

/ Descriptions

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

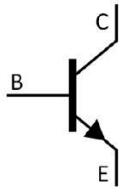
/ Features

High power gain, wide ASO.

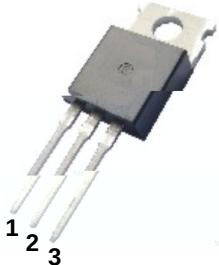
/ Applications

Transceiver final amplifier application, HF transceiver application.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

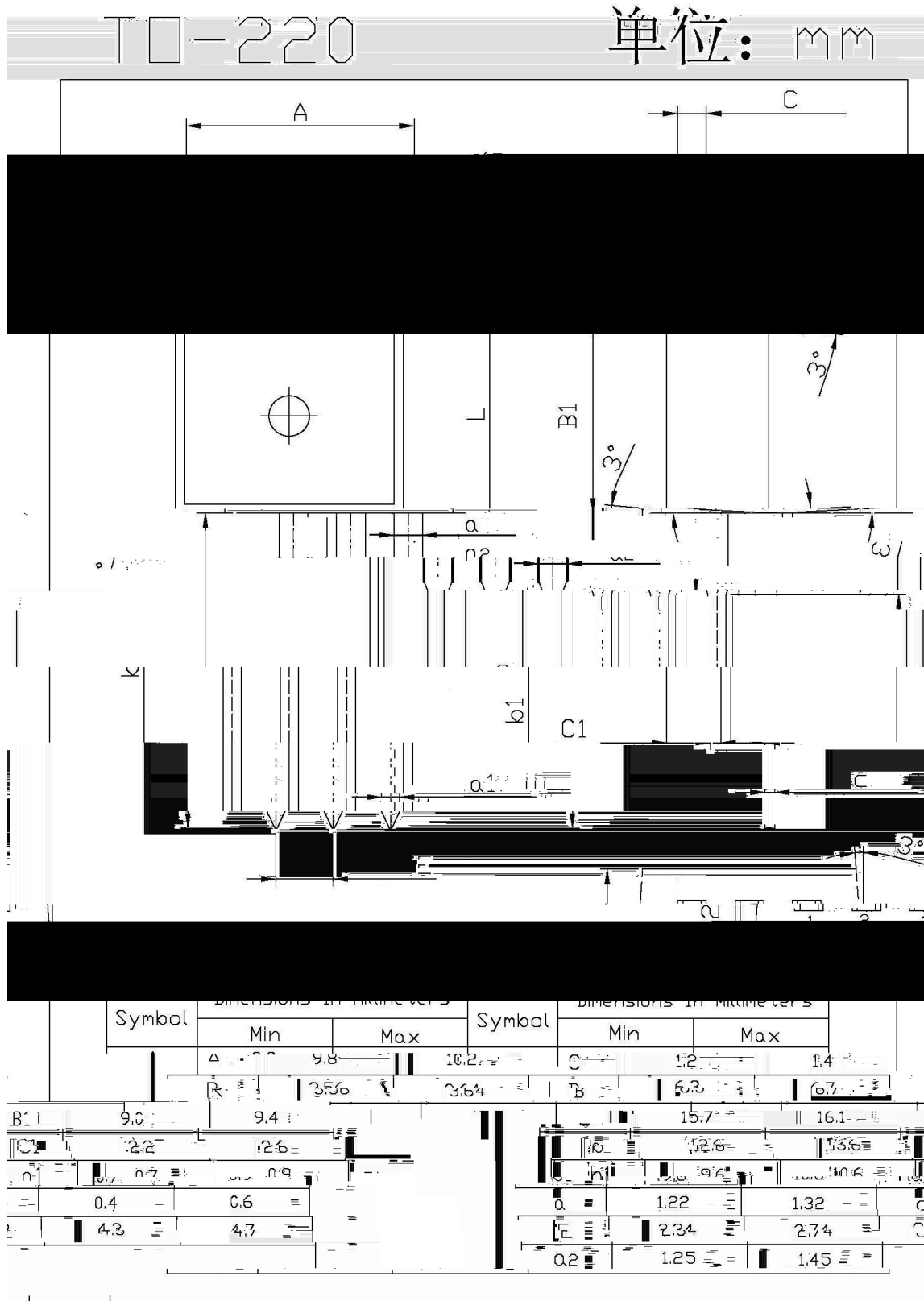
See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25

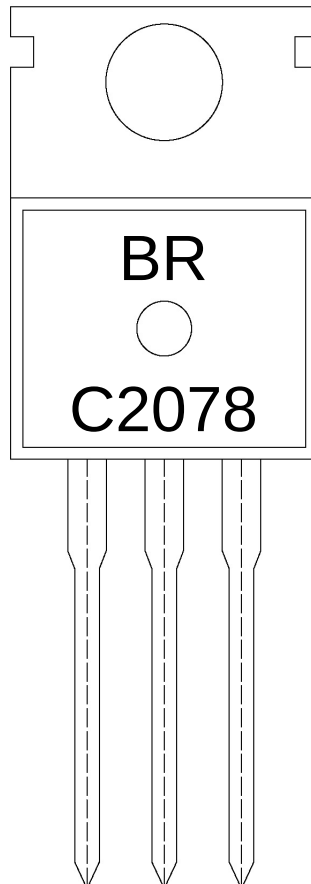
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	$V_{CER(RBE=50\Omega)}$	80	V
Emitter to Base Voltage	V_{EBO}	4.0	V
Collector Current - Continuous	I_C	4.0	A
Emitter Current - Continuous	I_E	-4.0	A
Collector Power Dissipation	$P_C(T_C=25^\circ C)$	10	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 150	$^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$V_{(BR)CER}$	$I_C=10mA$ $R_{BE}=50\Omega$	80			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1.0mA$ $I_C=0$	4.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			10	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=500mA$	100		200	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3.0A$ $I_B=300mA$			1.5	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=500mA$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		40		pF
Output Power	P_O	$V_{CC}=12V$ $P_i=300mW$ $f=27MHz$	4.0			W

/ Package Dimensions



/ Marking Instructions



BR

C2078

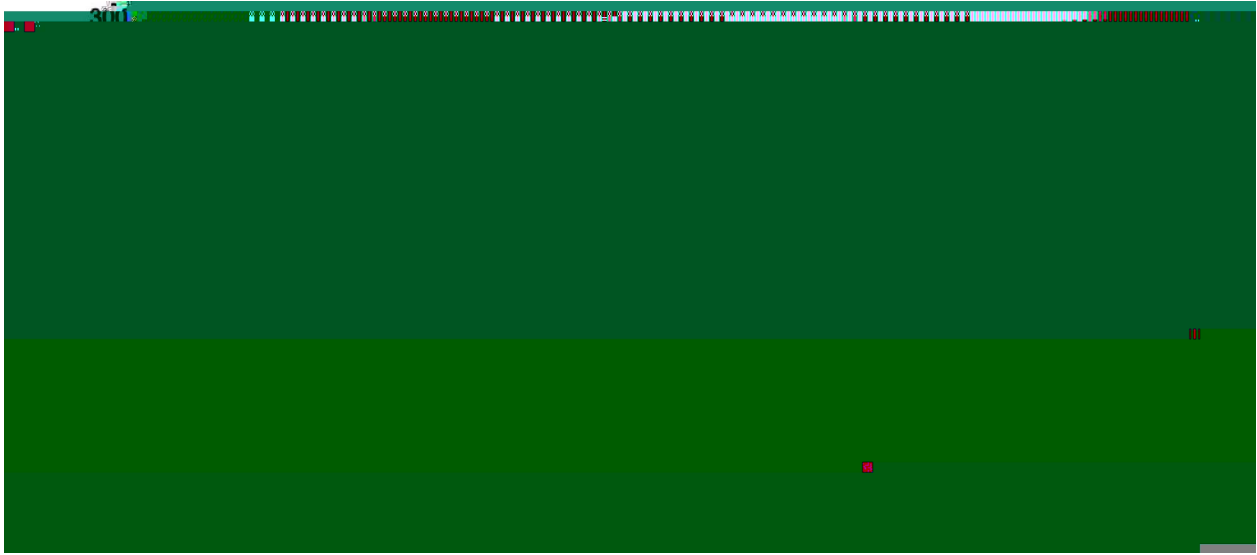
Note:

BR: Company Code

C2078: 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 袋	袋 盒	只 盒	盒 箱	只 箱	袋	盒	箱

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 套管	套管 盒	只 盒	盒 箱	只 箱	套管	盒	箱

/ Notices