KSA916YBU Datasheet

https://www.DiGi-Electronics.com

DiGi Electronics Part Number	KSA916YBU-DG
Manufacturer	onsemi
Manufacturer Product Number	KSA916YBU
Description	TRANS PNP 120V 0.8A TO92-3
Detailed Description	Bipolar (BJT) Transistor PNP 120 V 800 mA 120MHz 900 mW Through Hole TO-92-3

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
KSA916YBU	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
PNP	800 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
120 V	1V @ 50mA, 500mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA (ICBO)	120 @ 100mA, 5V
Power - Max:	Frequency - Transition:
900 mW	120MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-226-3, TO-92-3 Long Body	TO-92-3
Base Product Number:	
KSA916	

Environmental & Export classification

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

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DATA SHEET
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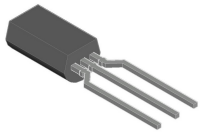
PNP Epitaxial Silicon Transistor

KSA916

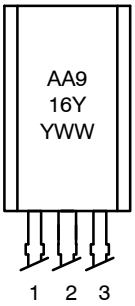


TO−92 3 LF
CASE 135AM

Features

- Audio Power Amplifier
- Driver Stage Amplifier
- Complement to KSC2316

MARKING DIAGRAM



1: Emitter
2: Collector
3: Base

A = Assembly Code
A916Y = Device Code
YWW = Date Code

ABSOLUTE 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	−800	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, by $R_{\theta JA}$	900	mW
	Power Dissipation, by $R_{\theta JC}$	3	W
	Derate Above 25°C, by $R_{\theta JA}$	7.2	mW/°C
	Derate Above 25°C, by $R_{\theta JC}$	24	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction−to−Ambient	130	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction−to−Case	41	°C/W

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

ORDERING INFORMATION

Device	Package	Shipping
KSA916YTA	TO−92 3 LF (Pb−Free)	2000 / Fan−Fold

KSA916

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 = −1 mA, I_E = 0	−120	–	–	V
BV_{CEO}	Collector−Emitter Breakdown Voltage	I_C = −10 mA, I_B = 0	−120	–	–	V
BV_{EBO}	Emitter−Base Breakdown Voltage	I_E = −1 mA, I_C = 0	−5	–	–	V
I_{CBO}	Collector Cut−Off Current	V_{CB} = −120 V, I_E = 0	–	–	−0.1	μA
h_{FE1}	DC Current Gain	V_{CE} = −5 V, I_C = −10 mA	60	–	–	
h_{FE2}	DC Current Gain	V_{CE} = −5 V, I_C = −100 mA	80	–	240	
V_{CE}(sat)	Collector−Emitter Saturation Voltage	I_C = −500 mA, I_B = −50 mA	–	–	−1	V
f_T	Current Gain Bandwidth Product	V_{CE} = −5 V, I_C = −100 mA	–	120	–	MHz
C_{ob}	Output Capacitance	V_{CB} = −10 V, I_E = 0, f = 1 MHz	–	–	40	pF

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	O	Y
h_{FE2}	80 ~ 160	120 ~ 240

KSA916

TYPICAL PERFORMANCE CHARACTERISTICS

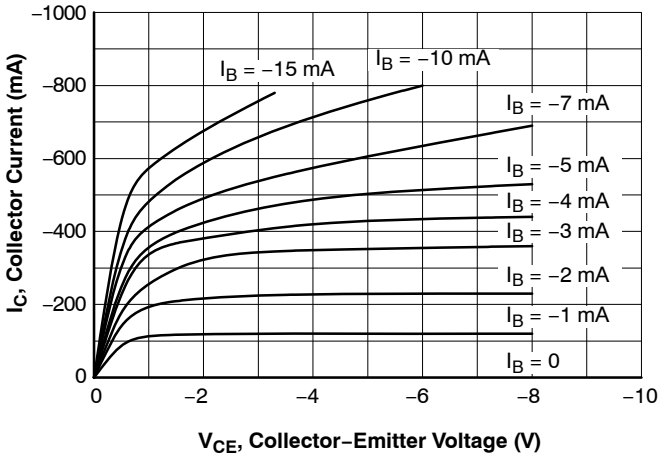


Figure 1. Static Characteristic

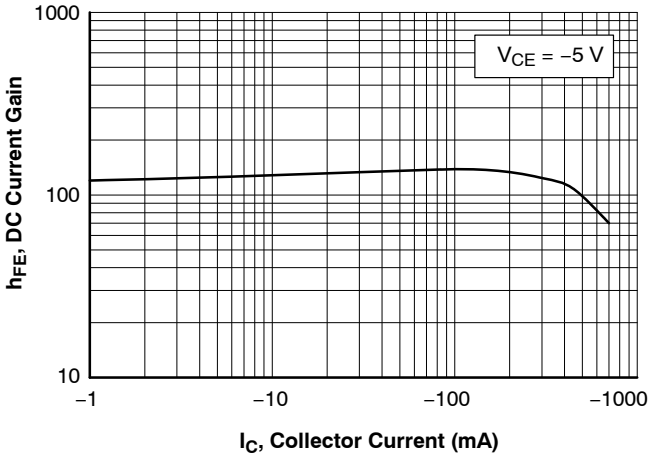


Figure 2. DC Current Gain

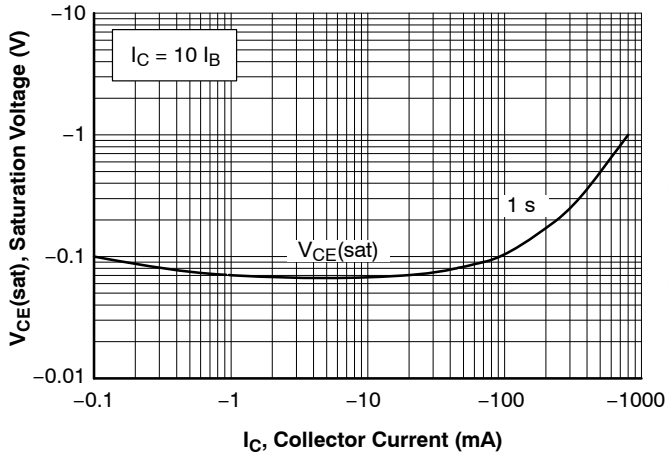


Figure 3. Collector−Emitter Saturation Voltage

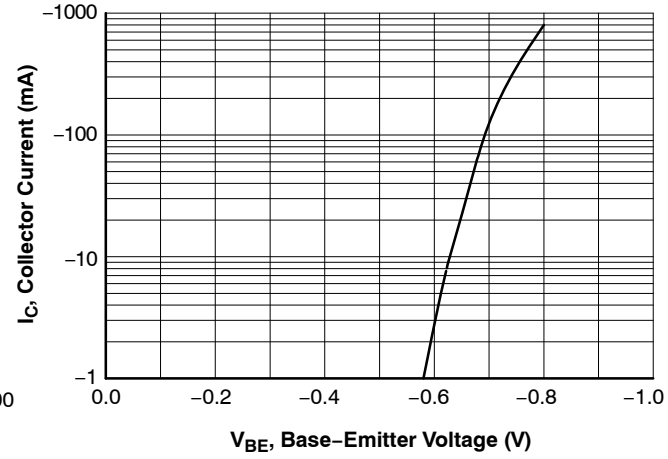


Figure 4. Base−Emitter On Voltage

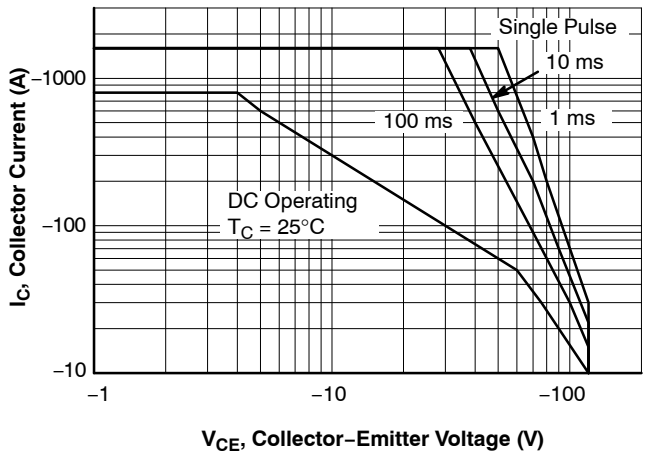


Figure 5. Safe Operating Area

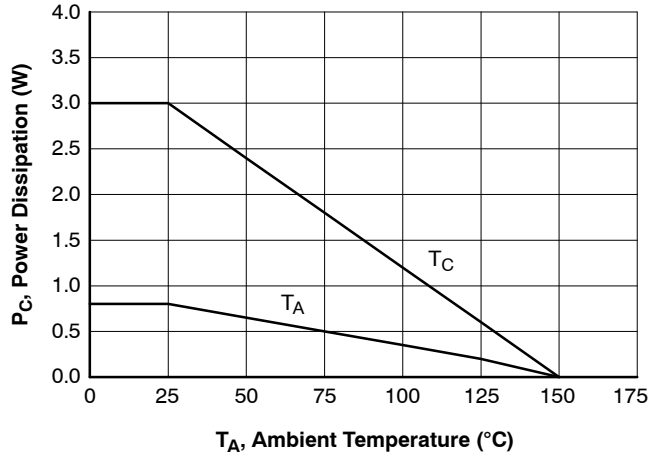


Figure 6. Power Derating

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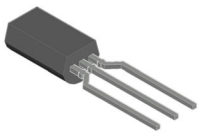
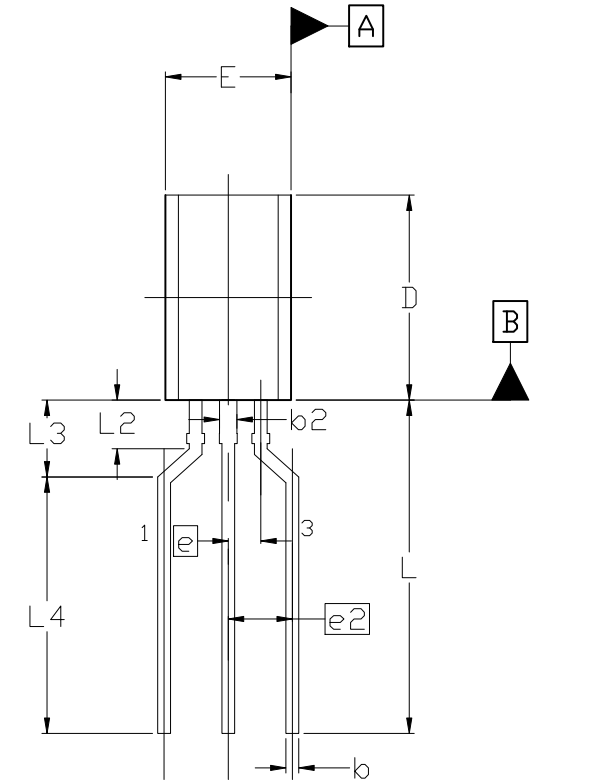
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

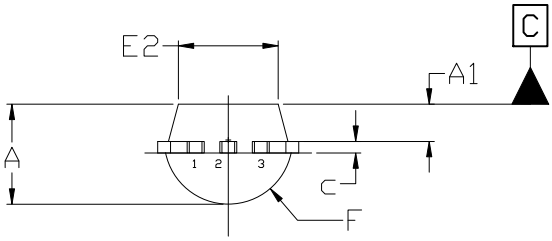


TO−92 3 8.0x4.9 (LEADFORMED)
CASE 135AM
ISSUE B

DATE 14 JAN 2021



TOP VIEW



END VIEW

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2009.
2. CONTROLLING DIMENSION: MILLIMETERS
3. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, GATE REMAINS AND TIE BAR PROTRUSIONS.
4. DIMENSION b AND b2 DOES NOT INCLUDE DAMBAR PROTRUSION. DIMENSION b2 LOCATED ABOVE THE DAMBAR PORTION OF MIDDLE LEAD.

	MILLIMETERS		
DIM	MIN.	NOM.	MAX.
A	3.70	3.90	4.10
A1	1.25	1.45	1.65
b	0.35	0.50	0.60
b2	0.62	---	0.78
c	0.35	0.45	0.55
D	7.80	8.00	8.20
E	4.70	4.90	5.10
E2	3.70	3.90	4.10
e	1.27 BSC		
e2	2.50 BSC		
F	2.45 REF		
L	13.00 REF		
L2	1.50	---	1.90
L3	2.60	---	3.40
L4	10.40 REF		

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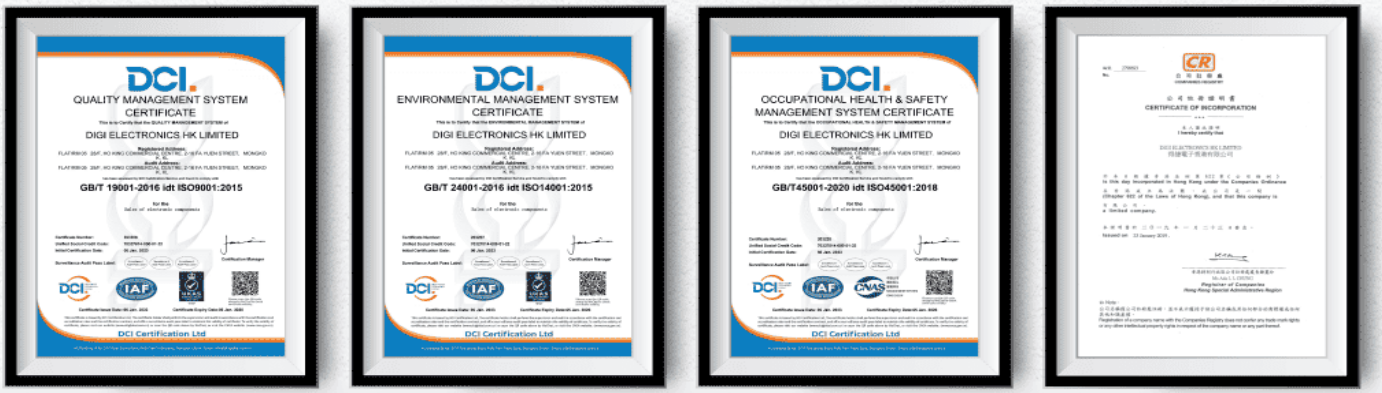

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