

# 2N6125

Rev.H Oct.-2018



DATA SHEET

## / Descriptions

TO-220          PNP          Silicon PNP transistor in a TO-220 Plastic Package.

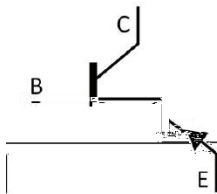
## / Features

2N6122  
Complement to 2N6122.

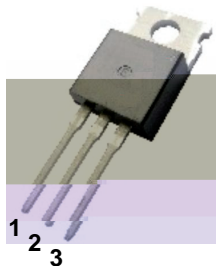
## / Applications

Medium power linear switching applications.

## / Equivalent Circuit



## / Pinning



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

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

See Marking Instructions.

## / Absolute Maximum Ratings(Ta=25 )

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-60	V
Collector to Emitter Voltage	$V_{CEO}$	-60	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-4.0	A
Peak Collector Current	$I_{CM}$	-7.0	A
Base Current - Continuous	$I_B$	-1.0	A
Collector Power Dissipation	$P_C(T_C=25)$	40	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

## / Electrical Characteristics(Ta=25 )

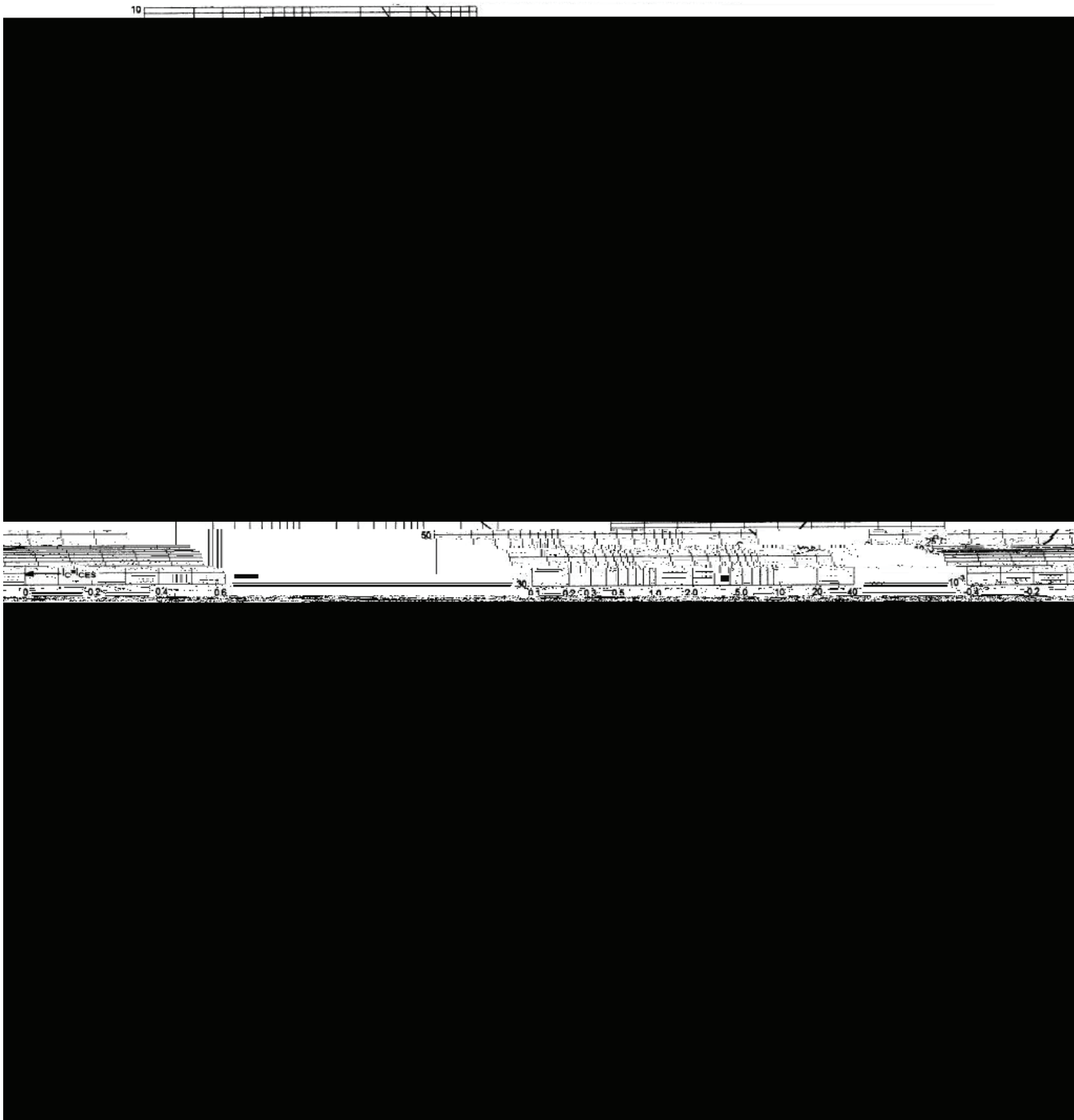
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage*	* $V_{CEO}$	$I_C=-100mA$ $I_B=0$	-60			V
Collector to Emitter Breakdown Voltage	$V_{CBO}$	$I_C=-1mA$ $I_E=0$	-60			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-1mA$ $I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-60V$ $I_E=0$			-0.1	mA
Collector Cut-Off Current	$I_{CEO}$	$V_{CE}=-60V$ $I_B=0$			-1.0	mA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-1.0	mA
DC Current Gain	* $h_{FE(1)}$	$V_{CE}=-2.0V$ $I_C=-1.5A$	25		100	
	* $h_{FE(2)}$	$V_{CE}=-2.0V$ $I_C=-4.0A$	10			
Collector to Emitter Saturation Voltage*	* $V_{CE(sat)}$	$I_C=-1.5A$ $I_B=0.15A$			-0.6	V
Collector to Emitter Saturation Voltage*	* $V_{CE(sat)}$	$I_C=-4.0A$ $I_B=-1.0A$			-1.4	V
Base to Emitter On Voltage*	* $V_{BE(on)}$	$I_C=-1.5A$ $V_{CE}=-2.0V$			-1.2	V
Transition Frequency	$f_T$	$I_C=-1.0A$ $V_{CE}=-4.0V$ $f=1.0MHz$	2.5			MHz

\*Pulse test: pulse width 300  $\mu$ s; duty cycle 2%.

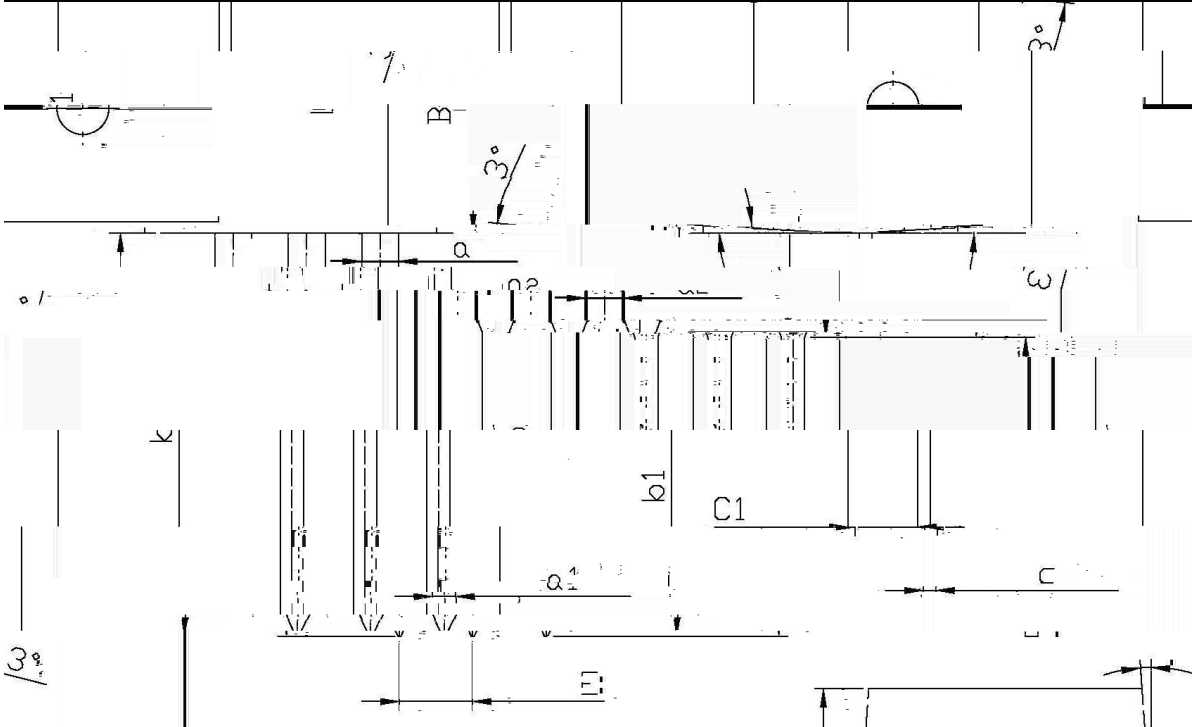
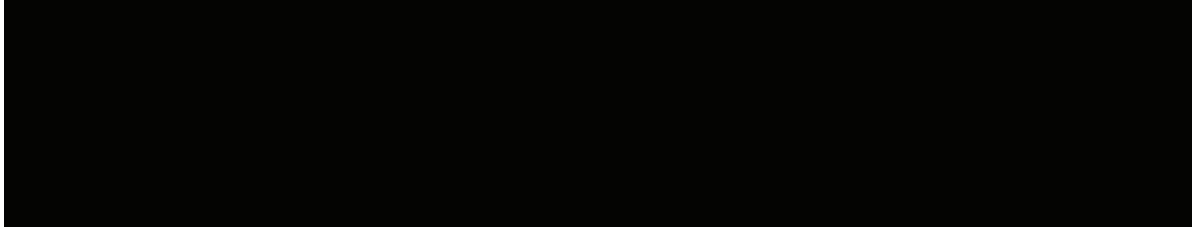
\* 300 $\mu$ s 2%

/ Electrical Characteristic Curve

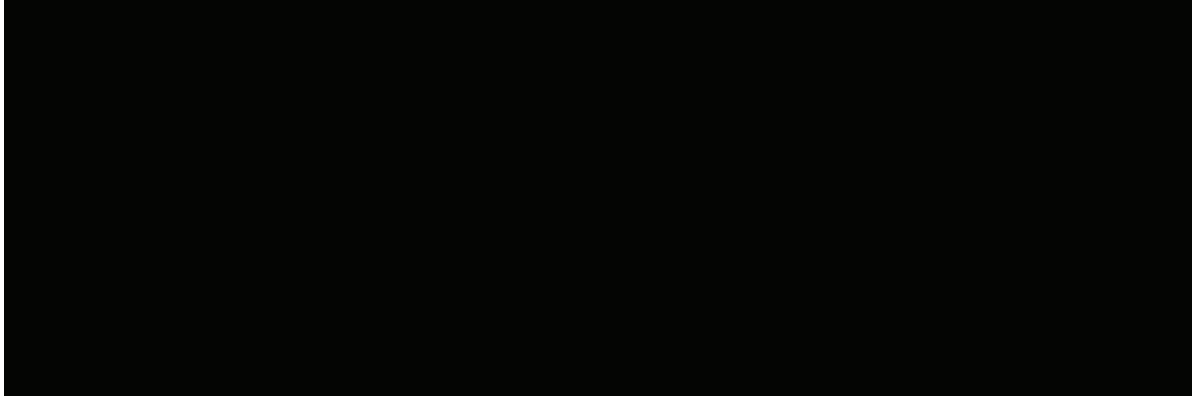
(SOA)



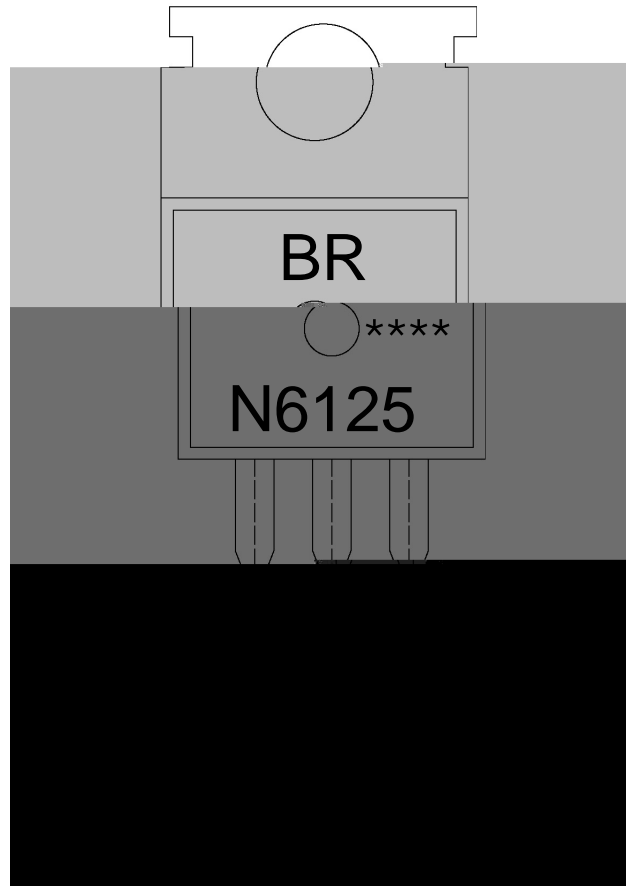
/ Package Dimensions



Dimensions in millimeter (mm)      Dimensions in millimeter (mm)



/ Marking Instructions



BR

N6125

\*\*\*\*

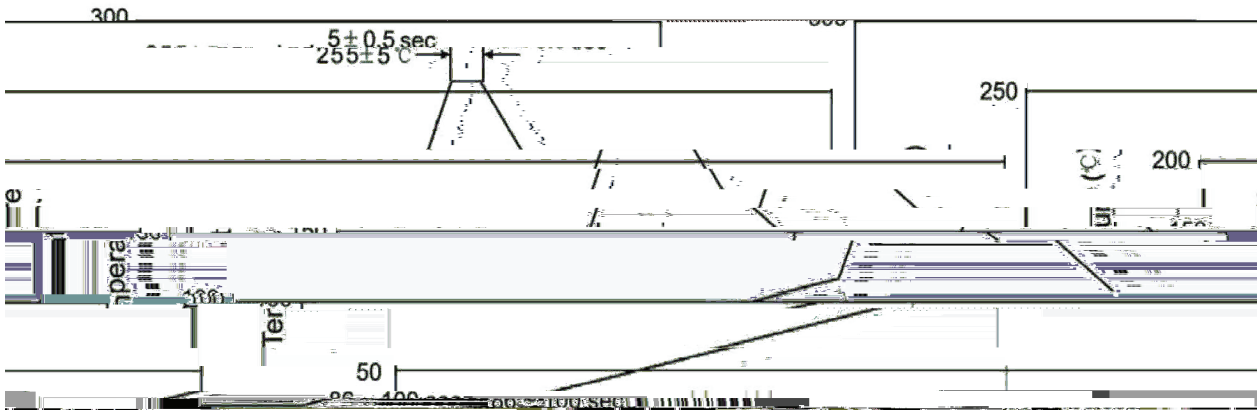
Note:

BR: Company Code

N6125: Product Type.

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

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



- |   |        |           |   |
|---|--------|-----------|---|
| 1 | 25 150 | 60 90sec; | Note:<br>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 mm <sup>3</sup> )		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

**/ TUBE**

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

**/ Notices**