

**9012**  
Rev.E Mar.-2016

Silicon PNP transistor in a TO-92 Plastic Package.

High P

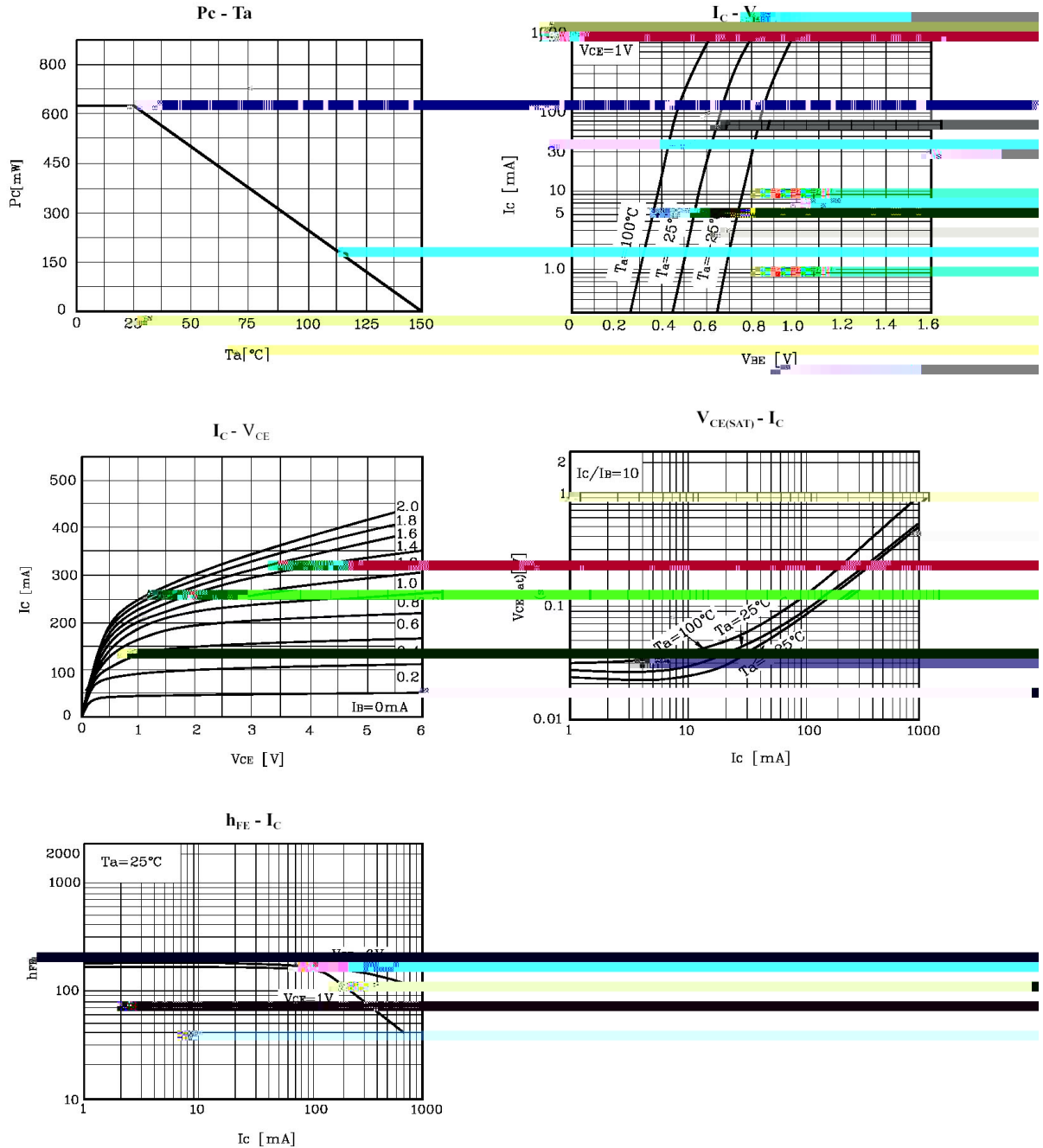
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-40	V
Collector to Emitter Voltage	$V_{CEO}$	-20	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-500	mA
Base Current - Continuous	$I_B$	-100	mA
Collector Power Dissipation	$P_C$	625	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	$V_{CBO}$	$I_C=-0.1mA$ $I_E=0$	-40			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-1.0mA$ $I_B=0$	-20			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-0.1mA$ $I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-25V$ $I_E=0$			-0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-3.0V$ $I_C=0$			-0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-1.0V$ $I_C=-50mA$	64		276	
	$h_{FE(2)}$	$V_{CE}=-1.0V$ $I_C=-500mA$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500mA$ $I_B=-50mA$		-0.18	-0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-500mA$ $I_B=-50mA$		-0.95	-1.2	V
Base to Emitter Voltage	$V_{BE}$	$V_{CE}=-1.0V$ $I_C=-10mA$		-0.67	-0.7	V

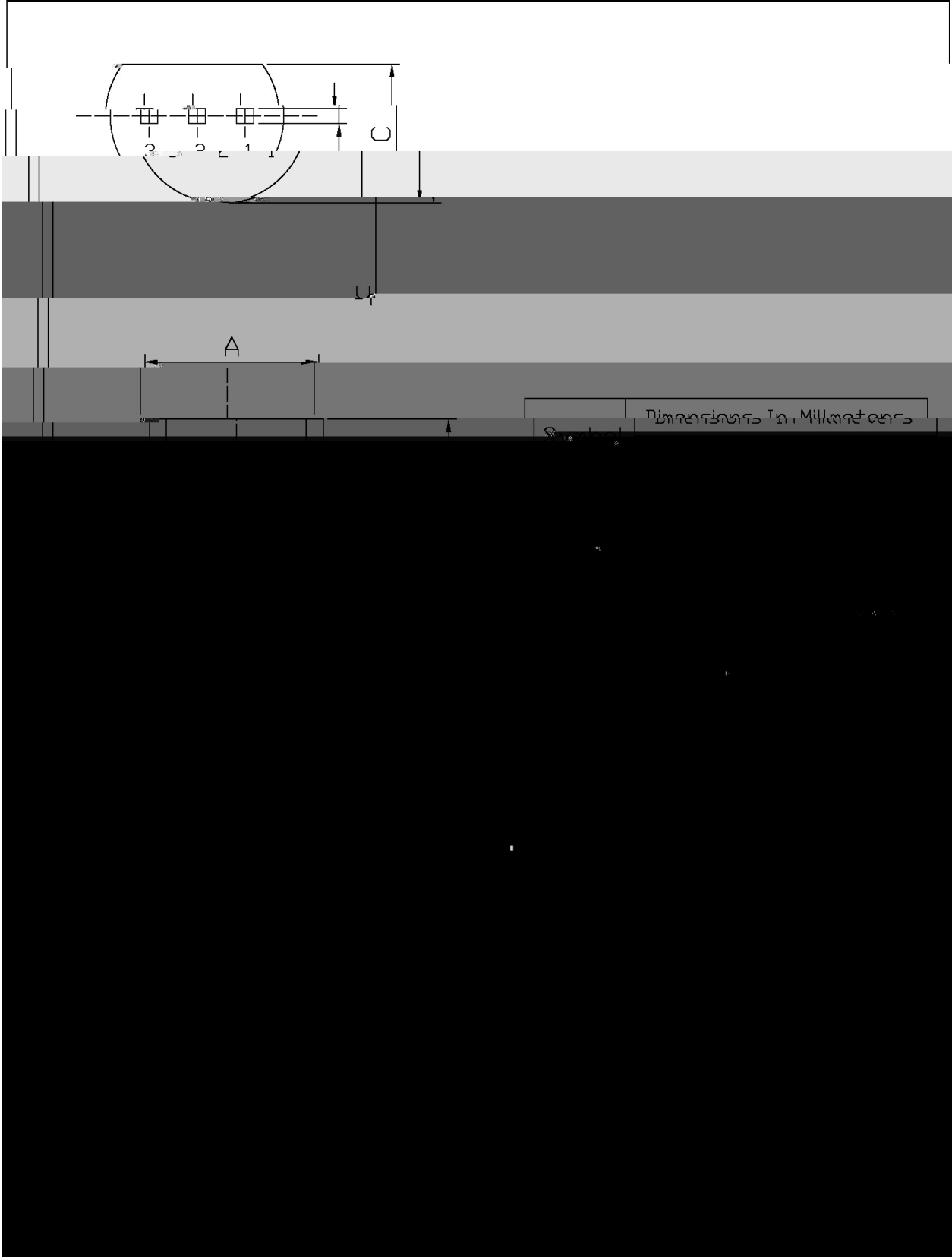
/ Electrical Characteristic Curve



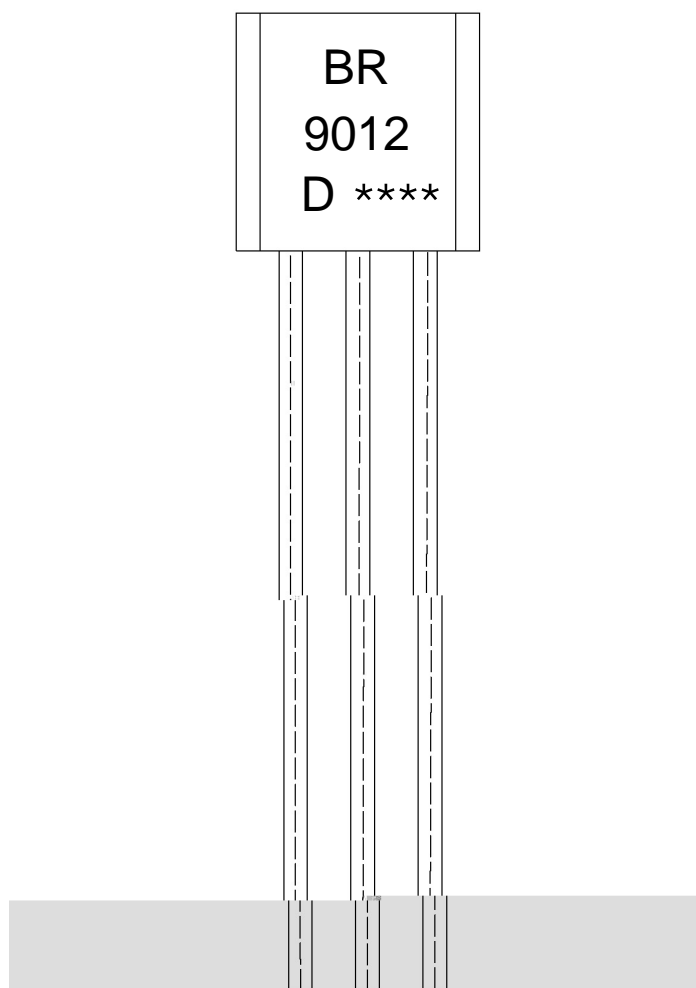
/ Package Dimensions

TO-92

Unit: mm



/ Marking Instructions



Note:

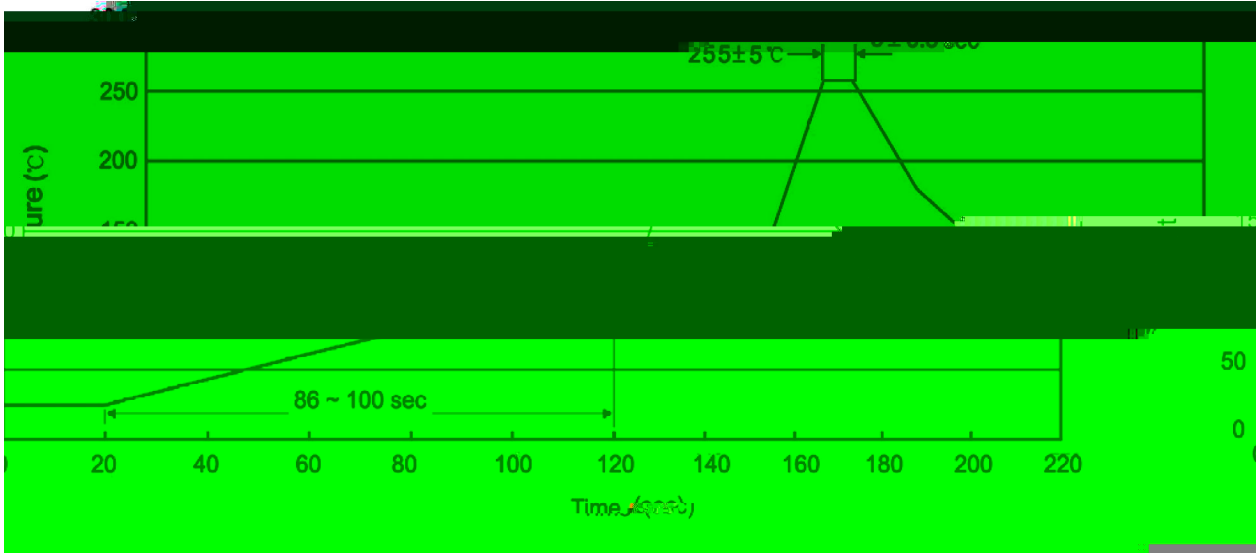
BR: Company Code.

9012: Product Type.

D:  $h_{FE}$  Classifications Symbol.

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

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



- |   |     |     |    |          |   |                                      |
|---|-----|-----|----|----------|---|--------------------------------------|
| 1 | 25  | 150 | 60 | 90sec;   | Note:                                   | 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