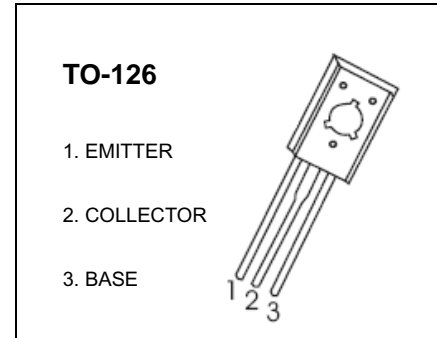


## TO-126 Plastic-Encapsulate Transistors

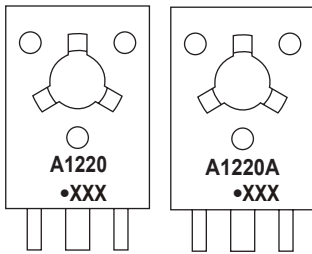
### KSA1220 / KSA1220A TRANSISTOR (PNP)

#### FEATURES

- Audio Frequency Power Amplifier
- High Frequency Power Amplifier
- Complement to KSC2690/KSC2690A

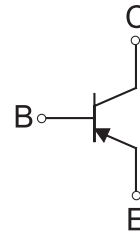


#### MARKING



A1220,A1220A=Device code  
 Soliddot = Green molding compound device, if none, the normal device  
 XXX=Code

#### Equivalent Circuit



#### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
KSA1220	TO-126	Bulk	200pcs/Bag
KSA1220A	TO-126	Bulk	200pcs/Bag
KSA1220-TU	TO-126	Tube	60pcs/Tube
KSA1220A-TU	TO-126	Tube	60pcs/Tube

#### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit	
V <sub>CBO</sub>	Collector-Base Voltage	KSA1220	-120	V
		KSA1220A	-160	V
V <sub>CEO</sub>	Collector-Emitter Voltage	KSA1220	-120	V
		KSA1220A	-160	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V	
I <sub>C</sub>	Collector Current (DC)	-1.2	A	
I <sub>CP</sub>	Collector Current ( PW ≤10ms,Duty Cycle ≤2 % )	-2.5	A	
I <sub>B</sub>	Base Current	-0.3	A	
P <sub>C</sub>	Collector Power Dissipation (T <sub>a</sub> = 25 °C)	1.25	W	
	Collector Power Dissipation (T <sub>c</sub> = 25 °C)	20	W	
T <sub>J</sub>	Junction Temperature	150	°C	
T <sub>stg</sub>	Storage Temperature	-55-150	°C	

## ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^\circ\text{C}$  unless otherwise specified

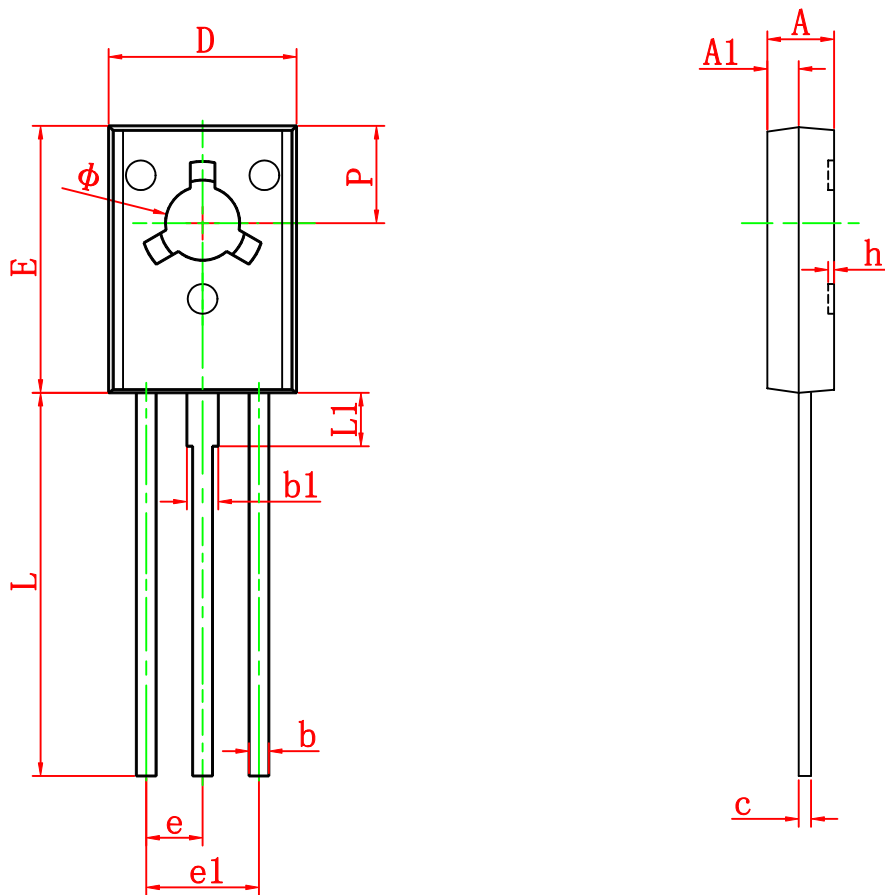
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB}=-120\text{V}$ , $I_E=0$			-1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-3\text{V}$ , $I_C=0$			-1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=-5\text{V}$ , $I_C=-5\text{mA}$	35			
	$h_{FE(2)}$	$V_{CE}=-5\text{V}$ , $I_C=-300\text{mA}$	60		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-1\text{A}$ , $I_B=-200\text{mA}$ <sup>(1)</sup>		-0.4	-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-1\text{A}$ , $I_B=-200\text{mA}$ <sup>(1)</sup>		-1	-1.3	V
Transition frequency	$f_T$	$V_{CE}=-5\text{V}$ , $I_C=-200\text{mA}$		175		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		26		pF

<sup>(1)</sup> Pulse Test :  $PW \leq 350\mu\text{s}$  , Duty Cycle  $\leq 2\%$

### CLASSIFICATION OF $h_{FE(2)}$

Rank	R	O	Y
Range	60-120	100-200	160-320

# TO-126 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
$\phi$	3.000	3.200	0.118	0.126