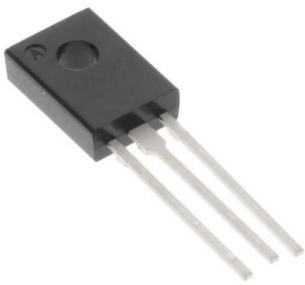


KSA1220AYS Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	KSA1220AYS-DG
Manufacturer	onsemi
Manufacturer Product Number	KSA1220AYS
Description	TRANS PNP 160V 1.2A TO126
Detailed Description	Bipolar (BJT) Transistor PNP 160 V 1.2 A 175MHz 1.2 W Through Hole TO-126



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

KSA1220AYS

Series:

-

Transistor Type:

PNP

Voltage - Collector Emitter Breakdown (Max):

160 V

Current - Collector Cutoff (Max):

1 μ A (ICBO)

Power - Max:

1.2 W

Operating Temperature:

150°C (TJ)

Package / Case:

TO-225AA, TO-126-3

Base Product Number:

KSA1220

Manufacturer:

onsemi

Product Status:

Obsolete

Current - Collector (Ic) (Max):

1.2 A

Vce Saturation (Max) @ Ib, Ic:

700mV @ 200mA, 1A

DC Current Gain (hFE) (Min) @ Ic, Vce:

160 @ 300mA, 5V

Frequency - Transition:

175MHz

Mounting Type:

Through Hole

Supplier Device Package:

TO-126

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.29.0075

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



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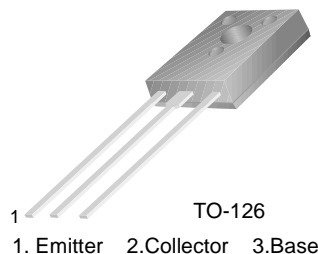
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KSA1220/1220A

Audio Frequency Power Amplifier High Frequency Power Amplifier

- Complement to KSC2690/KSC2690A



KSA1220/1220A

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	: KSA1220	- 120
		: KSA1220A	- 160
V_{CEO}	Collector-Emitter Voltage	: KSA1220	- 120
		: KSA1220A	- 160
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current (DC)	- 1.2	A
I_{CP}	*Collector Current (Pulse)	- 2.5	A
I_B	Base Current	- 0.3	A
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	1.2	W
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	20	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

* $PW \leq 10\text{ms}$, Duty Cycles $\leq 50\%$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = -120\text{V}$, $I_E = 0$			- 1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -3\text{V}$, $I_C = 0$			- 1	μA
h_{FE1}	* DC Current Gain	$V_{CE} = -5\text{V}$, $I_C = -5\text{mA}$	35	150		
h_{FE2}		$V_{CE} = -5\text{V}$, $I_C = -0.3\text{A}$	60	140	320	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = -1\text{A}$, $I_B = -0.2\text{A}$		- 0.4	- 0.7	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = -1\text{A}$, $I_B = -0.2\text{A}$		- 1	- 1.3	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -5\text{V}$, $I_C = -0.2\text{A}$		175		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10$, $I_E = 0$ $f = 1\text{MHz}$		26		pF

* Pulse Test: $PW \leq 350\mu\text{s}$, Duty Cycles $\leq 2\%$ Pulsed

h_{FE} Classification

Classification	R	O	Y
h_{FE2}	60 ~ 120	100 ~ 200	160 ~ 320

Typical Characteristics

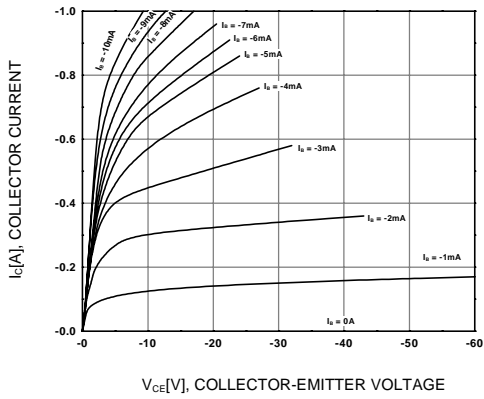


Figure 1. Static Characteristic

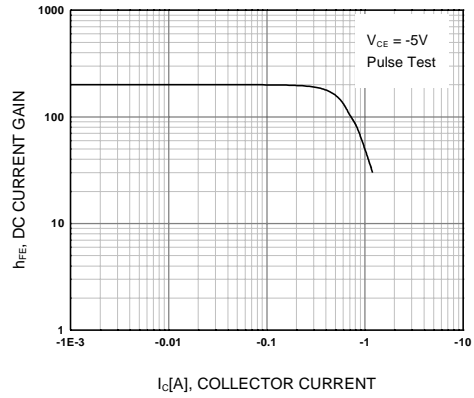


Figure 2. DC current Gain

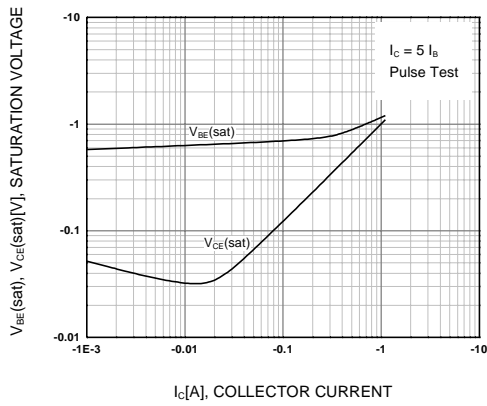


Figure 3. Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

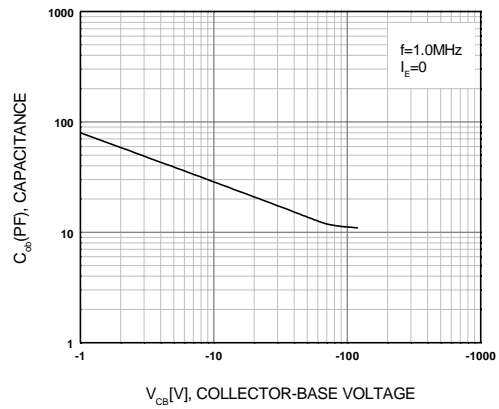


Figure 4. Collector Output Capacitance

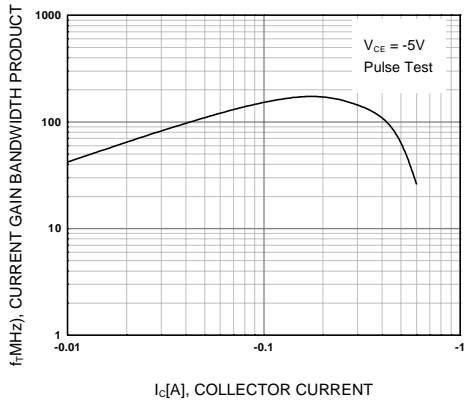


Figure 5. Current Gain Bandwidth Product

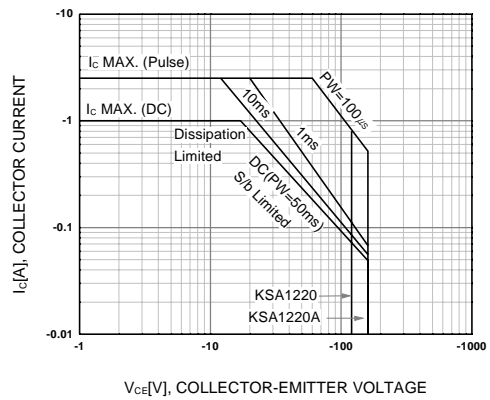


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

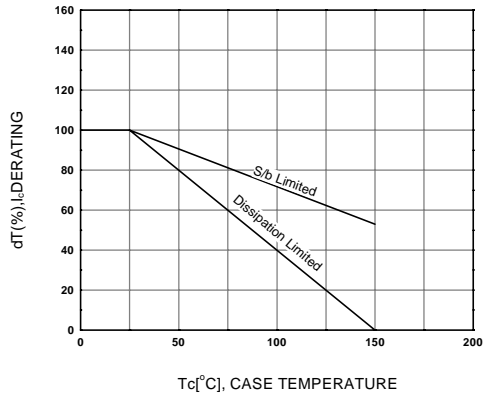


Figure 7. Derating Curve of Safe Operating Areas

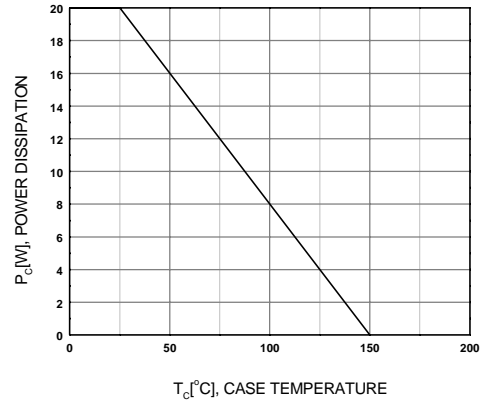
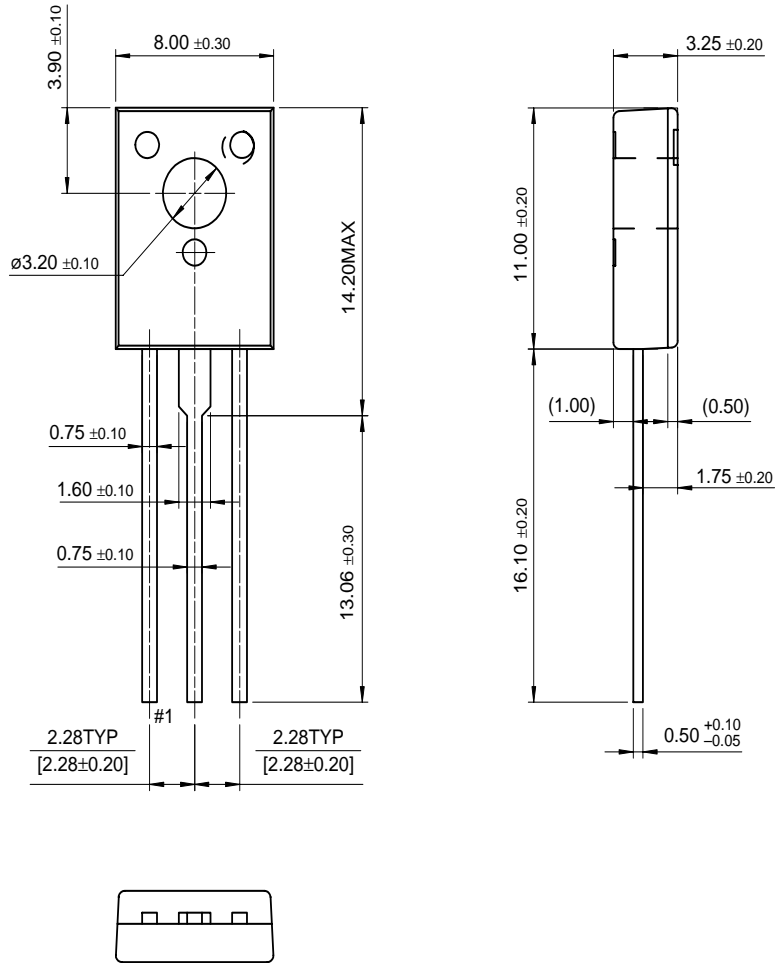


Figure 8. Power Derating

Package Demensions

TO-126



Dimensions in Millimeters

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