

# BC558

Rev.E Mar.-2016

## / Descriptions

TO-92(R)          PNP          Silicon PNP transistor in a TO-92(R) Plastic Package.

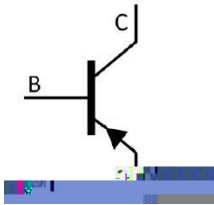
## / Features

High Voltage, Low Noise.

## / Applications

General purpose and switching application.

## / Equivalent Circuit



## / Pinning



PIN1 Emitter          PIN 2 Base          PIN 3 Collector

## / $h_{FE}$ Classifications & Marking

$h_{FE}$ Classifications Symbol	A	B	C
$h_{FE}$ Range	125 250	220 475	420 800

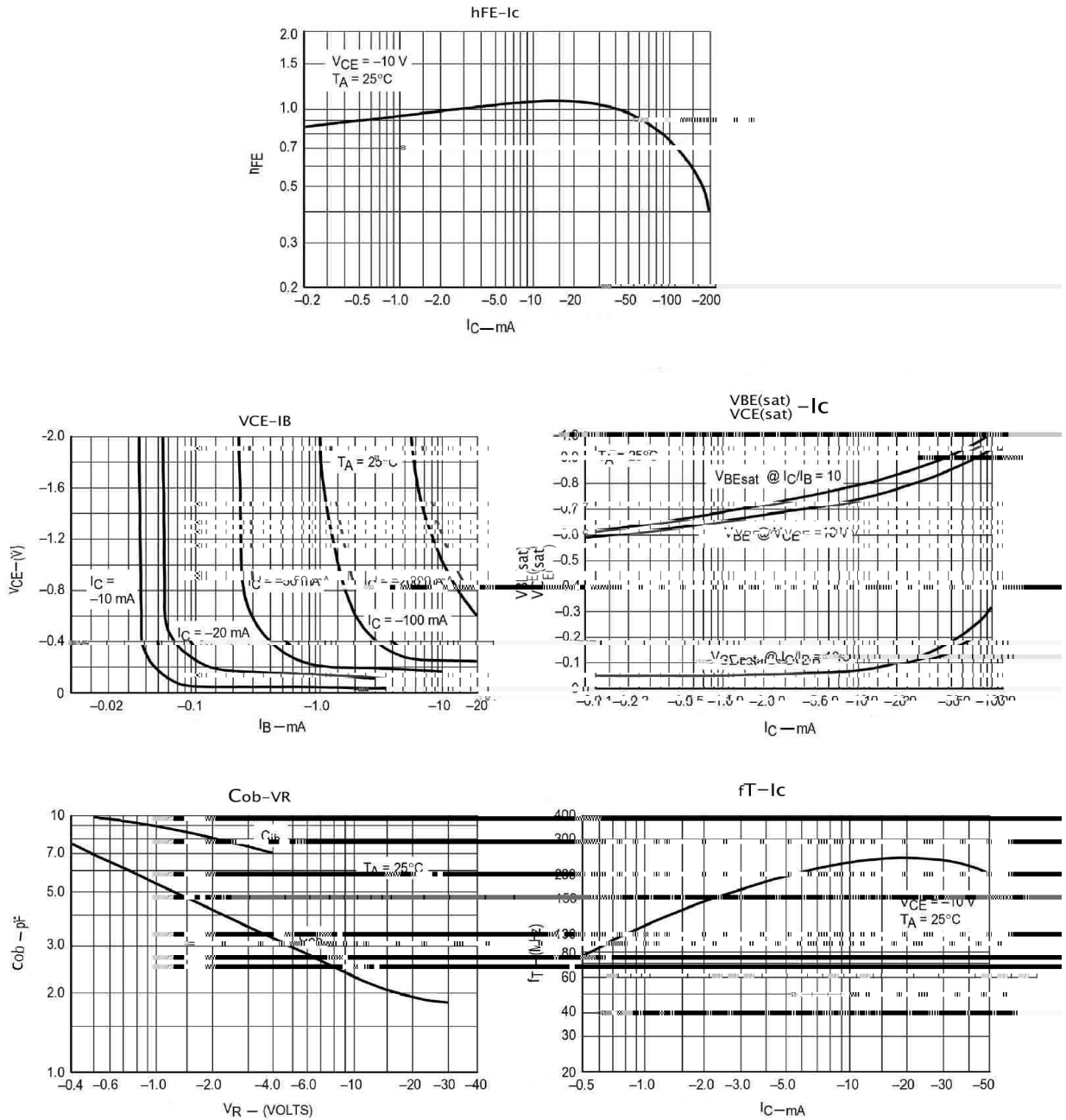
## / Absolute Maximum Ratings(Ta=25 )

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-30	V
Collector to Emitter Voltage	$V_{CEO}$	-30	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-100	mA
Emitter Current - Continuous	$I_E$	100	mA
Collector Power Dissipation	$P_C$	625	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

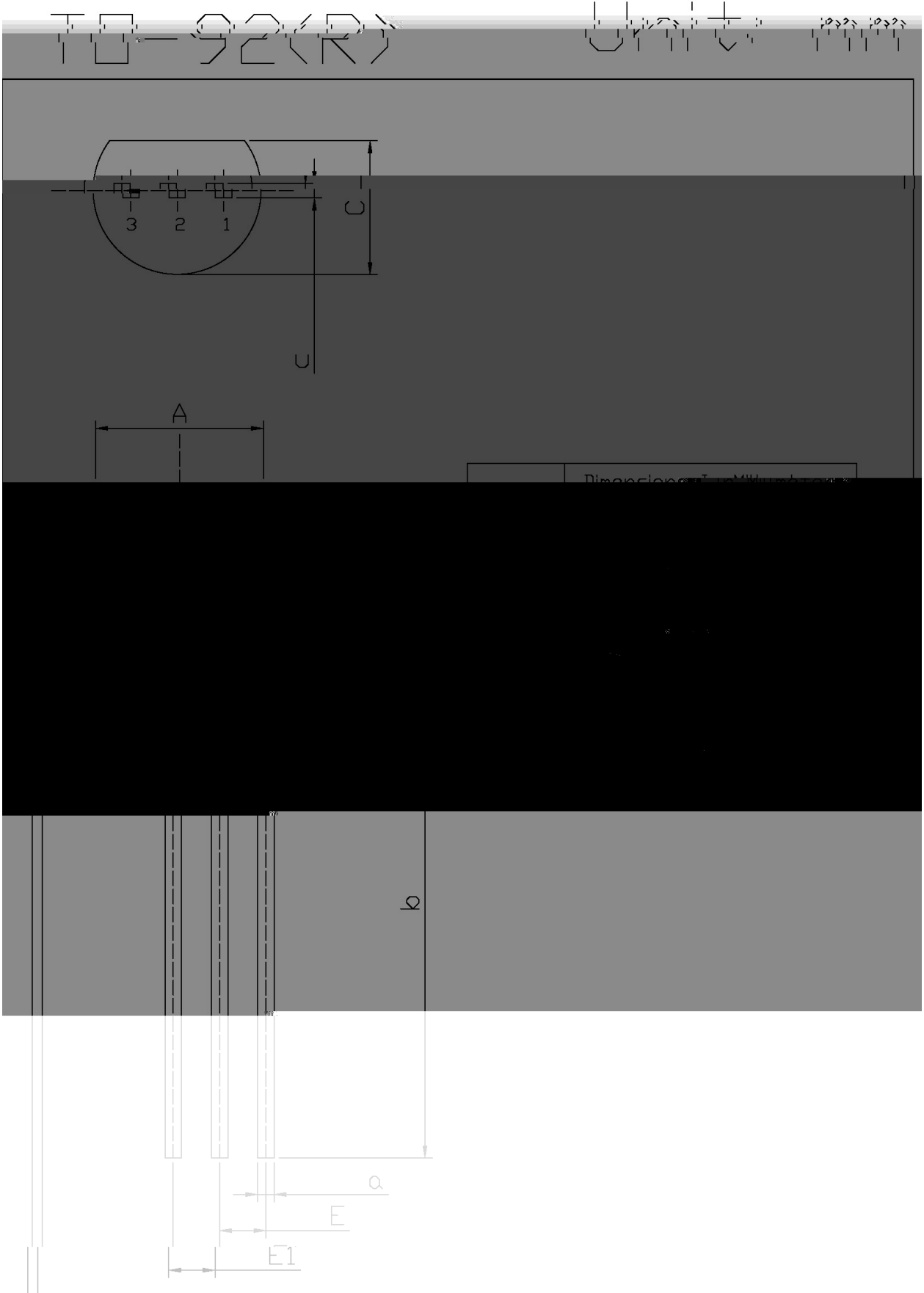
## / Electrical Characteristics(Ta=25 )

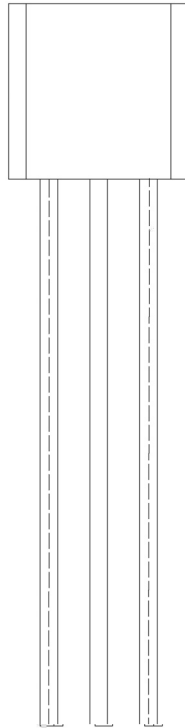
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-30V$ $I_E=0$			-0.015	A
DC Current Gain	$h_{FE}$	$V_{CE}=-5.0V$ $I_C=-2.0mA$	125		800	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100mA$ $I_B=-5.0mA$			-0.65	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100mA$ $I_B=-5.0mA$		-0.9	-1.1	V
Base-Emitter Voltage	$V_{BE(1)}$	$V_{CE}=-5.0V$ $I_C=-2.0mA$	-0.6		-0.75	V
	$V_{BE(2)}$	$V_{CE}=-5.0V$ $I_C=-10mA$			-0.8	V
Current Gain Bandwidth Product	$f_T$	$V_{CE}=-5.0V$ $I_C=-10mA$ $f=100MHz$		150		MHz
Transition Frequency	$C_{ob}$	$V_{CB}=-10V$ $f=1.0MHz$		4.5		pF
Noise Figure	NF	$V_{CE}=-6.0V$ $I_C=-0.1mA$ $R_g=10K$ $f=1.0KHz$		1.0	10	dB

/ Electrical Characteristic Curve

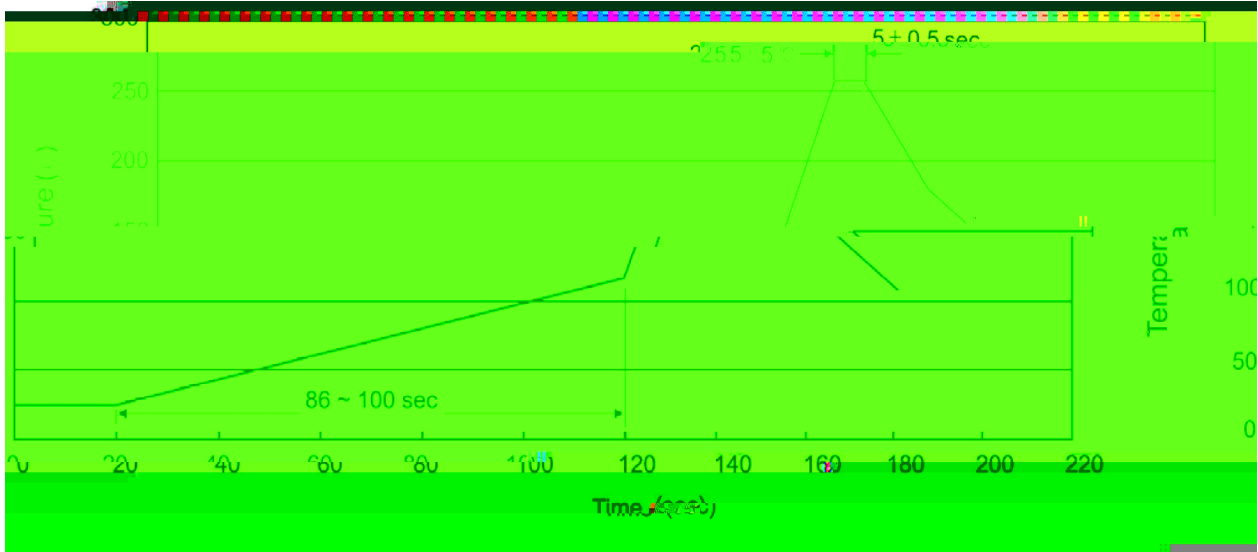


/ Package Dimensions





( ) / 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