

/ Descriptions

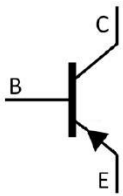
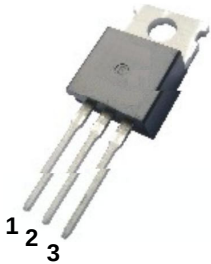
Silicon PNP transistor in a TO-220 Plastic Package.

/ Features

Complement to .

/ Applications

Use in general-purpose amplifier and 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)

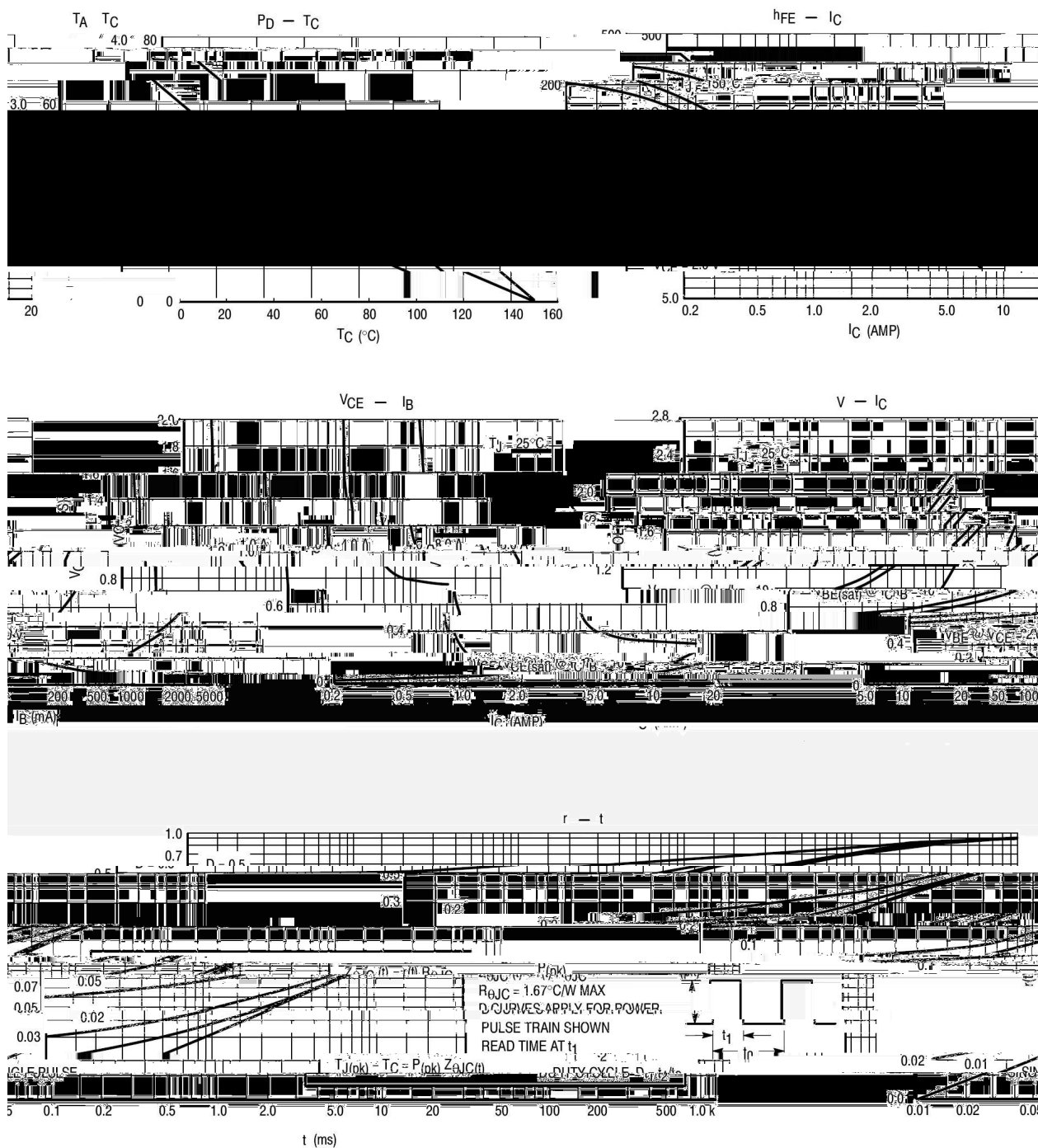
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-90	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-15	A
Base Current	I_B	-5.0	A
Total Power Dissipation	$P_D(T_C=25^{\circ}\text{C})$	75	W
	$P_D(T_A=25^{\circ}\text{C})$	1.8	W
Operating and Storage Junction Temperature Range	$T_j T_{stg}$	-65~+150	
Thermal Resistance Junction to Case	R_{JC}	1.67	/W
Thermal Resistance Junction to Ambient	R_{JA}	70	/W

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C=-200\text{mA}$ $I_B=0$	-80			V
Collector Emitter Sustaining Voltage	V_{CEX}	$I_C=-200\text{mA}$ $V_{BE}=-1.5\text{V}$	-90			V
Collector Cut-Off Current	I_{CEX}	$V_{CB}=-85\text{V}$ $V_{BE(off)}=-1.5\text{V}$			-500	A
		$V_{CB}=-80\text{V}$ $V_{BE(off)}=-1.5\text{V}$ $T_C=150^{\circ}\text{C}$			-5.0	A
Collector Cut-Off Current	I_{CEO}	$V_{CE}=-40\text{V}$ $I_B=0$			-1.0	mA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0\text{V}$ $I_C=0$			-1.0	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-4.0\text{V}$ $I_C=-5.0\text{A}$	20		150	
	$h_{FE(2)}$	$V_{CE}=-4.0\text{V}$ $I_C=-15\text{A}$	5.0			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-5.0\text{A}$ $I_B=-0.5\text{A}$			-1.3	V
		$I_C=-15\text{A}$ $I_B=-5.0\text{A}$			-3.5	V
Base to Emitter On Voltage	$V_{BE(on)}$	$I_C=-5.0\text{A}$ $V_{CE}=-4.0\text{V}$			-1.3	V
		$I_C=-15\text{A}$ $V_{CE}=-4.0\text{V}$			-3.5	V
Transition Frequency	f_T	$I_C=-1.0\text{A}$ $f=1.0\text{MHz}$ $V_{CE}=-4.0\text{V}$	5.0			MHz
Small-Signal Current Gain	h_{fe}	$I_C=-1.0\text{A}$ $f=1.0\text{kHz}$ $V_{CE}=-4.0\text{V}$	25			

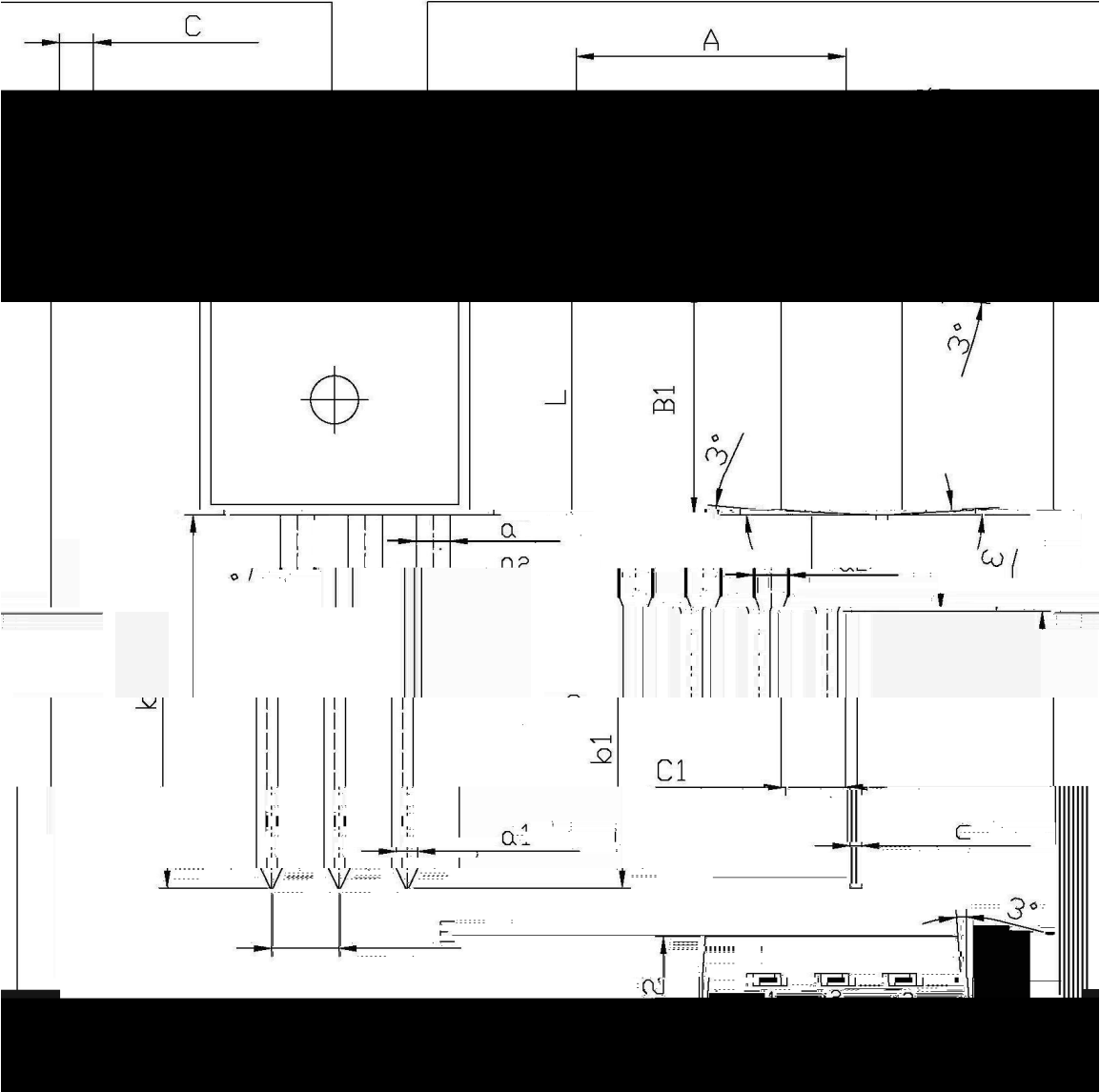
*Pulse test: pulse width 300 μs ; duty cycle 2%.

/ Electrical Characteristic Curve



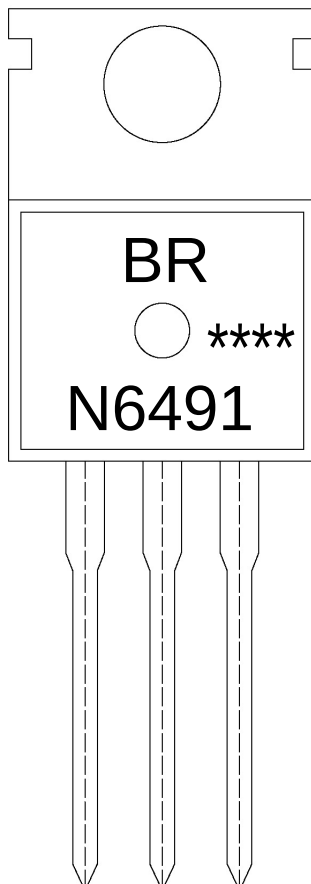
/ Package Dimensions

单位: mm TO-220 E



Dimensions in millimeters			Dimensions in millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	9.8	10.2	C	1.2	1.4
B	3.56	3.64	E	6.3	6.7
P	15.7	16.1	a	0.4	0.6
B1	9.0	9.4	E	4.3	4.7
C1	2.2	2.6	Q2	1.25	1.45

/ Marking Instructions



BR

N6491

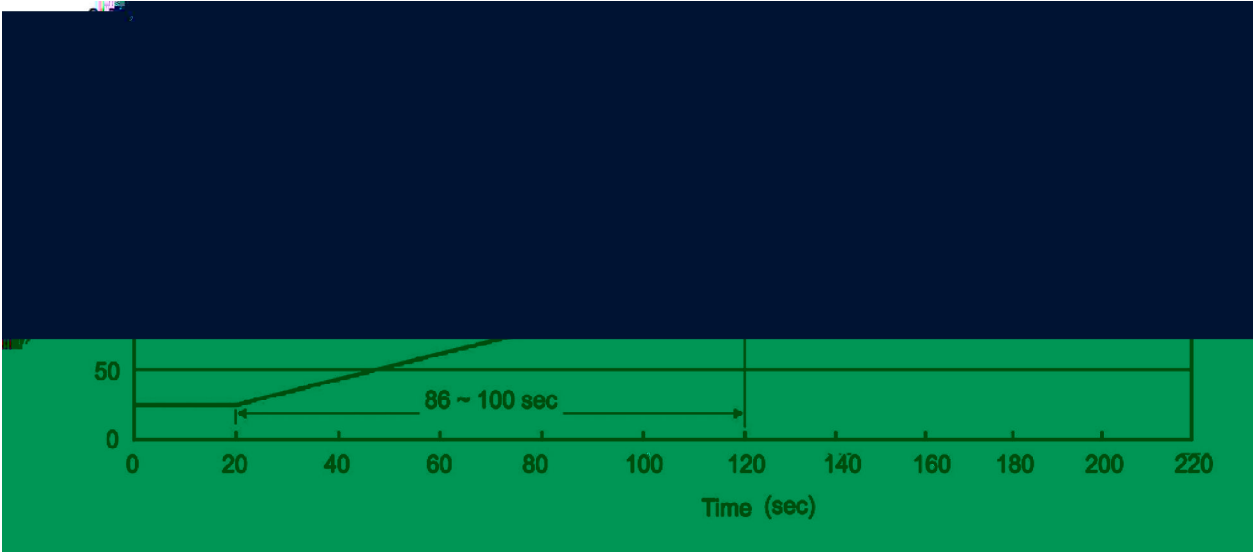
Note:

BR: Company Code

N6491: 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 mm ³)
	Units/Bag	Bags/Inner Box		