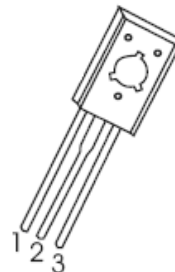
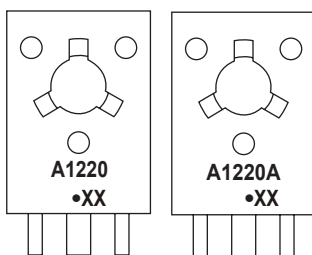


**TO-126 Plastic-Encapsulate Transistors****KSA1220 / KSA1220A** TRANSISTOR (PNP)**FEATURES**

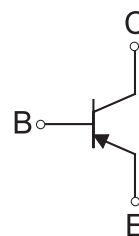
- Audio Frequency Power Amplifier
- High Frequency Power Amplifier
- Complement to KSC2690/KSC2690A

TO-126

1. EMITTER
2. COLLECTOR
3. BASE

**MARKING**

A1220,A1220A=Device code
Solid dot = Green molding compound device, if none, the normal device
XX=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_a=25°C unless otherwise noted)

Symbol	Parameter		Value	Unit
V _{CBO}	Collector-Base Voltage	KSA1220	-120	V
		KSA1220A	-160	V
V _{CEO}	Collector-Emitter Voltage	KSA1220	-120	V
		KSA1220A	-160	V
V _{EBO}	Emitter-Base Voltage		-5	V
I _C	Collector Current (DC)		-1.2	A
I _{CP}	Collector Current (PW ≤10ms,Duty Cycle ≤2 %)		-2.5	A
I _B	Base Current		-0.3	A
P _C	Collector Power Dissipation (T _a = 25 °C)		1.25	W
	Collector Power Dissipation (T _c = 25 °C)		20	W
T _J ,T _{stg}	Operation Junction and Storage Temperature Range		-55-150	°C

ELECTRICAL CHARACTERISTICS

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

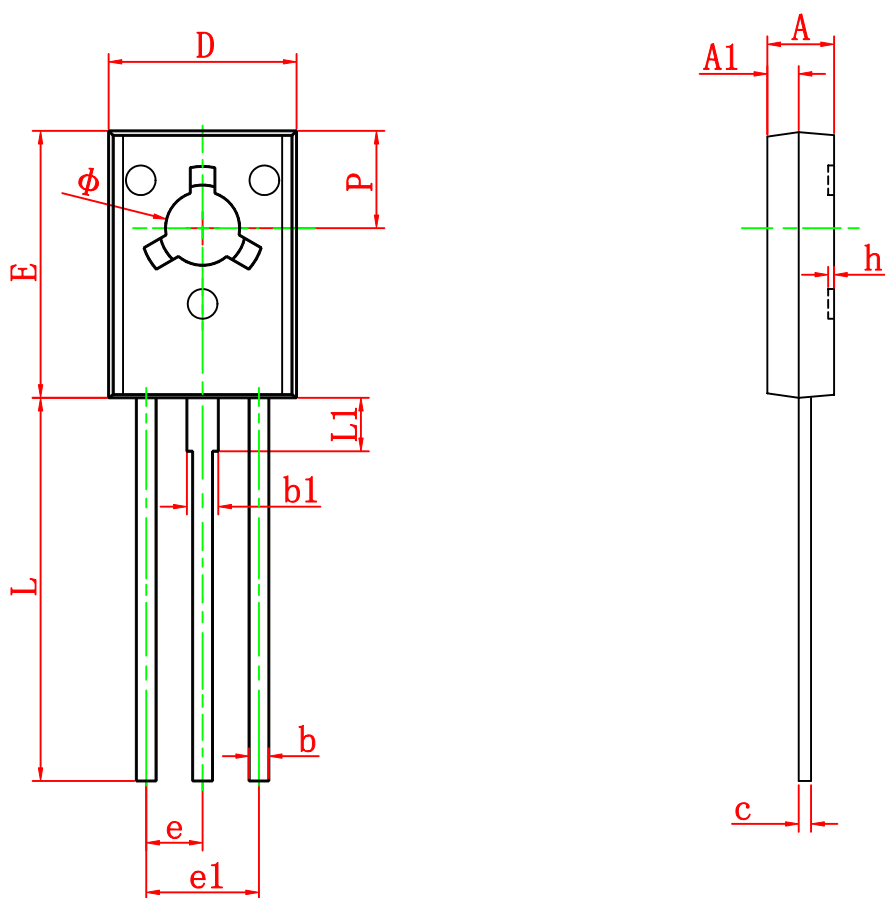
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB}=-120\text{V}$, $I_E=0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-3\text{V}$, $I_C=0$			-1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-5\text{V}$, $I_C=-5\text{mA}$	35			
	$h_{FE(2)}$	$V_{CE}=-5\text{V}$, $I_C=-300\text{mA}$	60		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-1\text{A}$, $I_B=-200\text{mA}$ ⁽¹⁾		-0.4	-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-1\text{A}$, $I_B=-200\text{mA}$ ⁽¹⁾		-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

⁽¹⁾ 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
Φ	3.000	3.200	0.118	0.126