

/ Descriptions

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

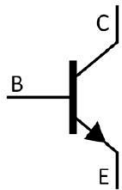
/ Features

KSA642
Complement to KSA642, $P_C=400\text{mW}$.

/ Applications

Low frequency power amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Collector PIN 2 Base PIN 3 Emitter

/ hFE Classifications & Marking

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

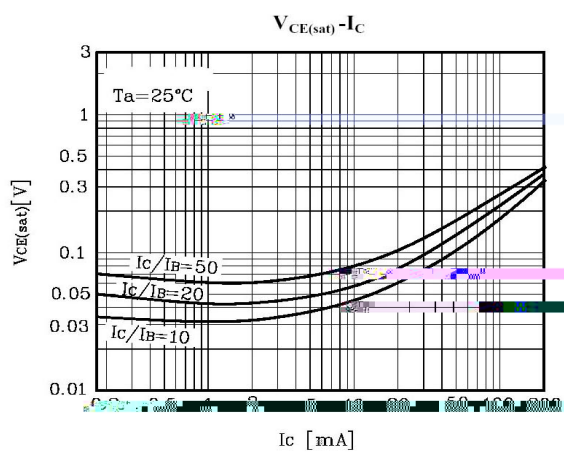
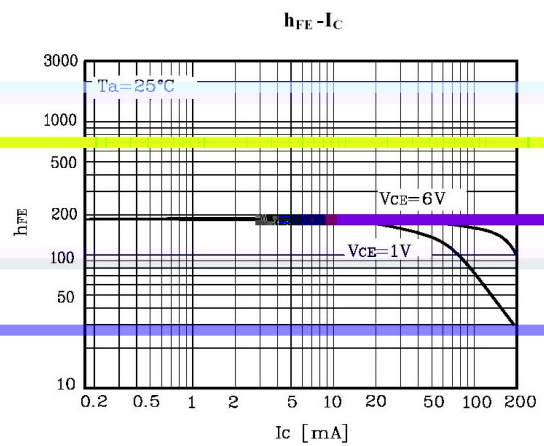
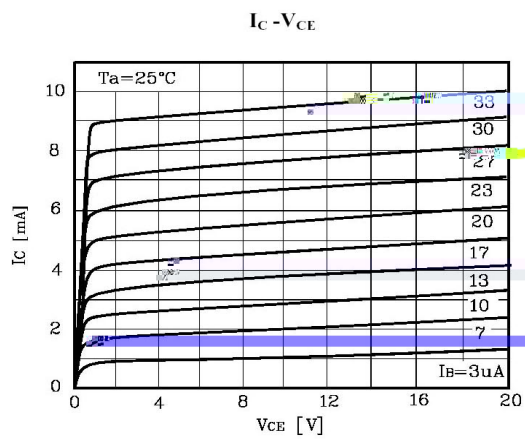
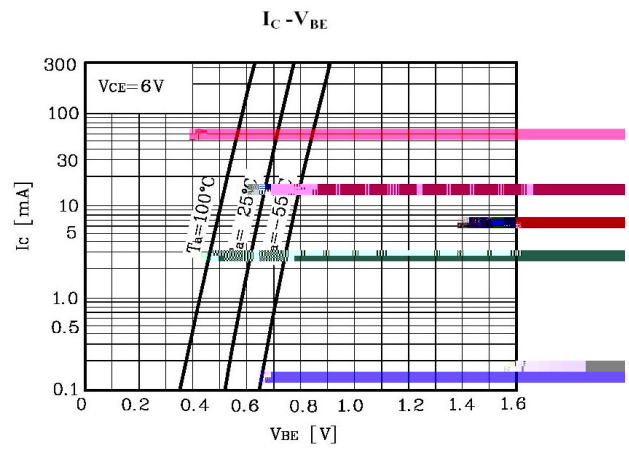
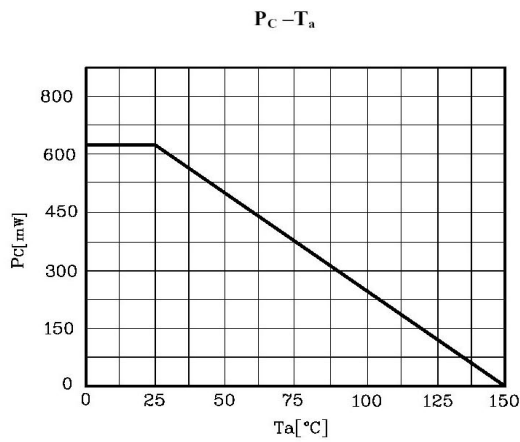
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	300	mA
Collector Power Dissipation	P_C	400	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}	$I_C=100\mu A$ $I_E=0$	30			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	25			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-10\mu A$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=25V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=3.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=1.0V$ $I_C=50mA$	70		400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=300mA$ $I_B=30mA$		0.14	0.4	V

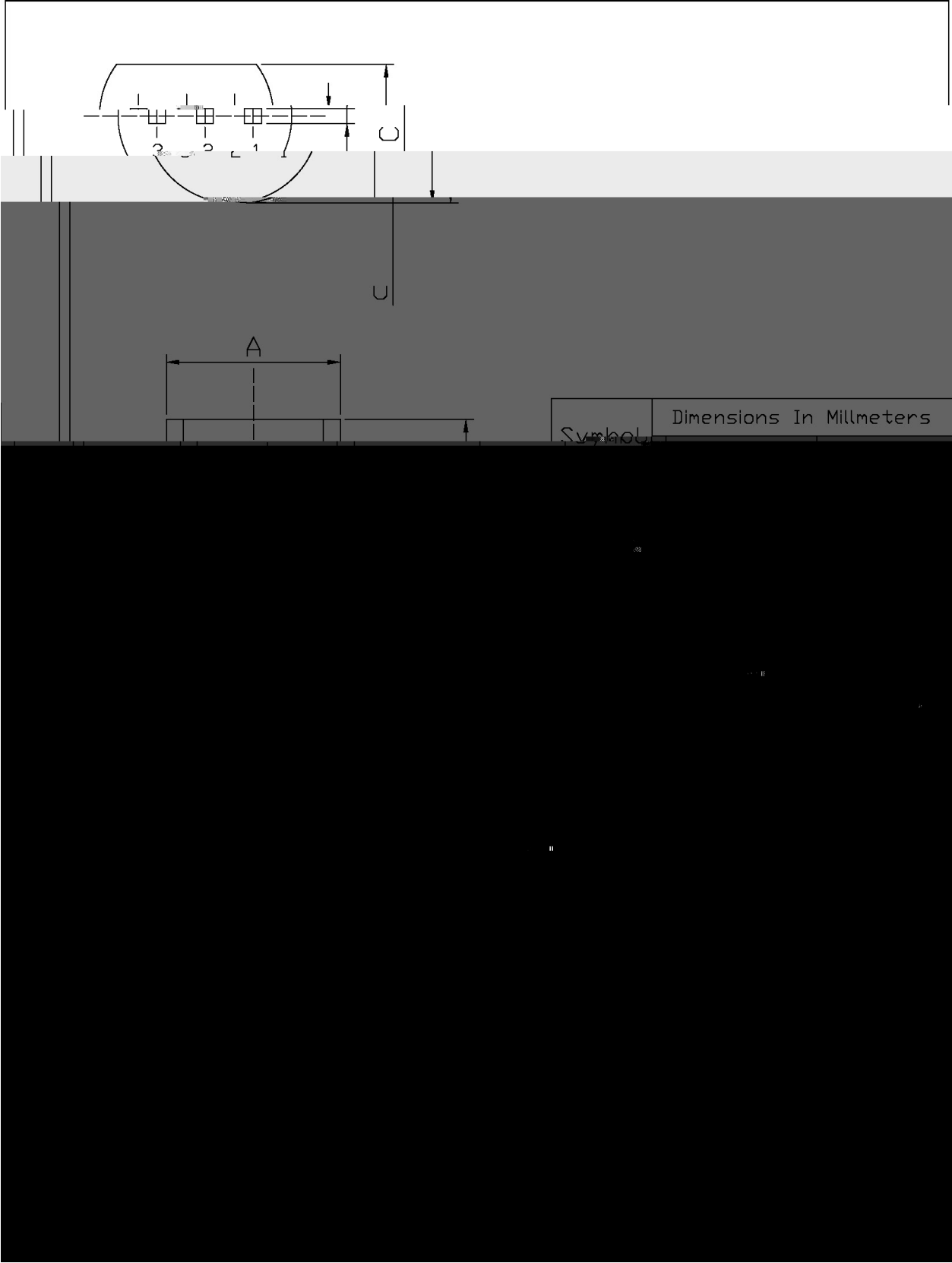
/ Electrical Characteristic Curve



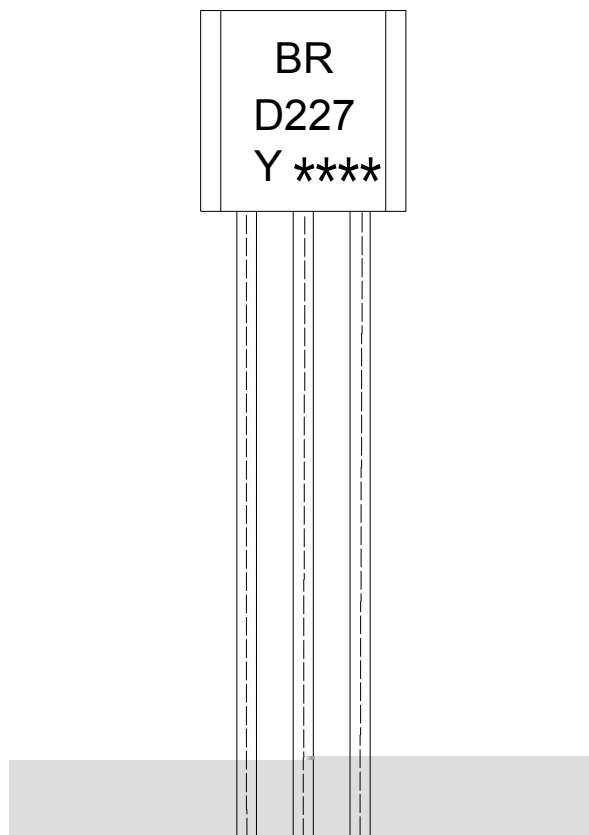
/ Package Dimensions

T0-92

Unit: mm



/ Marking Instructions



BR:

D227

Y: h_{FE}

Note:

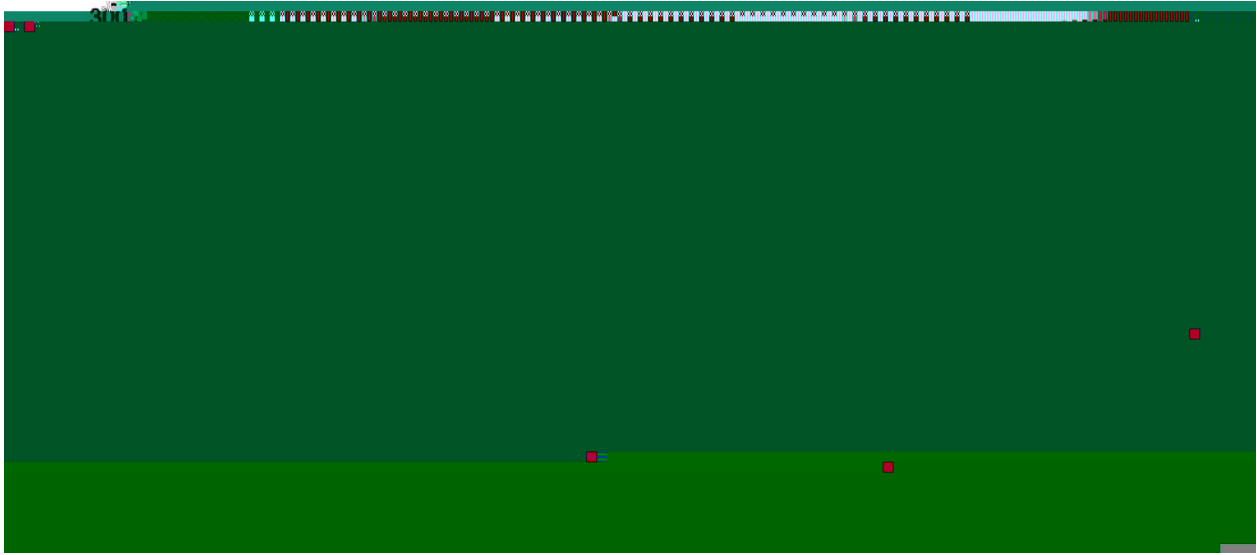
BR: Company Code.

D227: Product Type.

Y: h_{FE} Classifications Symbol

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|--------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 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

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension (unit mm3)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

/ AMMO

Package Type	Units					Dimension (unit mm3)	
	Units/tape /	Tape/Inner Box /	Rows/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Inner Box	Outer Box
TO-92	3,000	1	120	10	30,000	328×230×42	480×346×235
							547×407×268

/ Notices