

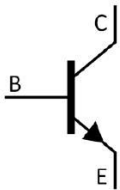
**/ Descriptions**

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

**/ Features**

High  $V_{CE0}$ , high  $P_C$ .

Medium power high voltage applications..



PIN1   Collector          PIN 2   Base          PIN 3   Emitter

**/ hFE Classifications & Marking**

See Marking Instructions.

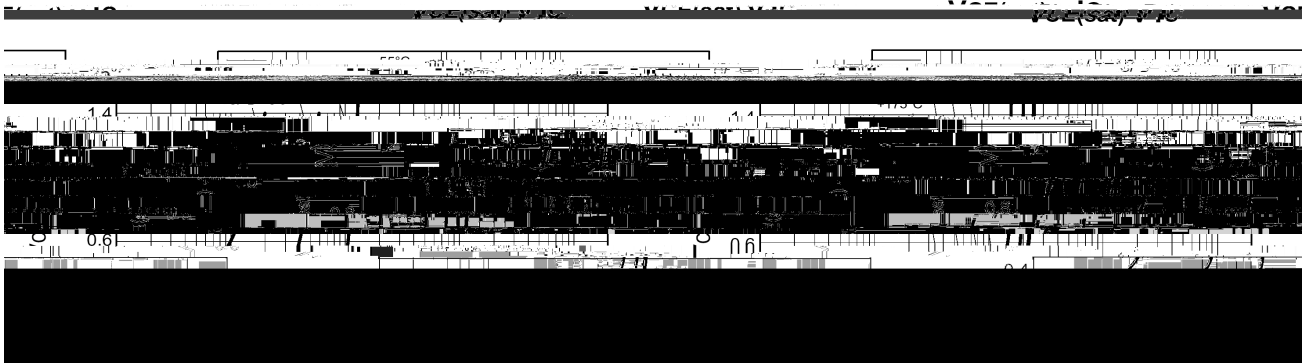
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	400	V
Collector to Emitter Voltage	$V_{CEO}$	400	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current - Continuous	$I_C$	300	mA
Collector Power Dissipation	$P_C$	1.0	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=100\mu A$ $I_E=0$	400			V
Collector to Emitter Breakdown Voltage*	$*V_{CEO}$	$I_C=10mA$ $I_B=0$	400			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=100\mu A$ $I_C=0$	5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=320V$ $I_E=0$			0.1	$\mu A$
Collector Cut-Off Current	$I_{CEO}$	$V_{CE}=320V$ $I_B=0$			0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=4.0V$ $I_C=0$			0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=10V$ $I_C=50mA$	100		300	
	$h_{FE(2)}$	$V_{CE}=10V$ $I_C=1.0mA$	100			
	$*h_{FE(3)}$	$V_{CE}=10V$ $I_C=100mA$	15			

Collector-Emitter Saturation Voltage

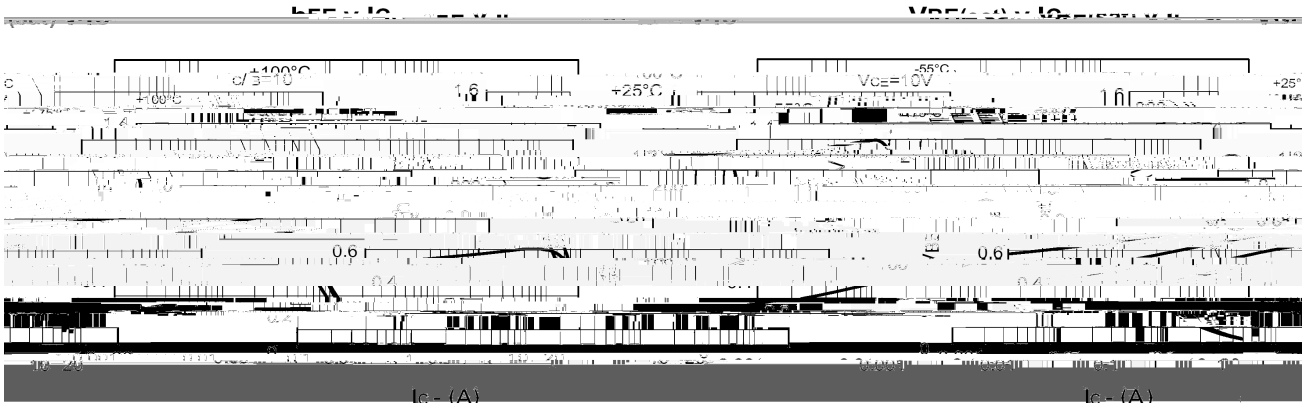
V

/ Electrical Characteristic Curve



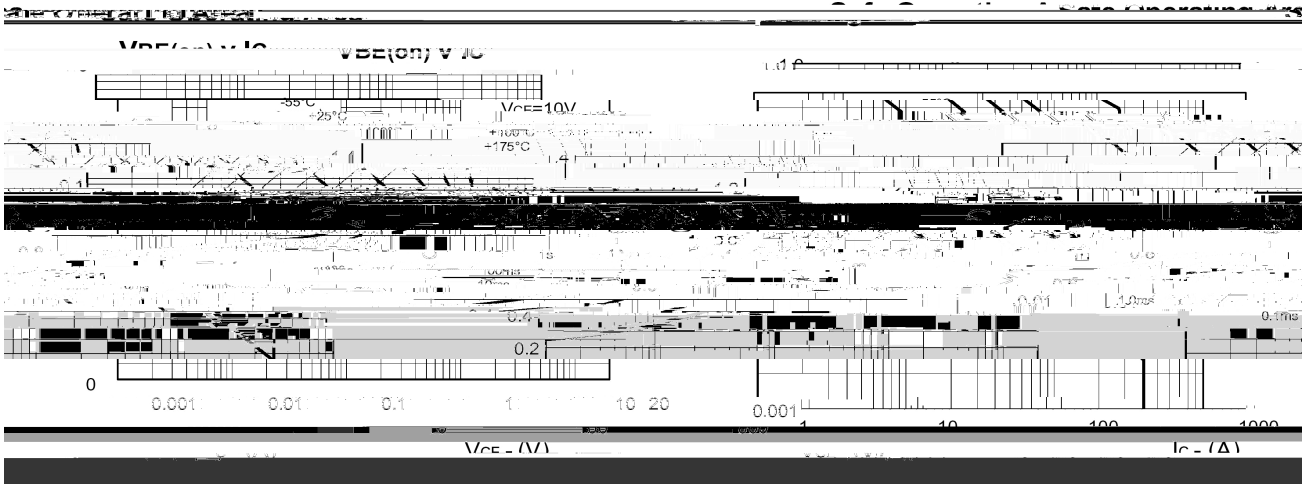
Ic - (A)

Ic - (A)



Ic - (A)

Ic - (A)



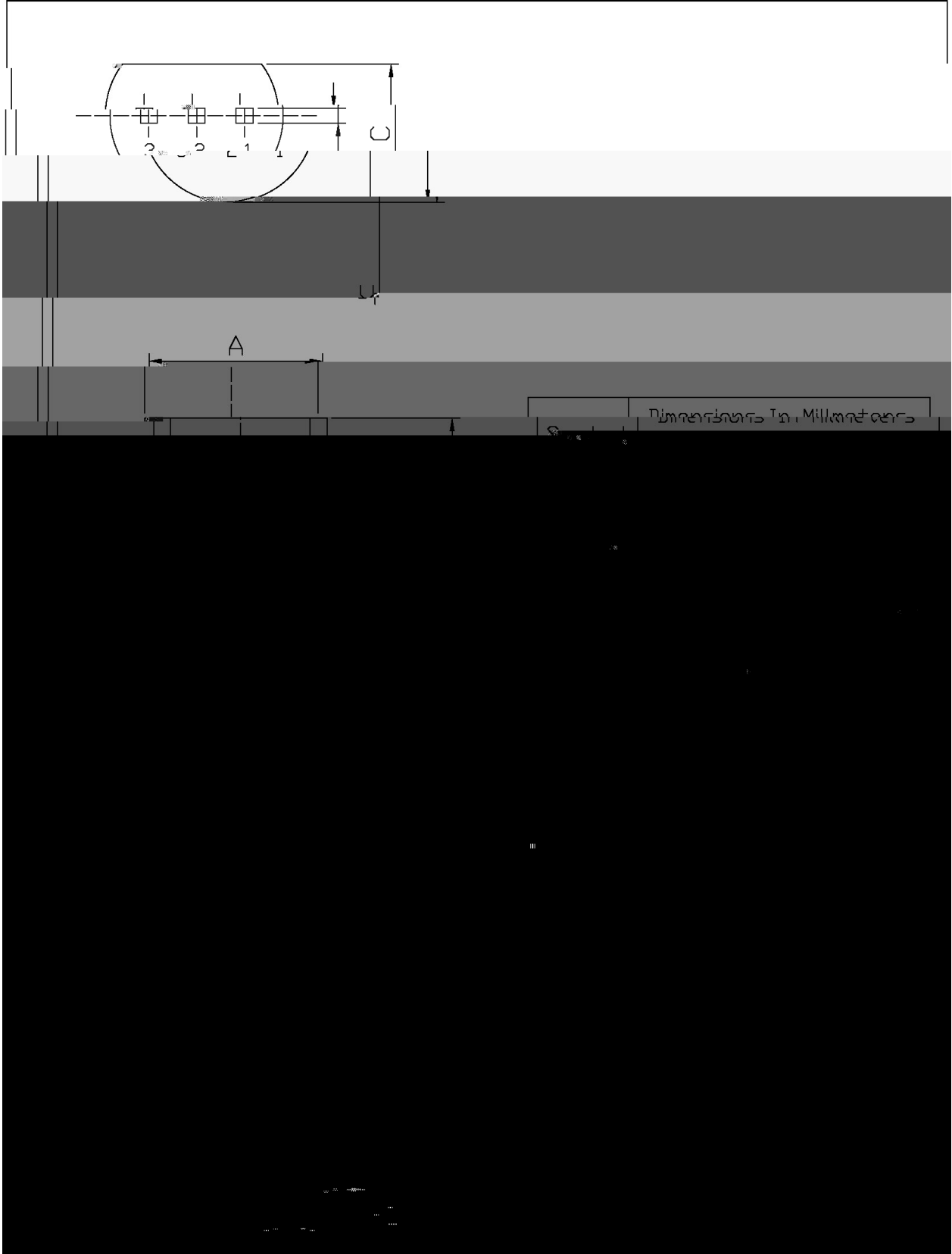
Vce - (V)

Ic - (A)

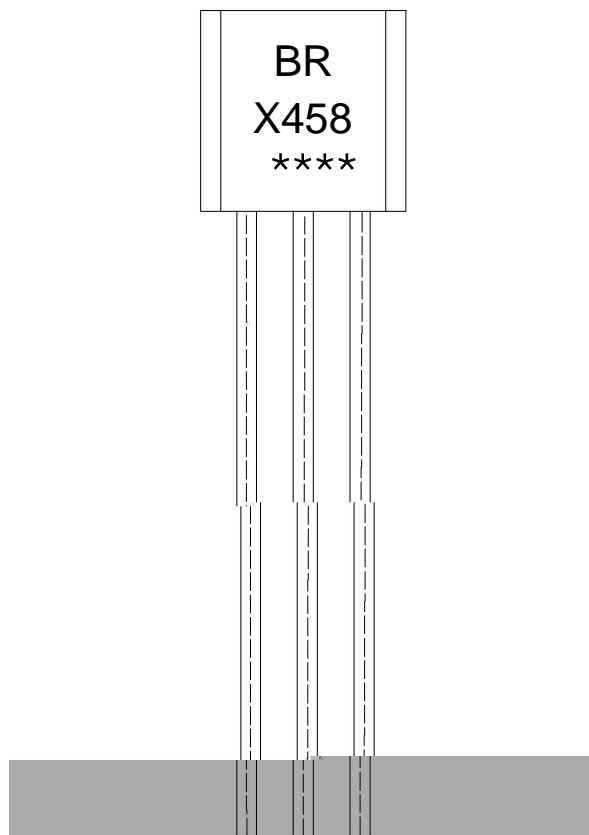
/ Package Dimensions

T0-92

Unit: mm



/ Marking Instructions



BR:

X458

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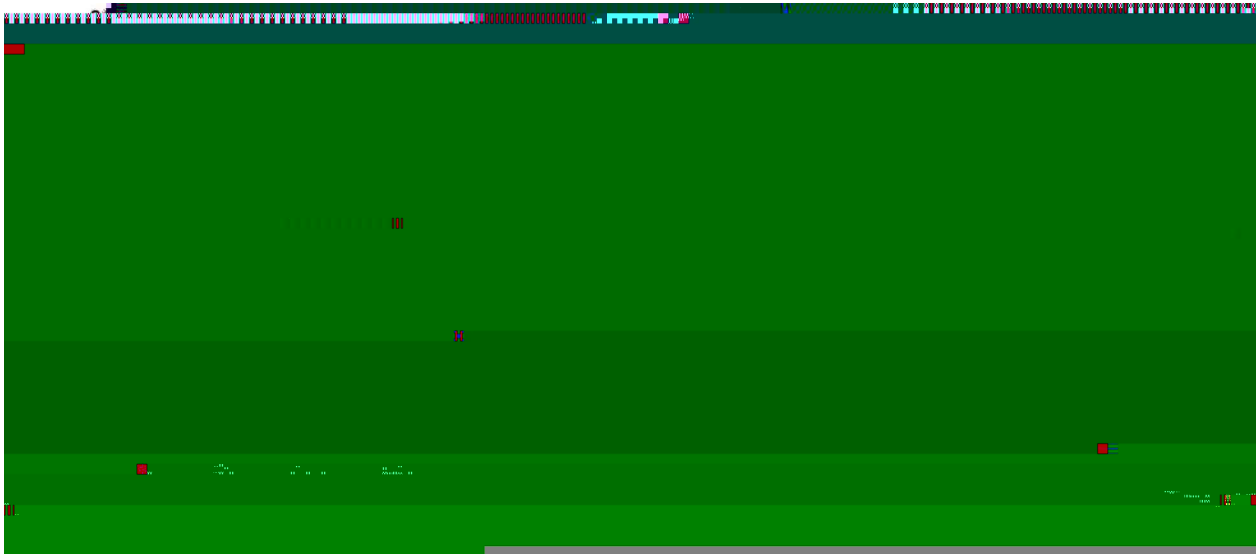
Note:

BR: Company Code.

X458: Product Type.

\*\*\*\*: 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		