

/ Descriptions

WR0553I QSQ Silicon NPN transistor in a TO-220F Plastic Package.

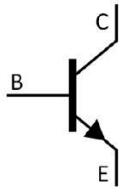
/ Features

/ / 5VB4899
Low $V_{CE(sat)}$, wide SOA, complements the 2SB1566.

/ Applications

/ Voltage regulator, DC-DC converter and relay driver audio frequency power Amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	E	F
h_{FE} Range	100 200	160 320

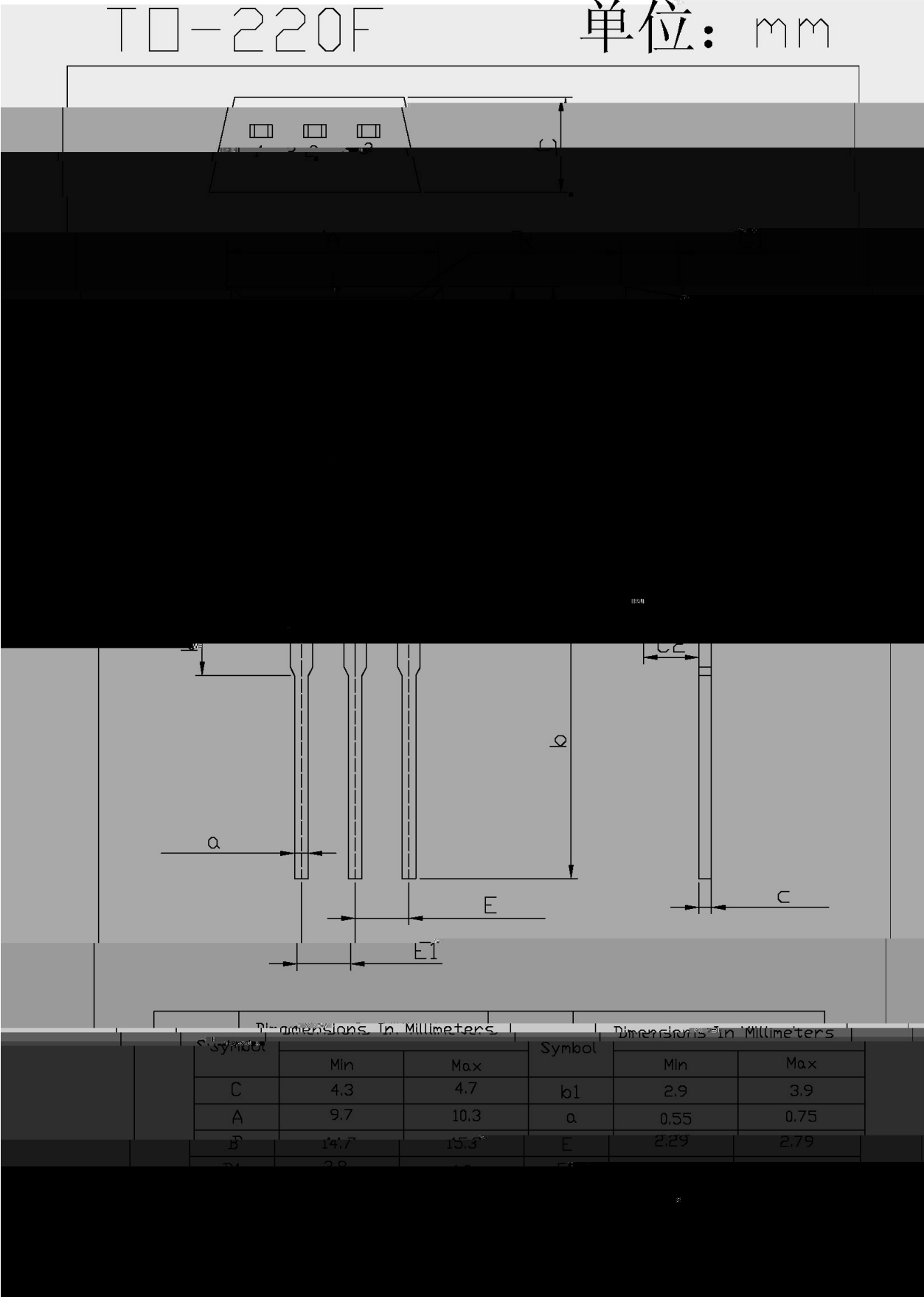
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$	25	W
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55 150	$^{\circ}C$

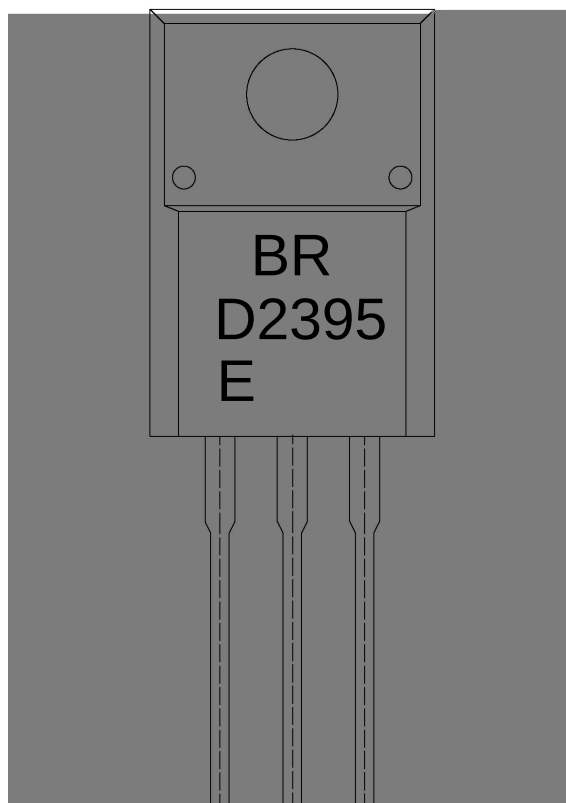
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50\mu A$	60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$	50			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=50\mu A$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=40V \quad I_E=0$			1.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4.0V \quad I_C=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V \quad I_C=500mA$	100		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A \quad I_B=0.2A$			1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A \quad I_B=0.2A$			1.5	V
Transition Frequency	f_T	$V_{CE}=5.0V \quad I_C=500mA$		100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V \quad I_E=0 \quad f=1.0MHz$		35		pF

/ Package Dimensions



/ Marking Instructions



BU

G56<8

H=

h_{IH}

Note:

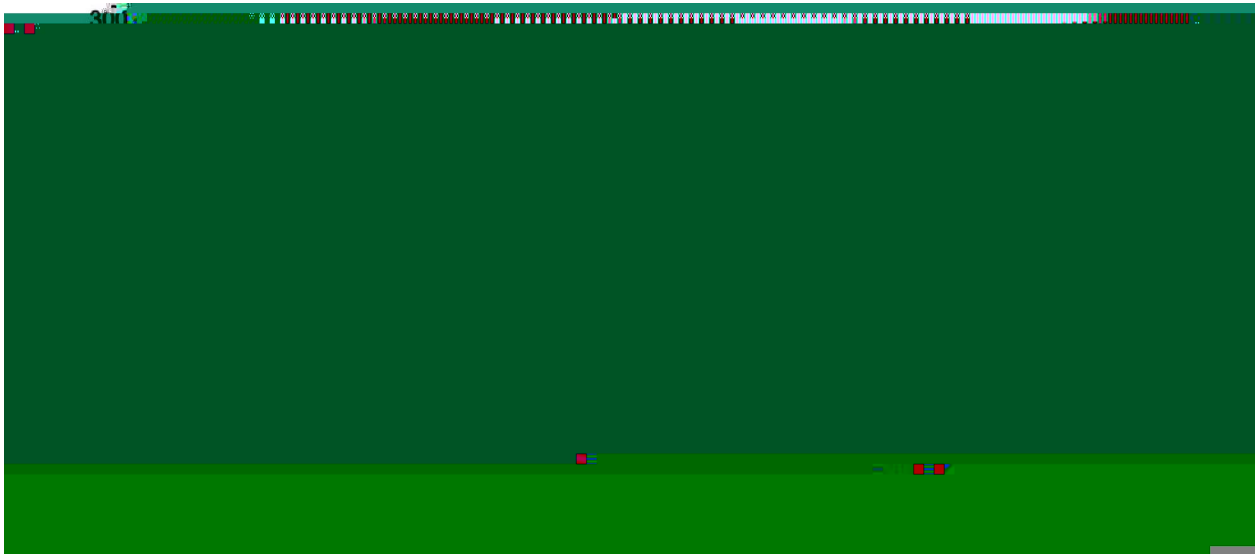
BR: Company Code.

D2395: Product Type.

E: h_{FE} Classifications Symbol

****: 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