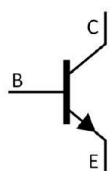


TO-92 NPN Silicon NPN transistor in a TO-92 Plastic Package.

, 2SA933A
 Small base output capacitance, complementary pair with 2SA933A.

General purpose amplifier.

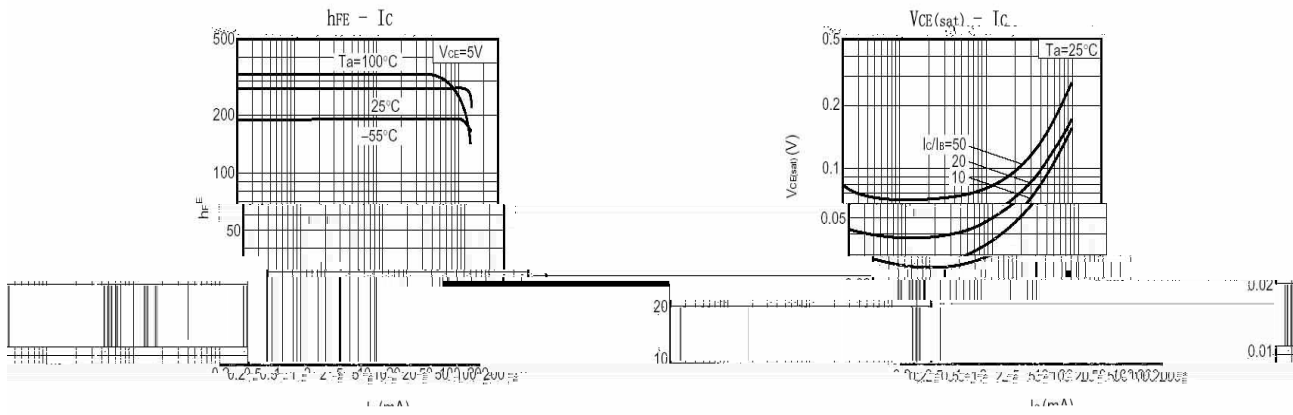


PIN1 Base PIN 2 Collector PIN 3 Emitter

h_{FE} Classifications Symbol	Q	R	S
h_{FE} Range	120~270	180~390	270~560

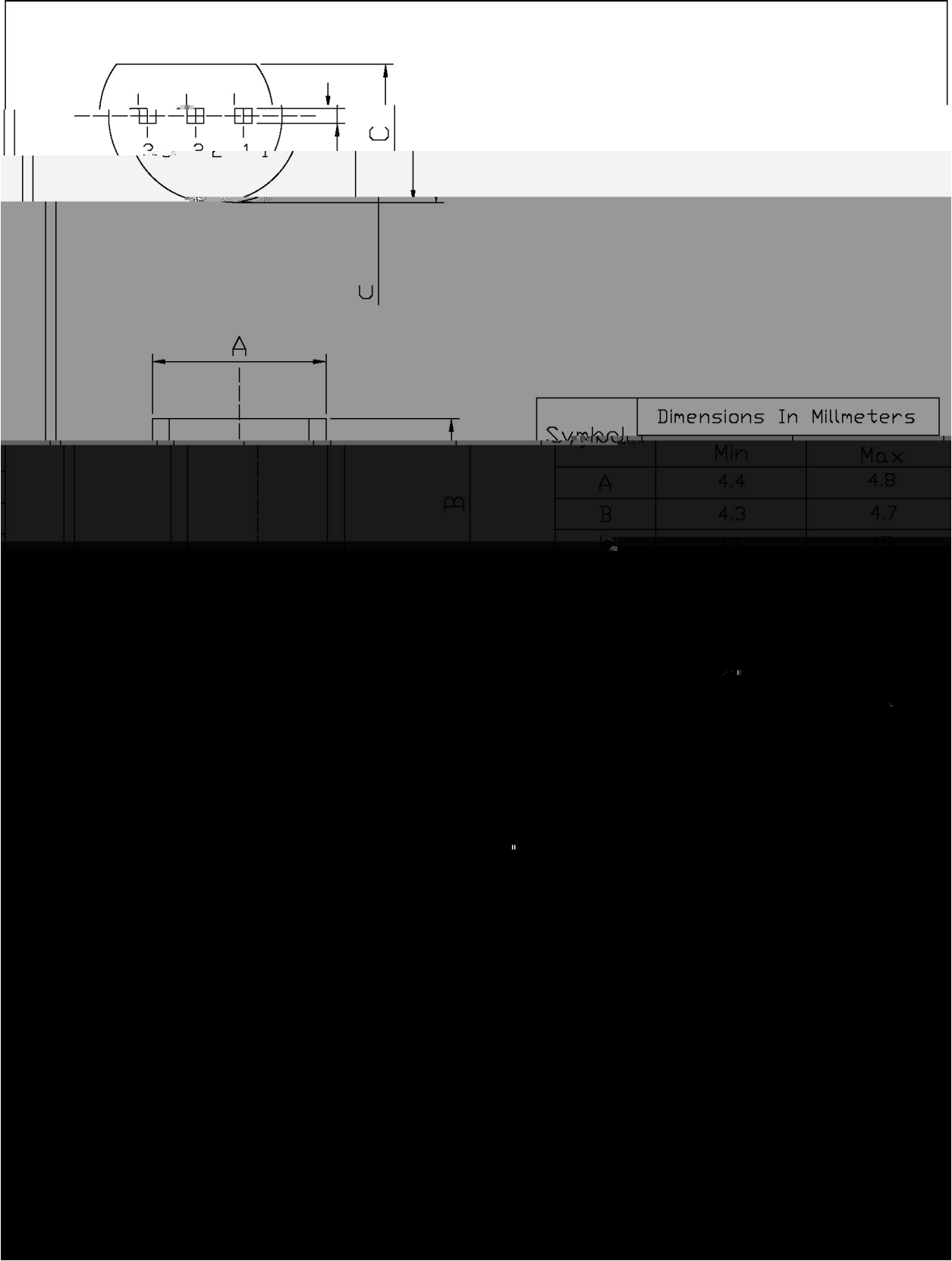
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	I_C	150	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50\mu A$ $I_E=0$	60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $I_B=0$	50			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=50\mu A$ $I_C=0$	7.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=7.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6.0V$ $I_C=1.0mA$	120		560	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50mA$ $I_B=5.0mA$			0.4	V
Transition Frequency	f_T	$V_{CE}=12V$ $f=100MHz$ $I_E=-2.0mA$		180		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=12V$ $f=1.0MHz$ $I_E=0$		2.0	3.5	pF

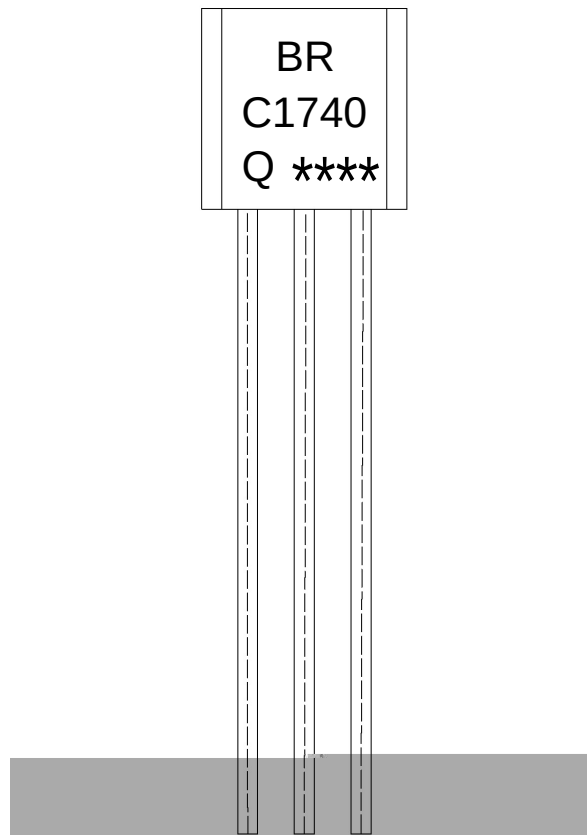


T0-92

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.4	4.8
B	4.3	4.7
C	1.2	1.5



BR:

C1740

Q: h_{FE}

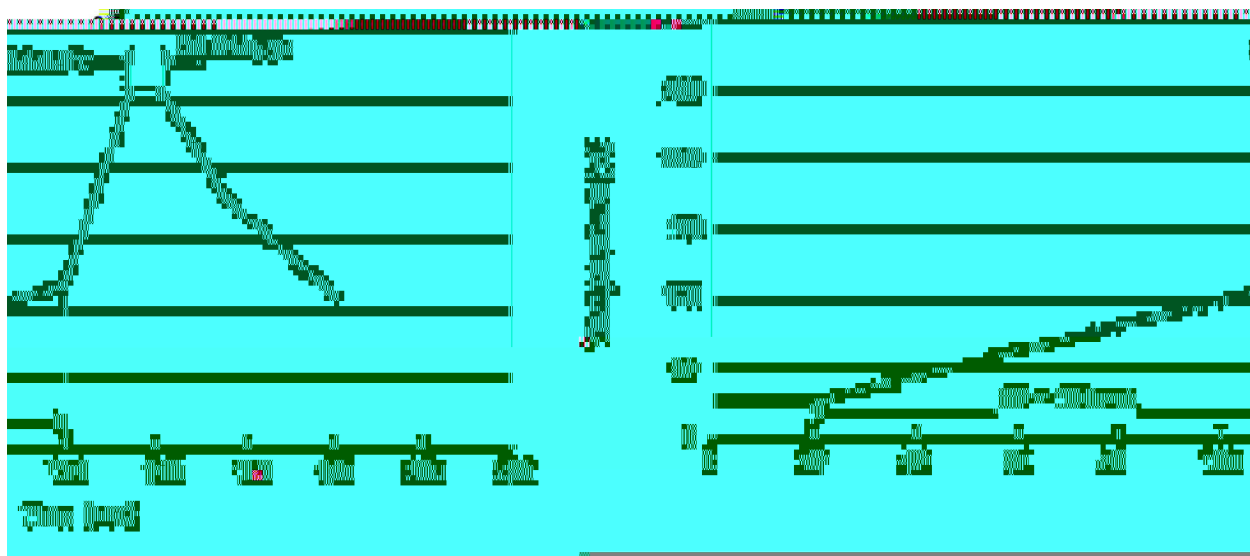
Note:

BR: Company Code.

C1740: Product Type.

Q: h_{FE} Classifications Symbol

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



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. |

270±5

10±1 sec.

Temp:270±5

Time:10±1 sec

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268