

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



May 2016

KSC1815 **NPN Epitaxial Silicon Transistor**

Features

- · Audio Frequency Amplifier and High-Frequency OSC
- Complement to KSA1015
- Collector-Base Voltage: V_{CBO} = 50 V



Ordering Information

Part Number	Part Number Top Mark		Packing Method	
KSC1815YTA	YC&3	TO-92 3L	Ammo	

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 $T_A = 25$ °C unless otherwise noted.

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	50	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	150	mA
I _B	Base Current	50	mA
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature Range	-55 to 150	°C

1

Thermal Characteristics(1)

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

Symbol	Parameter	Max.	Unit
D	Total Device Dissipation	400	mW
P _D	Derate Above 25°C	3.2	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	312	°C/W

Note:

1. PCB size: FR-4, 76 mm x 114 mm x 1.57 mm (3.0 inch x 4.5 inch x 0.062 inch) with minimum land pattern size.

Electrical Characteristics

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

Symbol	Parameter	Conditions	Min.	Тур.	Max.	Unit
BV _{CBO}	Collector-Base Voltage	$I_C = 1 \text{ mA}, I_E = 0$	60			V
BV _{CEO}	Collector-Emitter Voltage	$I_C = 10 \text{ mA}, I_B = 0$	50			V
BV_EBO	Emitter-Base Voltage	$I_E = 10 \mu A, I_C = 0$	5			V
I_{CBO}	Collector Cut-Off Current	$V_{CB} = 60 \text{ V}, I_{E} = 0$			0.1	μΑ
I _{EBO}	Emitter Cut-Off Current	$V_{EB} = 5 \text{ V}, I_{C} = 0$			0.1	μΑ
V _{CE(sat)}	Collector-Emitter Saturation Voltage	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$		0.10	0.25	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$			1.0	V
h _{FE1}	DC Current Gain	$V_{CE} = 6 \text{ V}, I_{C} = 2 \text{ mA}$	70		700	
h _{FE2}	DC Current Gain	$V_{CE} = 6 \text{ V}, I_{C} = 150 \text{ mA}$	25			
f _T	Current Gain Bandwidth Product	$V_{CE} = 10 \text{ V}, I_{C} = 1 \text{ mA}$	80			MHz
C _{ob}	Output Capacitance	$V_{CB} = 10 \text{ V}, I_{E} = 0,$ f = 1 MHz		2.0	3.0	pF
N _F	Noise Figure	$V_{CE} = 6 \text{ V, } I_{C} = 0.1 \text{ mA,}$ $R_{S} = 10 \text{ k}\Omega, \text{ f} = 1 \text{ Hz}$		1.0	10.0	dB

hFE Classification

Classification	0	Y	GR	L
h _{FE1}	70 ~ 140	120 ~ 240	200 ~ 400	350 ~ 700

Typical Performance Characteristics

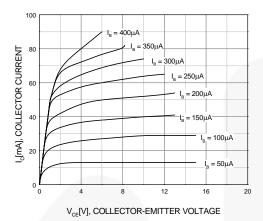


Figure 1. Static Characteristic

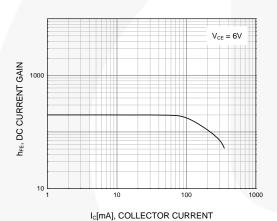


Figure 3. DC Current Gain

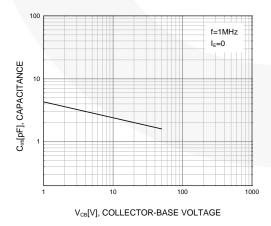


Figure 5. Output Capacitance

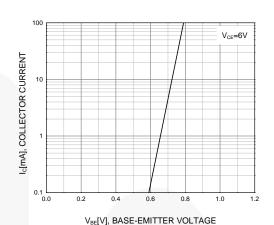


Figure 2. Transfer Characteristic

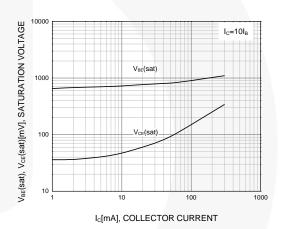


Figure 4. Base-Emitter Saturation Voltage and Collector-Emitter Saturation Voltage

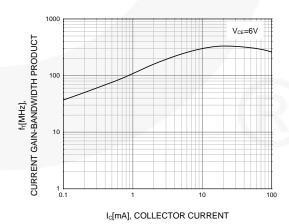
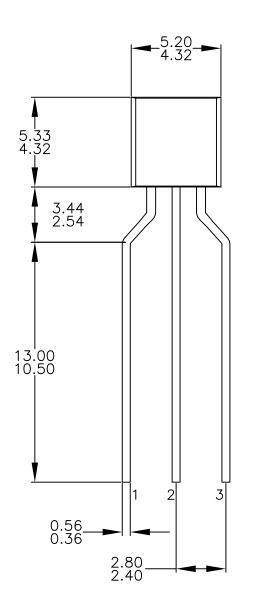
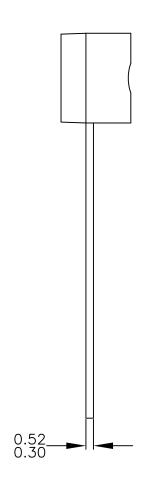
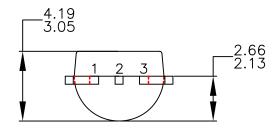


Figure 6. Current Gain Bandwidth Product







NOTES: UNLESS OTHERWISE SPECIFIED

- DRAWING CONFORMS TO JEDEC MS-013, VARIATION AC.
 ALL DIMENSIONS ARE IN MILLIMETERS.
 DRAWING CONFORMS TO ASME Y14.5M-2009.
 DRAWING FILENAME: MKT-ZAO3FREV3.
 FAIRCHILD SEMICONDUCTOR.
- B. C. D. E.

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:

KSC1815GRTA KSC1815YBU KSC1815GRBU KSC1815YTA KSC1815GRTA_Q

ПОСТАВКА ЭЛЕКТРОННЫХ КОМПОНЕНТОВ

многоканальный

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