

/ Descriptions

TO-92 NPN Silicon NPN transistor in a TO-92 Plastic Package.

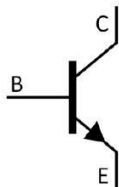
/ Features

KSA733
Complementary pair with KSA733.

/ Applications

Audio frequency amplifier, high frequency OSC.

/ Equivalent Circuit



/ Pinning



PIN1 Collector PIN 2 Base PIN 3 Emitter

/ hFE Classifications & Marking

h _{FE} Classifications Symbol	O	Y	G	L
h _{FE} Range	70~140	120~240	200~400	350~700

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	150	mA
Collector Power Dissipation	P_C	250	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

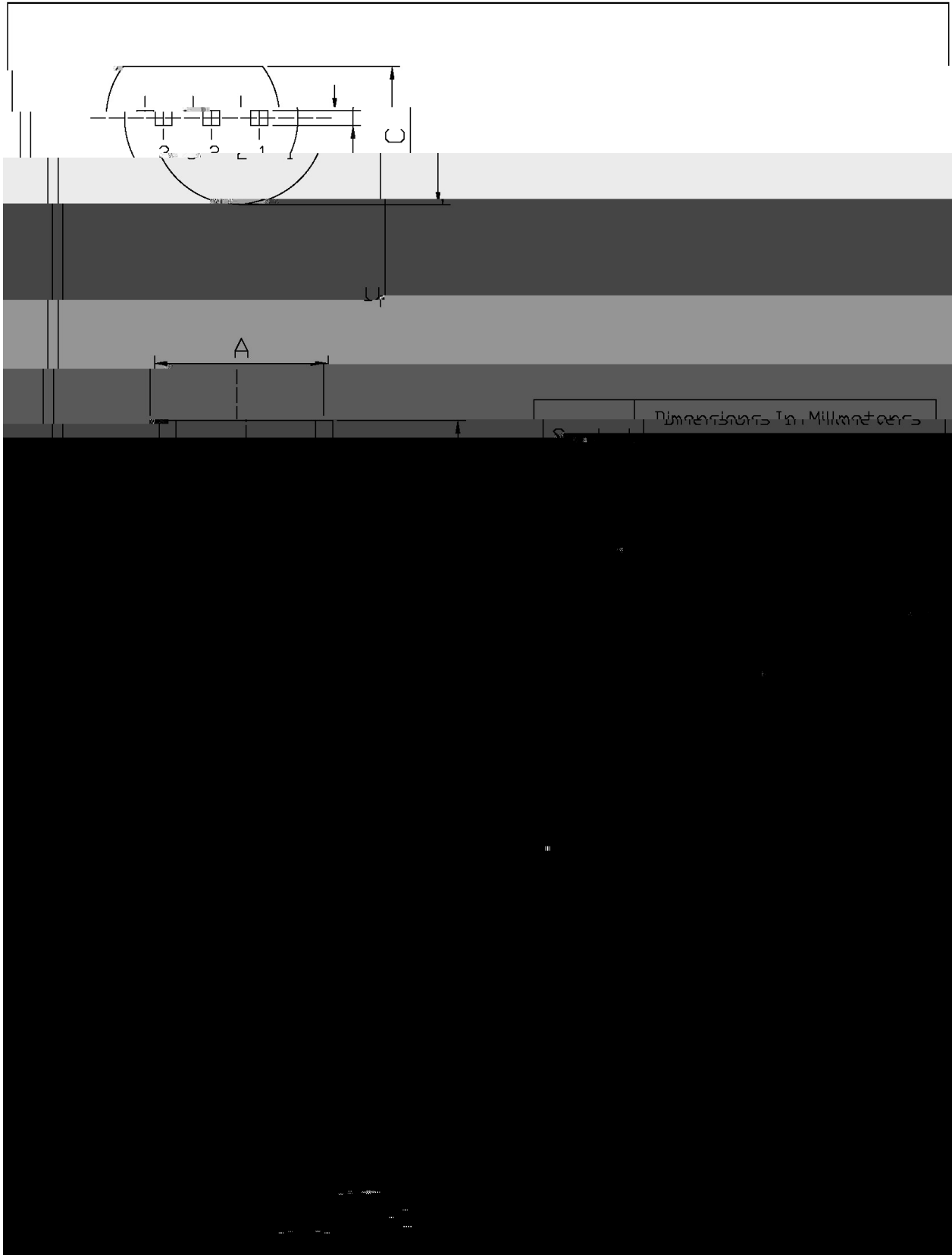
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=100\text{ A}$ $I_E=0$	60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10\text{mA}$ $I_B=0$	50			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-10\text{ A}$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=40\text{V}$ $I_E=0$			0.1	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=3.0\text{V}$ $I_C=0$			0.1	A
DC Current Gain	h_{FE}	$V_{CE}=6.0\text{V}$ $I_C=1.0\text{mA}$	70		700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$ $I_B=10\text{mA}$		0.15	0.3	V
Transition Frequency	f_T	$V_{CE}=6.0\text{V}$ $I_C=10\text{mA}$		300		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=6.0\text{V}$ $I_E=0$ $f=1.0\text{MHz}$		2.5		pF
Noise Figure	NF	$V_{CE}=6.0\text{V}$ $I_E=-0.5\text{mA}$ $f=1.0\text{KHz}$ $R_S=500$		4.0		dB

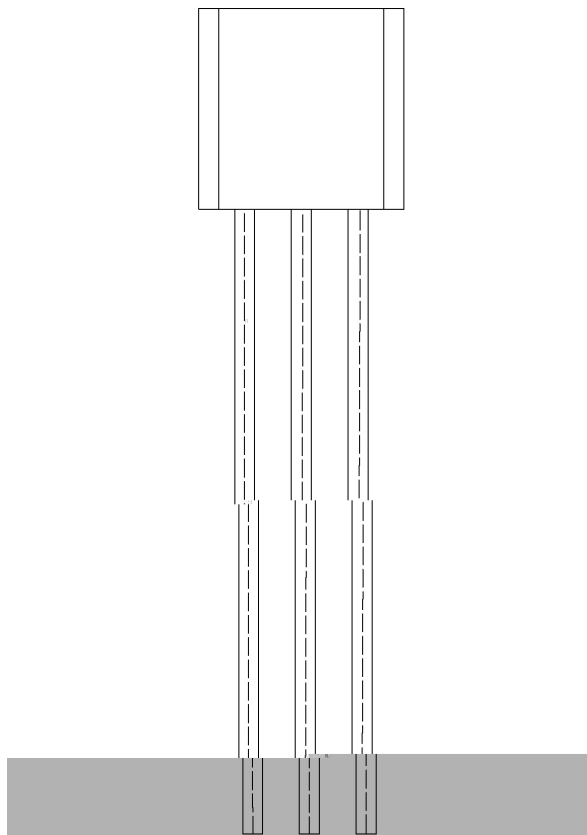
/ Electrical Characteristic Curve

T0-92

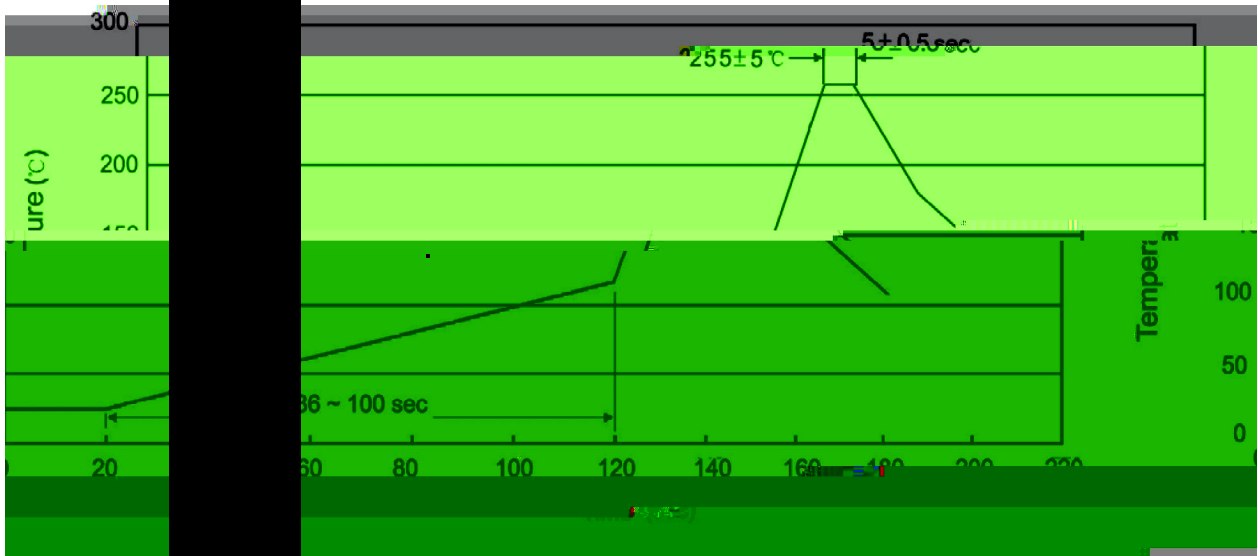
Unit: mm



/ Marking Instructions



/ Temperature Profile for Dip Soldering(Pb-Free)



Note:

- 1

60 ~ 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 2

5±0.5sec;

2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3

2 ~ 10 /sec.

3. Cooling Speed: 2~10 /sec.

Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp:270±5 Time:10±1 sec

/ SPEC.

Package Type	Units				Dimension		(unit mm3)

/

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