

TO-126 Plastic-Encapsulate Transistors

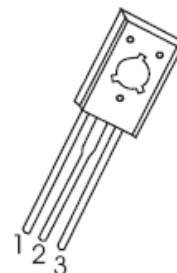
TRANSISTOR (NPN)

FEATURES

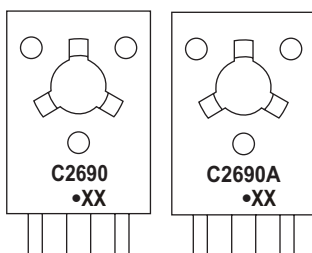
Audio Frequency Power Amplifier
High Frequency Power Amplifier
Complement to KSA1220/KSA1220A

TO-126

1. EMITTER
2. COLLECTOR
3. BASE

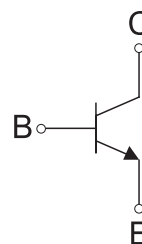


MARKING



C2690, C2690A = 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
KSC2690	TO-126	Bulk	200pcs/Bag
KSC2690A	TO-126	Bulk	200pcs/Bag
KSC2690-TU	TO-126	Tube	60pcs/Tube
KSC2690A-TU	TO-126	Tube	60pcs/Tube

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	KSC2690	120
		KSC2690A	160
V _{CEO}	Collector-Emitter Voltage	KSC2690	120
		KSC2690A	160
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

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

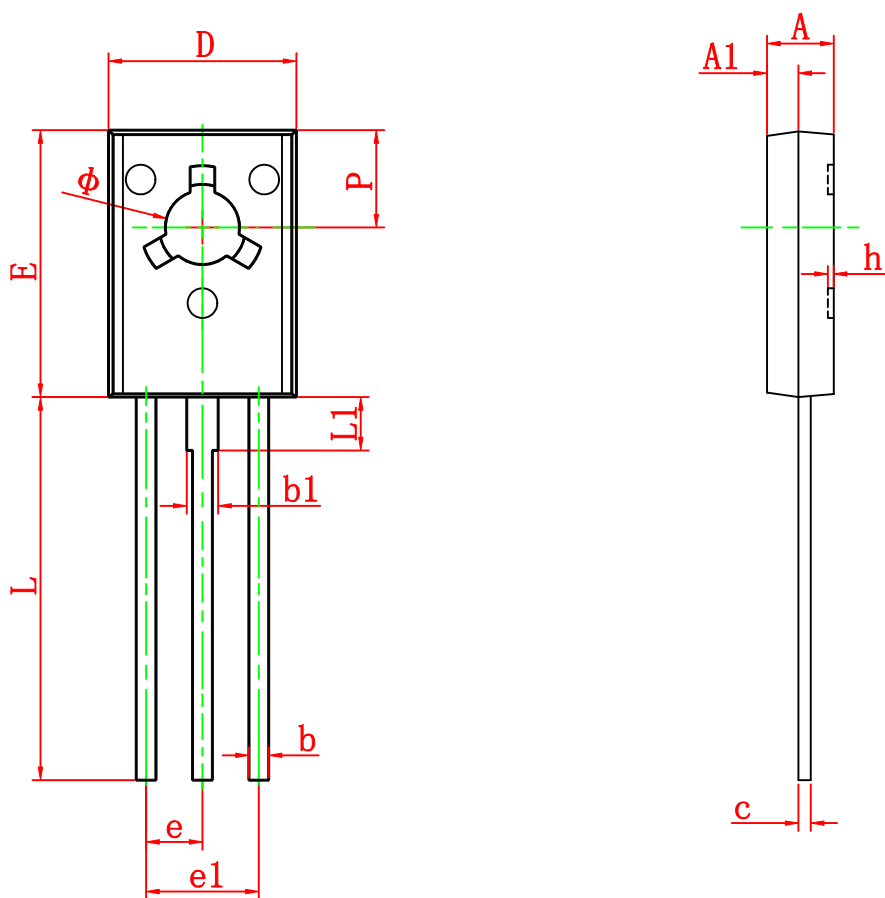
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB}=120\text{V}$, $I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{ V}$, $I_C=0$			1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}$, $I_C=5\text{mA}$	35	105		
	$h_{FE(2)}$	$V_{CE}=5\text{V}$, $I_C=300\text{mA}$	60	140	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	$V_{CE}=5\text{V}$, $I_C=200\text{mA}$		155		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		19		pF

⁽¹⁾ Pulse Test : $PW \leq 350\text{ }\mu\text{s}$, 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