2SD2395

Rev.E Mar.-2016

DATA SHEET

/ Descriptions

WR0553I ṂṂ Ḷ QSQ ÆṀ ч s ‖ ⅂ Silicon NPN transistor in a TO-220F Plastic Package.

/ Features

ت ⊃ я ں ṇ / Ḳ ⊞Ḡ ъ Ṫ Ă ת /ль 5VE4899 ب́M

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

/ Applications

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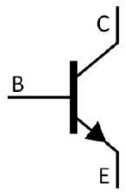
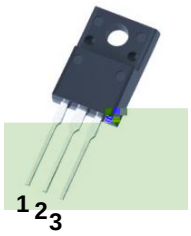
Voltage regulator, DC-DC converter and relay driver audio frequency power Amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 χ Base PIN 2 χ Collector PIN 3 χ Emitter

/ h_{FE} Classifications & Marking

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

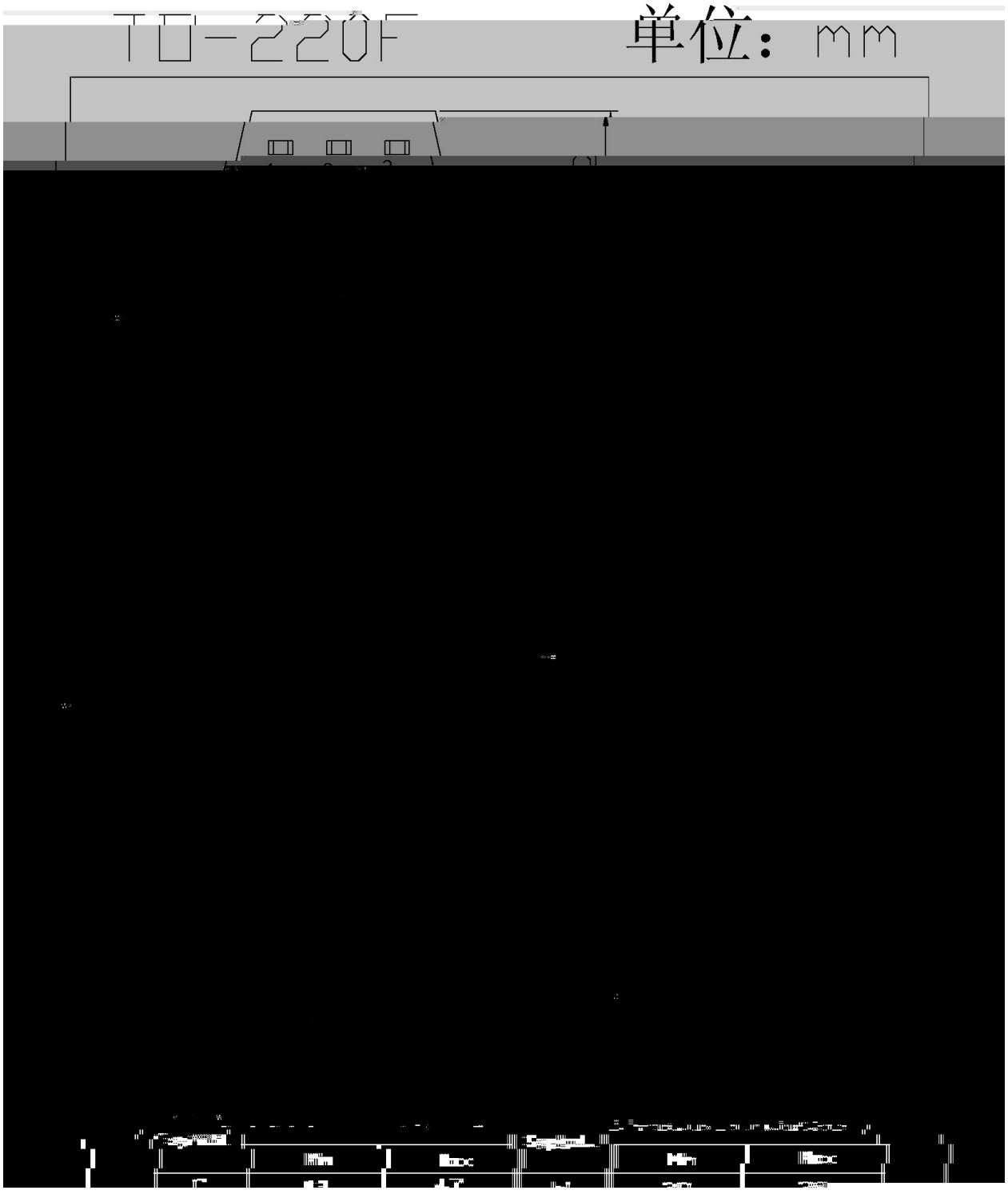
/ Absolute Maximum Ratings(Ta=25)

v ̈Ω̣ Parameter	ɬ N Symbol	̈Ω̣ Ö Rating	D Ɉ 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	$P_C(T_C=25\ )$	25	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

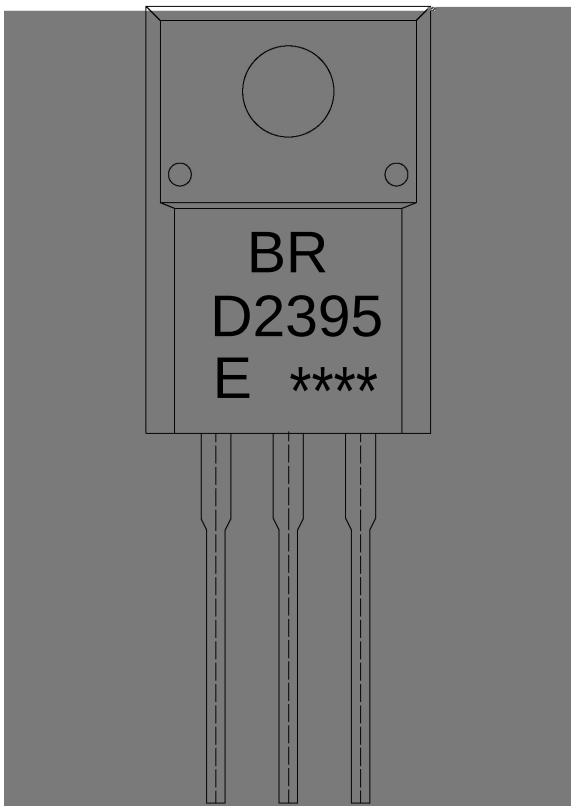
/ Electrical Cha2gcteristics(Ta=25)

v ̈Ω̣ Parameter	ɬ N Symbol	⅃ ⁝ ̊ Ţ Test Conditions	ω̣ ṇ Ö Min	Ɛ ʒ Ö Typ	ω̣ ᶻ Ö Max	D Ɉ Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=50μA	60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA	50			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=50μA	5.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=40V I_E=0			1.0	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4.0V I_C=0			1.0	μA
DC Current Gain	h_{FE}	V_{CE}=5.0V I_C=500mA	100		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2.0A I_B=0.2A			1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=2.0A I_B=0.2A			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		35		pF

/ Package Dimensions

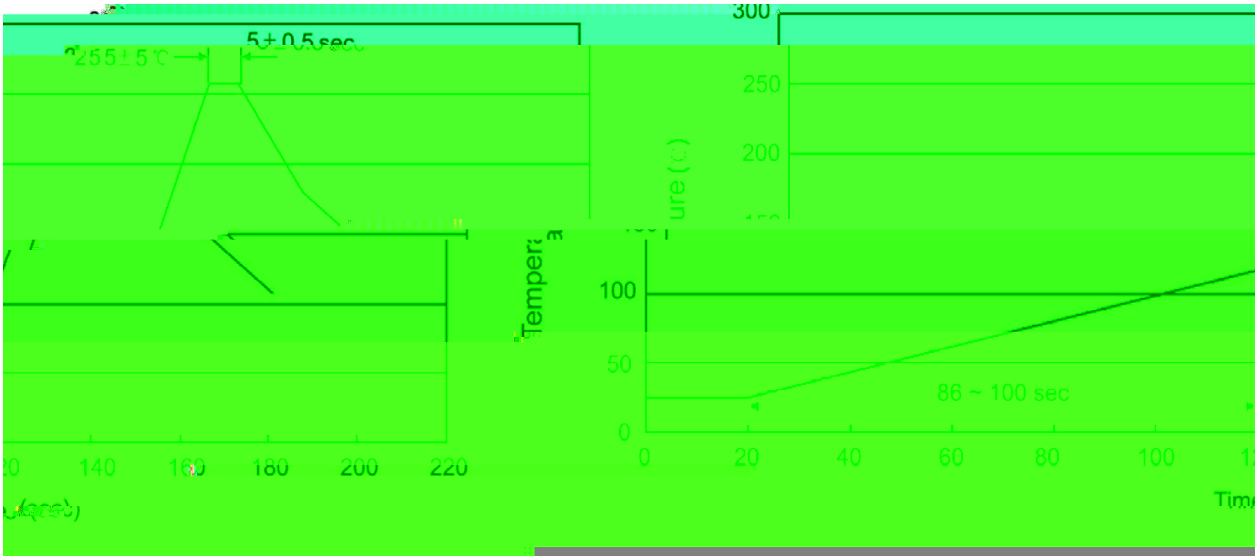


/ Marking Instructions



ب ˝ χ	
EU χ	⌘ ⅔ ᴵᴵ ⊓
G56<8 χ	⌘ ⅋ ᴺ ⊓
H=	⌘ kᴵᴴ ʿ ᶠ ⊓
---- χ	⌘ ⅎ ⅎ ŋ̈ ᴺ ⊓ ı ⅋ ⅎ ⅎ ŋ̈ ᴺ ψ ק
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)



ب ˝ χ

1 ƒ ♬ □ ỷ 25 Ḱ 150 ɫ ı `H ڑ 60 Ḱ 90sec;

2 Š Ö □ ỷ 255 ° 5 ɫ ı `H ڑ ˋY ⺈ ⺮ 5 ° 0.5sec;

3 ì ˙ ⺈ ˛ ɔ ھ ỷ ⺮ 2 Ḱ 10 ɫ /sec.

Note:

1.Preheating:25~150 ɫ , Time:60~90sec.

2.Peak Temp.:255 ° 5 ɫ , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ɫ /sec.

/ Resistance to Soldering Heat Test Conditions

□ ỷ χ 270 ° 5 ɫ `H ڑ χ 10 ° 1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

ˋΩ ţ γ Ł / BULK

Package Type	Units					Dimension (unit mm^3)		
	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