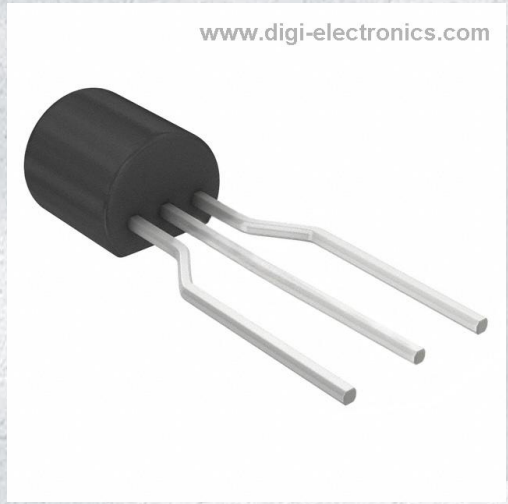
KSC815YTA Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	KSC815YTA-DG
Manufacturer	onsemi
Manufacturer Product Number	KSC815YTA
Description	TRANS NPN 45V 0.2A TO92-3
Detailed Description	Bipolar (BJT) Transistor NPN 45 V 200 mA 200MHz 400 mW Through Hole TO-92-3

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
KSC815YTA	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	200 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
45 V	400mV @ 15mA, 150mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA (ICBO)	120 @ 50mA, 1V
Power - Max:	Frequency - Transition:
400 mW	200MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-226-3, TO-92-3 (TO-226AA) Formed Leads	TO-92-3
Base Product Number:	
KSC815	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

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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_questions@onsemi.com.

September 2015

KSC815
NPN Epitaxial Silicon Transistor

Features

- Low Frequency Amplifier and High Frequency Oscillator
- Collector-Base Voltage: V_{CBO} = 60 V
- Complement to KSA539
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)
- Non Suffix “-C” means Side Collector (1. Emitter 2. Base 3. Collector)

TO-92
1. Emitter
2. Base
3. Collector

Straight Lead Bulk Packing

Bent Lead Tape & Reel Ammo Packing

Ordering Information

Part Number	Top Mark	Package	Packing Method
KSC815YTA	C815	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	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	200	mA
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 to 150	°C

Thermal Characteristics(1)

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

Symbol	Parameter	Value	Unit
P_C	Collector Power Dissipation	400	mW
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	310	°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.	Typ.	Max.	Unit
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 100 µA, I_E = 0	65			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10 mA, I_B = 0	45			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 10 µA, I_C = 0	5			V
I_{CBO}	Collector Cut-Off Current	V_{CB} = 45 V, I_E = 0			0.1	µA
I_{EBO}	Emitter Cut-Off Current	V_{EB} = 3 V, I_C = 0			0.1	µA
h_{FE}	DC Current Gain	V_{CE} = 1 V, I_C = 50 mA	40		400	
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = 10 V, I_C = 10 mA	0.60	0.65	0.90	V
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 150 mA, I_B = 15 mA		0.15	0.40	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 150 mA, I_B = 15 mA		0.83	1.10	V
f_T	Current Gain Bandwidth Product	V_{CE} = 10 V, I_C = 10 mA	100	200		MHz
C_{ob}	Output Capacitance	V_{CB} = 10 V, I_E = 0, f = 1 MHz		4		pF

h_{FE} Classification

Classification	R	O	Y	G
h_{FE}	40 ~ 80	70 ~ 140	120 ~ 240	200 ~ 400

Typical Performance Characteristics

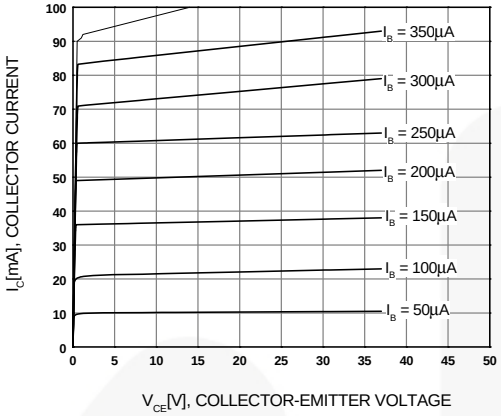

Figure 1. Static Characteristic

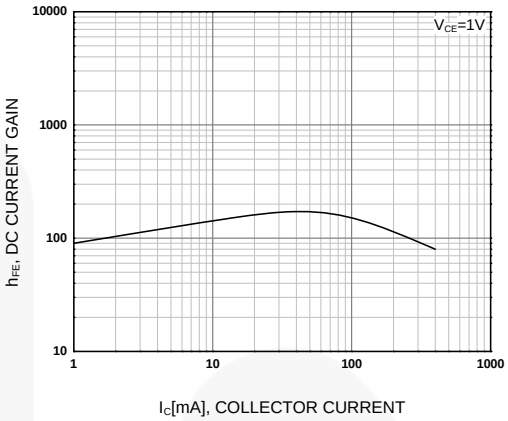

Figure 2. DC Current Gain

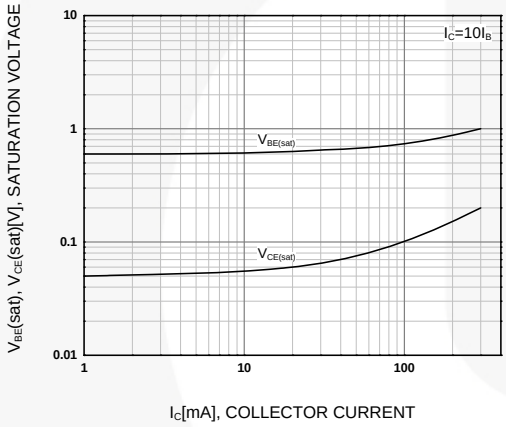

Figure 3. Base-Emitter Saturation Voltage and Collector-Emitter Saturation Voltage

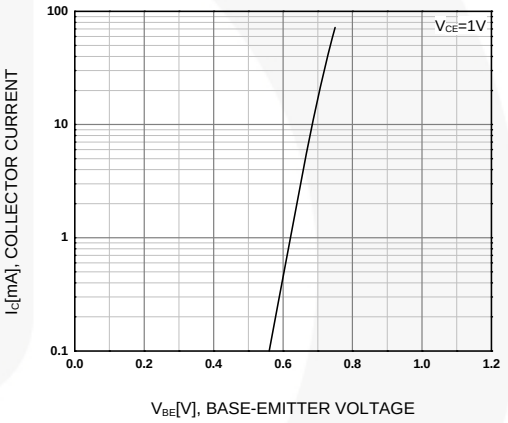

Figure 4. Base-Emitter On Voltage

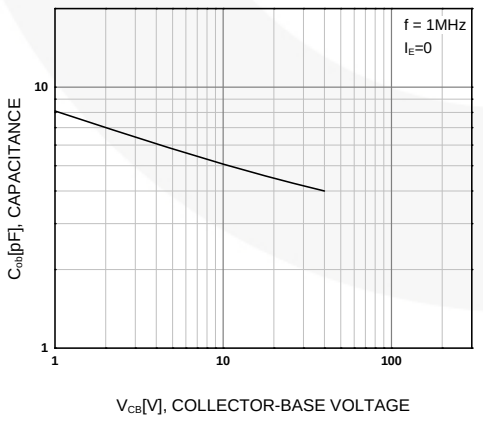

Figure 5. Collector Output Capacitance

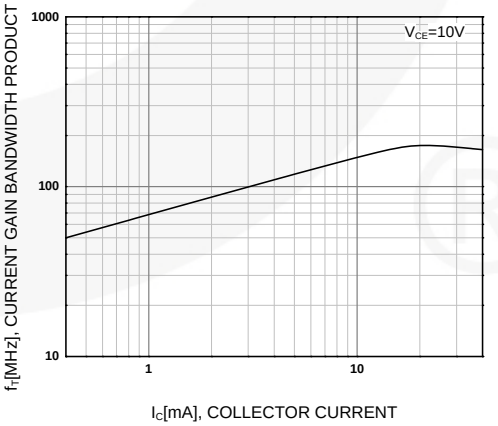

Figure 6. Current Gain Bandwidth Product

Physical Dimensions

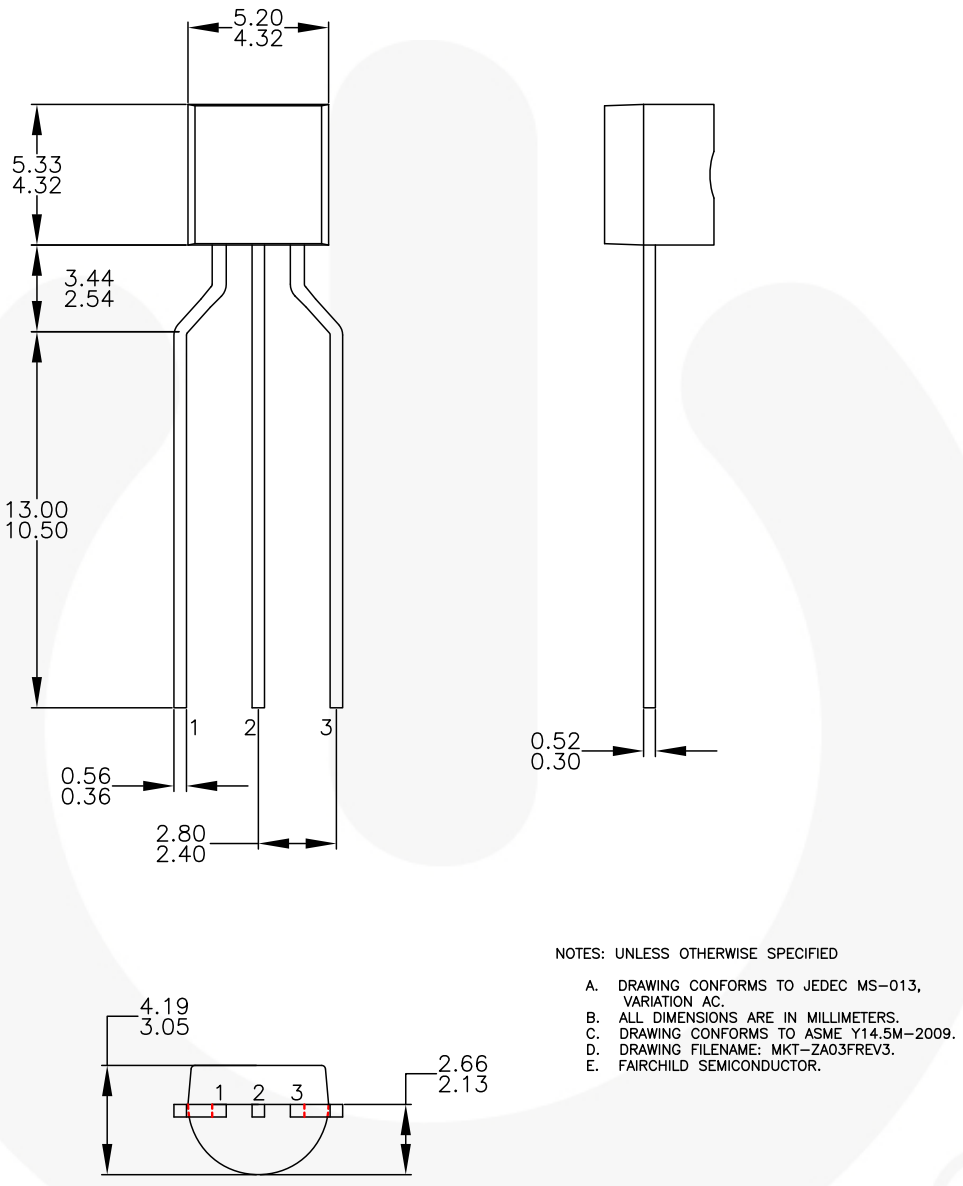

Figure 7. 3-Lead, TO-92, Molded, 0.2 In Line Spacing Lead Form, Ammo Type

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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.

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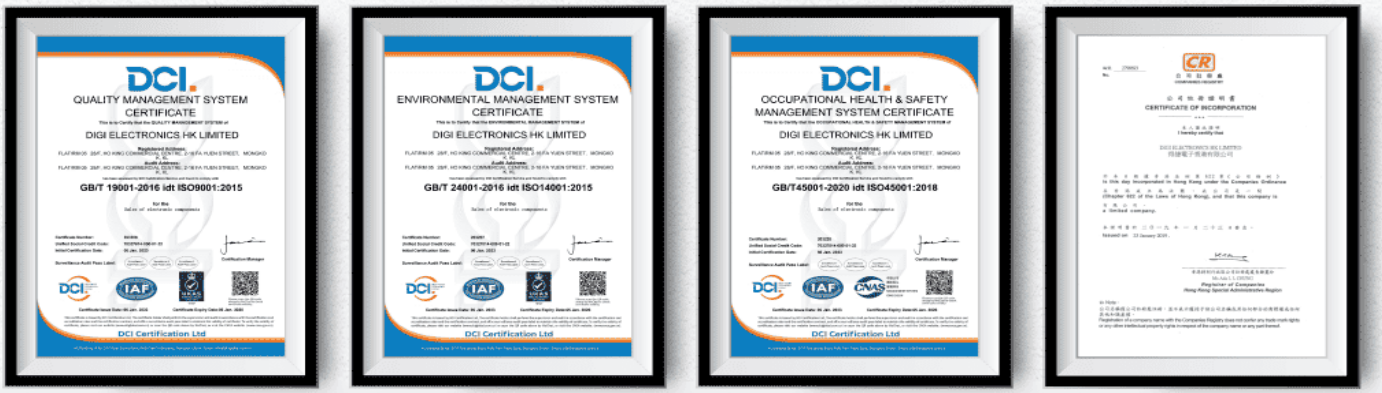

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