KSA992FATA Datasheet

DiGi Electronics Part Number	KSA992FATA-DG
Manufacturer	onsemi
Manufacturer Product Number	KSA992FATA
Description	TRANS PNP 120V 0.05A TO92-3
Detailed Description	Bipolar (BJT) Transistor PNP 120 V 50 mA 100MHz 500 mW Through Hole TO-92-3

https://www.DiGi-Electronics.com

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
KSA992FATA	onsemi
Series:	Product Status:
-	Active
Transistor Type:	Current - Collector (Ic) (Max):
PNP	50 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
120 V	300mV @ 1mA, 10mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
1µA	200 @ 1mA, 6V
Power - Max:	Frequency - Transition:
500 mW	100MHz
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:	
KSA992	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	Not Applicable
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

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DATA SHEET
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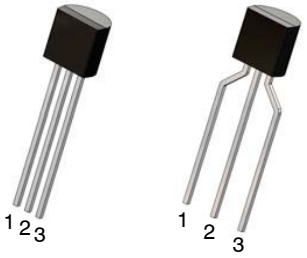
PNP Epitaxial Silicon Transistor

KSA992



1. Emitter
2. Collector
3. Base

TO−92 3 4.825x4.76 CASE 135AN **TO−92 3 4.83x4.76 LEADFORMED CASE 135AR**

Features

- Audio Frequency Low−Noise Amplifier
- Complement to KSC1845
- These are Pb−Free Devices

MAXIMUM RATINGS (Values are at T_A = 25°C unless otherwise noted.)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector−Base Voltage	−120	V
V_{CEO}	Collector−Emitter Voltage	−120	V
V_{EBO}	Emitter−Base Voltage	−5	V
I_C	Collector Current	−50	mA
I_B	Base Current	−10	mA
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	−55 to 150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

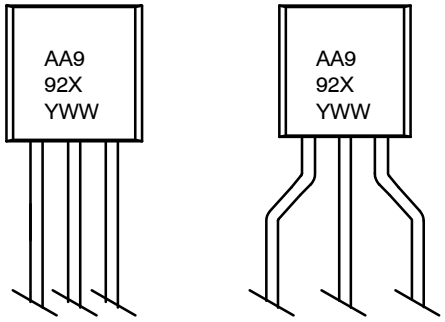
THERMAL CHARACTERISTICS

(Values are at T_A = 25°C unless otherwise noted.) (Note 1)

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	500	mW
	Derate Above 25°C	4	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction−to−Ambient	250	°C/W

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.

MARKING DIAGRAMS



A = Assembly Code
A992 = Device Code
X = F / FA / FB
YWW = Date Code

ORDERING INFORMATION

Device	Package	Shipping
KSA992FBU	TO−92 3 (Pb−Free)	10000 Units / Bulk Bag
KSA992FTA	TO−92 3 LF (Pb−Free)	2000 / Fan−Fold
KSA992FATA	TO−92 3 LF (Pb−Free)	2000 / Fan−Fold
KSA992FBTA	TO−92 3 LF (Pb−Free)	2000 / Fan−Fold

KSA992

ELECTRICAL CHARACTERISTICS (Values are at T_A = 25°C unless otherwise noted.)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
I_{CBO}	Collector Cut−Off Current	V_{CB} = −120 V, I_E = 0	–	–	−50	nA
I_{CEO}	Collector Cut−Off Current	V_{CE} = −100 V, I_B = 0	–	–	−1	μA
I_{EBO}	Emitter Cut−Off Current	V_{EB} = −5 V, I_C = 0	–	–	−50	nA
h_{FE1}	DC Current Gain	V_{CE} = −6 V, I_C = −0.1 mA	150	500	–	
h_{FE2}		V_{CE} = −6 V, I_C = −1 mA	300	450	600	
V_{BE}(on)	Base−Emitter On Voltage	V_{CE} = −6 V, I_C = −1 mA	−0.55	−0.61	−0.65	V
V_{CE}(sat)	Collector−Emitter Saturation Voltage	I_C = −10 mA, I_B = −1 mA	–	−0.09	−0.30	V
f_T	Current Gain Bandwidth Product	V_{CE} = −6 V, I_C = −1 mA	50	100	–	MHz
C_{ob}	Output Capacitance	V_{CB} = −30 V, I_E = 0, f = 1 MHz	–	2	3	pF
NF	Noise Figure	V_{CE} = −5 V, I_C = −1.0 mA, R_S = 100 kΩ, f = 1 kHz	–	7	–	dB

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

h_{FE} CLASSIFICATION

Classification	F	FA	FB
h_{FE2}	300~600	300~470	430~600

TYPICAL PERFORMANCE CHARACTERISTICS

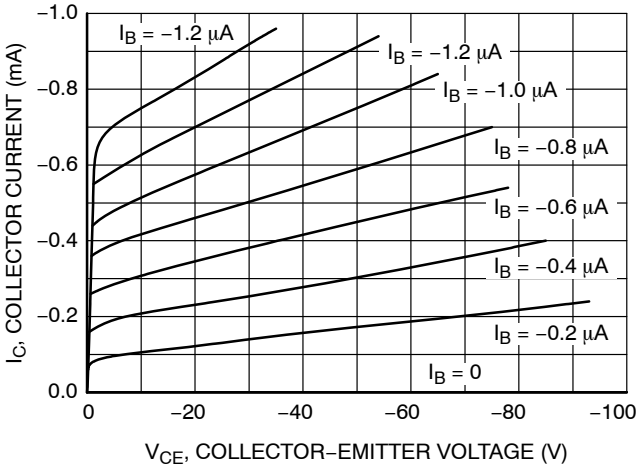


Figure 1. Static Characteristic

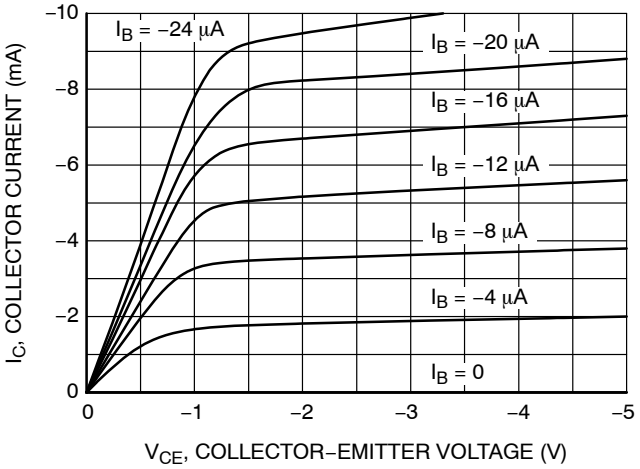


Figure 2. Static Characteristic

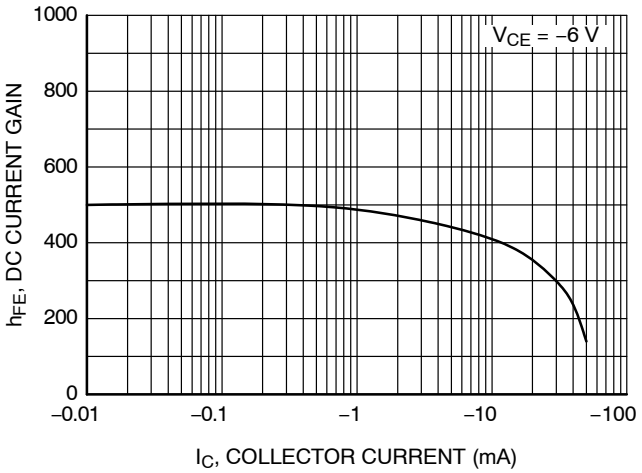


Figure 3. DC Current Gain

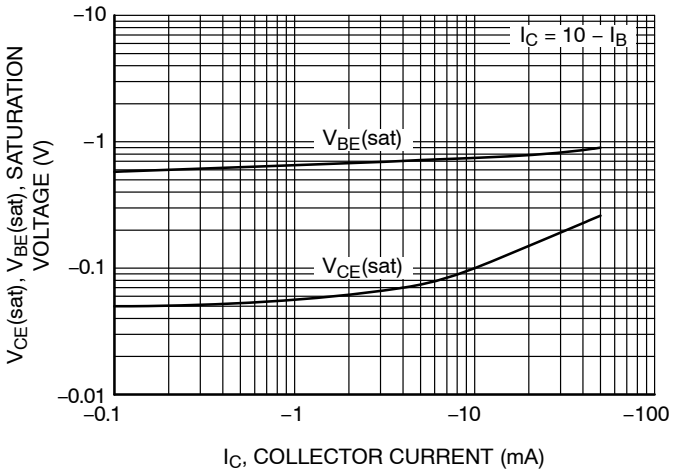


Figure 4. Base−Emitter Saturation Voltage and Collector−Emitter Saturation Voltage

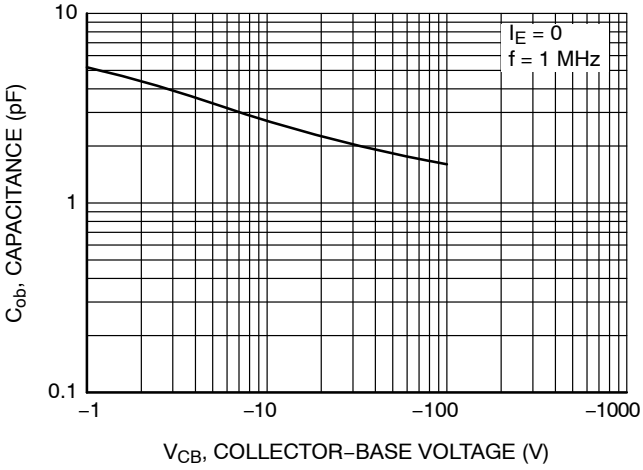


Figure 5. Collector Output Capacitance

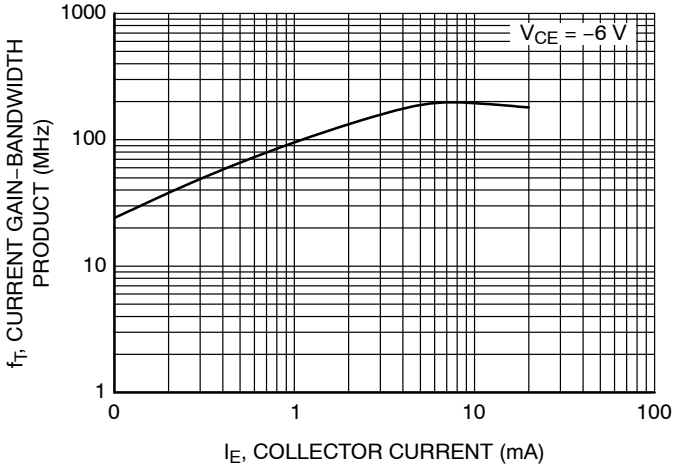


Figure 6. Current Gain Bandwidth Product

TYPICAL PERFORMANCE CHARACTERISTICS (Continued)

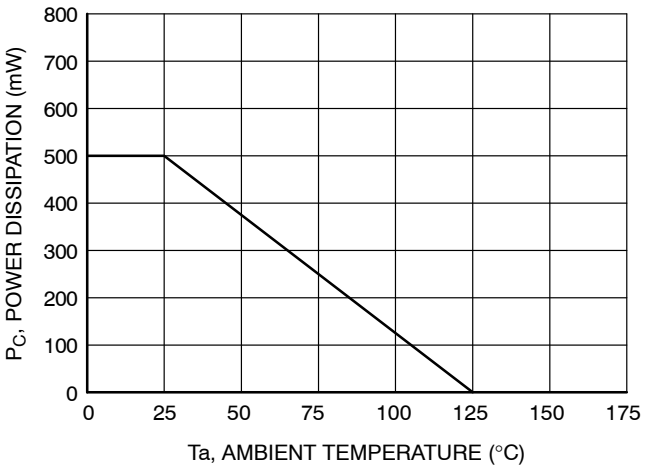


Figure 7. Power Derating

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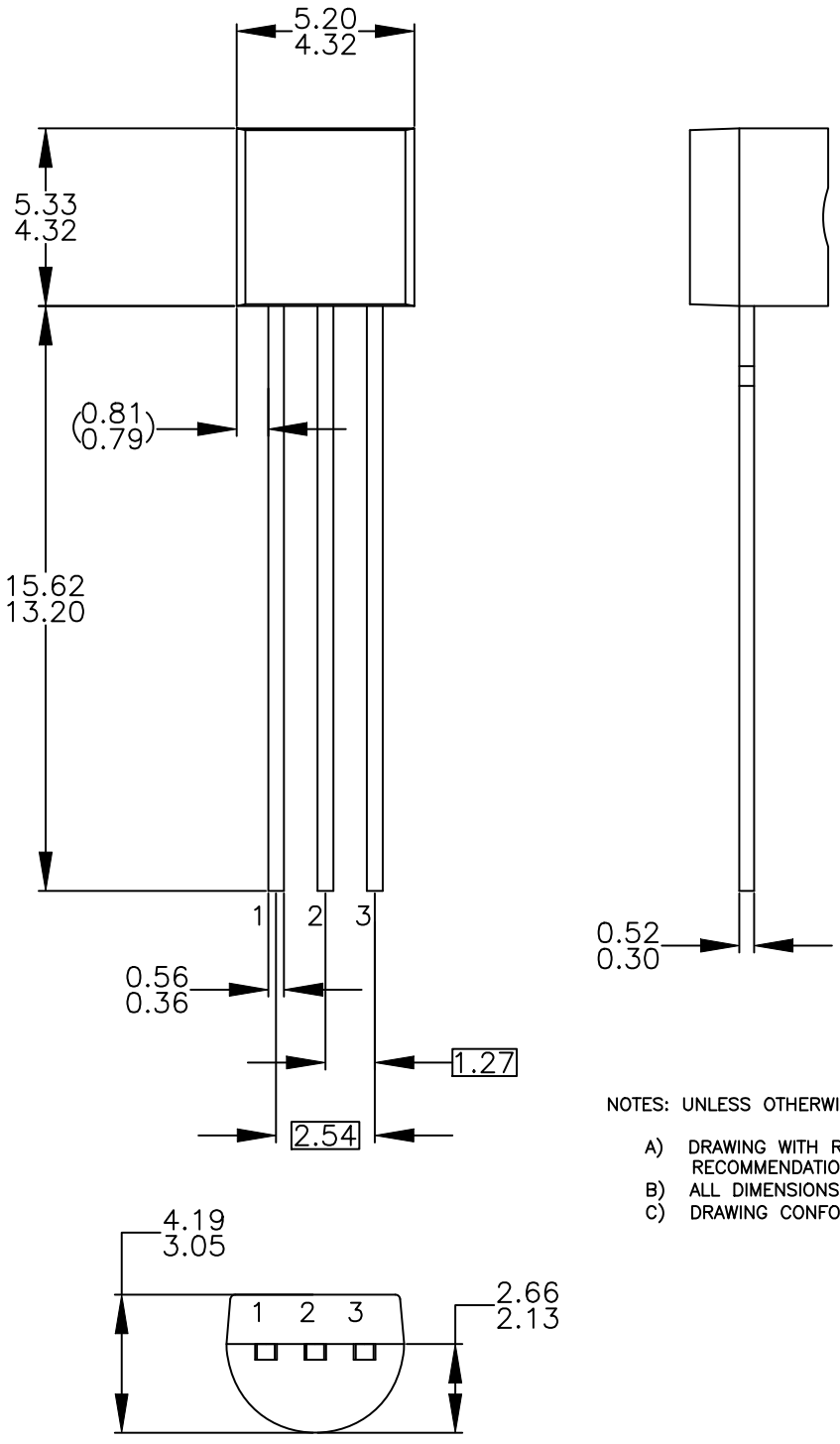
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

TO−92 3 4.825x4.76
CASE 135AN
ISSUE O

DATE 31 JUL 2016



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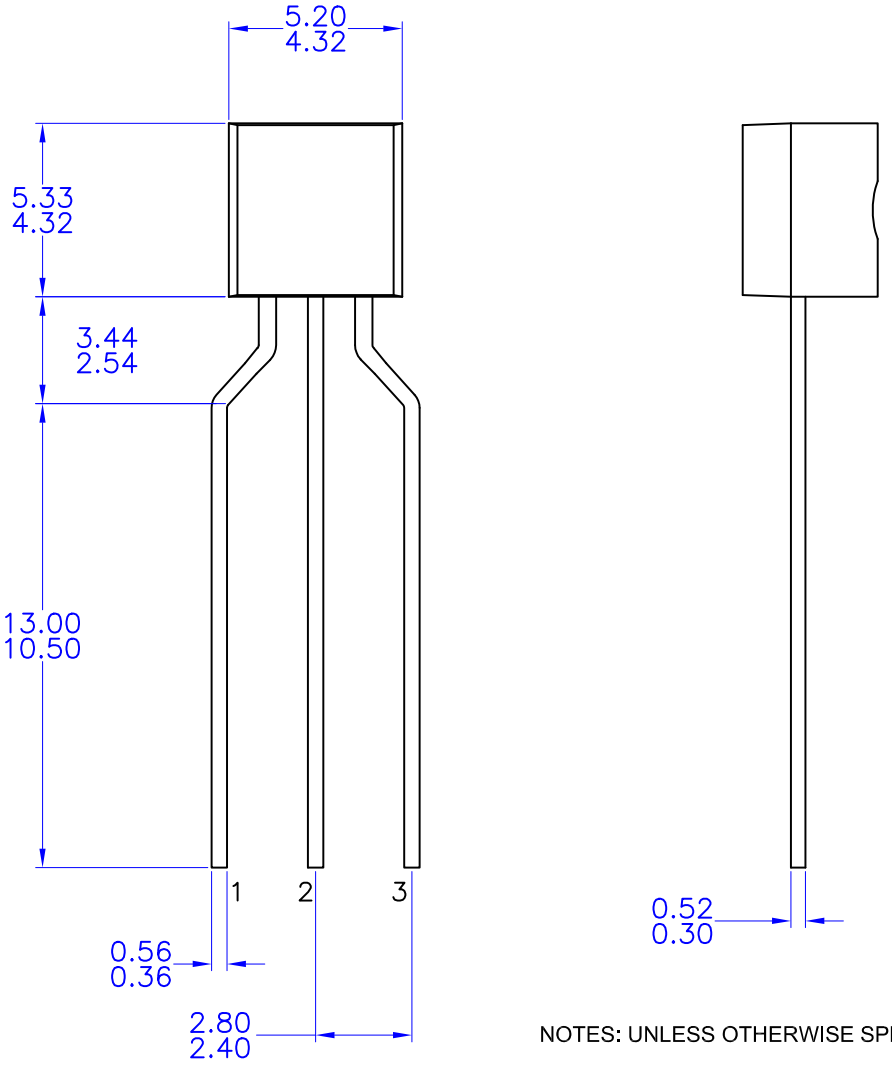
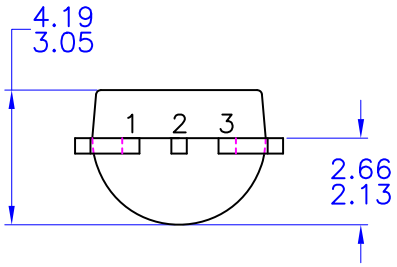
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

TO−92 3 4.83x4.76 LEADFORMED
CASE 135AR
ISSUE O

DATE 30 SEP 2016





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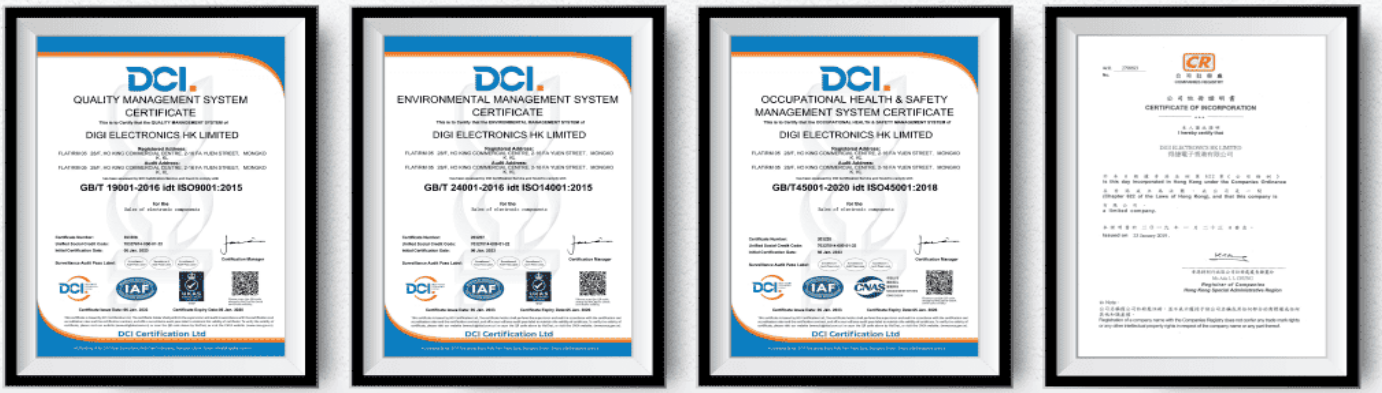

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