO-92

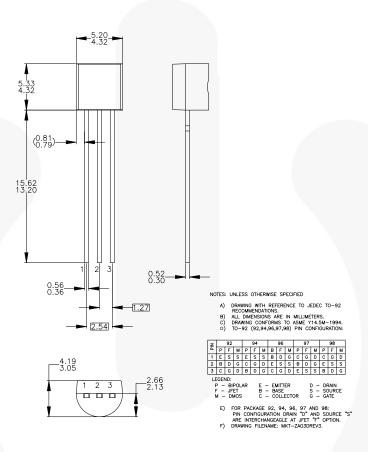


Figure 7. 3LEAD, TO92, JEDEC TO-92 COMPLIANT STRAIGHT LEAD CONFIGURATION (OLD TO92AM3)

Package drawings are provided as a service to customers considering Fairchild components. Drawings may change in any manner without notice. Please note the revision and/or date on the drawing and contact a Fairchild Semiconductor representative to verify or obtain the most recent revision. Package specifications do not expand the terms of Fairchild's worldwide terms and conditions, specifically the warranty therein, which covers Fairchild products.

Always visit Fairchild Semiconductor's online packaging area for the most recent package drawings: http://www.fairchildsemi.com/packaging/.





TRADEMARKS

The following includes registered and unregistered trademarks and service marks, owned by Fairchild Semiconductor and/or its global subsidiaries, and is not intended to be an exhaustive list of all such trademarks.

FPS™ AccuPower™ F-PFS™ AX-CAP®, **FRFET®** BitSiC™ Global Power ResourceSM GreenBridge™ Build it Now™

CorePLUS™ Green FPS™ CorePOWER™ Green FPS™ e-Series™

Gmax™ CROSSVOLT™ CTL^TM GTO™ Current Transfer Logic™ IntelliMAX™ ISOPLANAR™ **DEUXPEED®**

Making Small Speakers Sound Louder Dual Cool™

EcoSPARK® and Better™ EfficientMax™ MegaBuck™ $\mathsf{ESBC}^{\mathsf{TM}}$ MICROCOUPLER™ ® MicroFET™ MicroPak™

Fairchild® MicroPak2™ Fairchild Semiconductor® MillerDrive™ FACT Quiet Series™ MotionMax™ FACT' mWSaver™ FAST® OptoHiT™ FastvCore™ OPTOLOGIC® FETBench™

PowerTrench® PowerXS™ Programmable Active Droop™ OFET'

QS™ Quiet Series™ RapidConfigure™

Saving our world, 1mW/W/kW at a time™

SignalWise™ SmartMax™ SMART START™

Solutions for Your Success™

SPM® STEAL TH™ SuperFET SuperSOT™-3 SuperSOT™-6 SuperSOT™-8 SupreMOS® SyncFET™

SYSTEM GENERAL®*

TinyBoost™ TinyBuck™ TinyCalc™ TinyLogic[®] TINYOPTO™ TinyPower™ TinyPWM™ TinyWire™ TranSiC™ TriFault Detect™ TRUECURRENT®* uSerDes™

UHC Ultra FRFET™ UniFFT™ **VCX™** VisualMax™ VoltagePlus™

OPTOPLANAR®

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. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THE WARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

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.

- 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, and (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 a significant injury of the user.
- 2. A critical component in 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.

ANTI-COUNTERFEITING POLICY

Fairchild Semiconductor Corporation's Anti-Counterfeiting Policy. Fairchild's Anti-Counterfeiting Policy is also stated on our external website, www.fairchildsemi.com,

Counterfeiting of semiconductor parts is a growing problem in the industry. All manufacturers of semiconductor products are experiencing counterfeiting of their parts. Customers who inadvertently purchase counterfeit parts experience many problems such as loss of brand reputation, substandard performance, failed applications, and increased cost of production and manufacturing delays. Fairchild is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. Fairchild strongly encourages customers to purchase Fairchild parts either directly from Fairchild or from Authorized Fairchild Distributors who are listed by country on our web page cited above. Products customers buy either from Fairchild directly or from Authorized Fairchild Distributors are genuine parts, have full traceability, meet Fairchild's quality standards for handling and storage and provide access to Fairchild's full range of up-to-date technical and product information. Fairchild and our Authorized Distributors will stand behind all warranties and will appropriately address any warranty issues that may arise. Fairchild will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. Fairchild is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors

PRODUCT STATUS DEFINITIONS

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

Rev. 164

^{*} Trademarks of System General Corporation, used under license by Fairchild Semiconductor.

ON Semiconductor and in are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of ON Semiconductor's product/patent coverage may be accessed at www.onsemi.com/site/pdt/Patent-Marking.pdf. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using ON Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by ON Semiconductor. "Typical" parameters which may be provided in ON Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ON Semiconductor does not convey any license under its patent rights nor the rights of others. ON Semiconductor products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use ON Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold ON Semiconductor and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and exp

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor 19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada Email: orderlit@onsemi.com N. American Technical Support: 800–282–9855 Toll Free USA/Canada
Europe, Middle East and Africa Technical Support: Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81–3–5817–1050

ON Semiconductor Website: www.onsemi.com

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ON Semiconductor:

KSD471AYBU KSD471ACYBU KSD471AYTA KSD471ACGBU KSD471AGTA KSD471ACGTA KSD471ACYTA KSD471AGBU KSD471ACYTA_Q KSD471AGTA_Q KSD471ACGTA_Q

ПОСТАВКА ЭЛЕКТРОННЫХ КОМПОНЕНТОВ

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001 Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г. Москва, ул. Щербаковская д. 3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru moschip.ru_6 moschip.ru 4 moschip.ru 9