2SC3852
Rev.F Mar.-2016

DATA SHEET

/ Descriptions

WR0553I ṂṂ Ŀ QSQ ᴁṀ ɥ s ǁ ᒉ Silicon NPN transistor in a TO-220F Plastic Package.

/ Features

ϫῷ ᶻ/ت ᵓ ᴙ ᴗ Ḩ

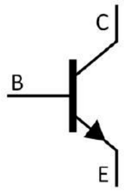
High h_{FE}, low $V_{CE(sat)}$.

/ Applications

Ẽ̮̂ ᴐ ᵓ ᚿ ᒉ ἰ Ʊ ı ʖ Ω̰̃ ᴴ ᴎ̊ ᵓ ˘ ȉ ᴗ

Driver for solenoid and motor, series regulator and general purpose.

/ Equivalent Circuit



/ Pinning

PIN1 χ Base PIN 2 χ Collector PIN 3 χ Emitter

/ h_{FE} Classifications & Marking

ð ᴍ ᒉ ب ˝ See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

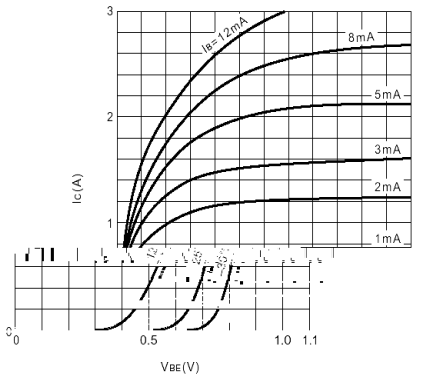
v ̈Ω Parameter	ϒ N Symbol	̈Ω Ö Rating	D Ч Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	3.0	A
Base Current	I_B	1.0	A
Collector Power Dissipation	P_C(Tc=25)	25	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

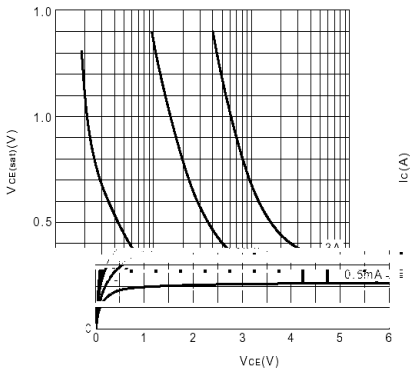
v ̈Ω Parameter	ϒ N Symbol	Ш ː ̊ Ţ Test Conditions	ω ŋ Ö Min	Ɛ ʒ Ö Typ	ω ᶻ Ö Max	D Ч Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=25mA	60			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=80V I_E=0			10	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=6.0V I_C=0			100	μA
DC Current Gain	h_{FE}	V_{CE}=4.0V I_C=500mA	500		2000	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2.0A I_B=50mA			0.5	V
Transition Frequency	f_T	V_{CE}=12V I_C=0.2A		15		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz		50		pF

/ Electrical Characteristic Curve

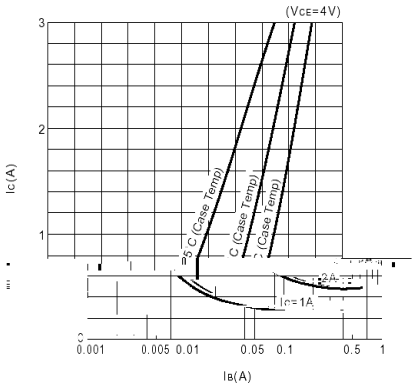
IC–VCE



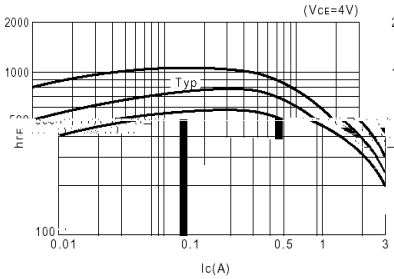
VCE(sat)–IB



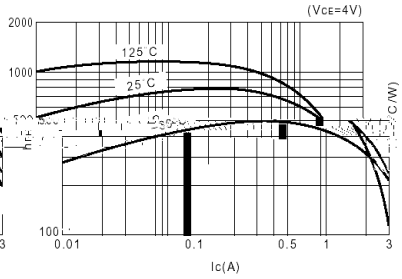
IC–VBE



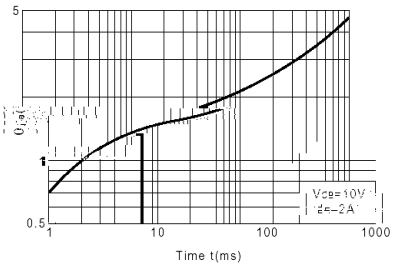
hFE–IC



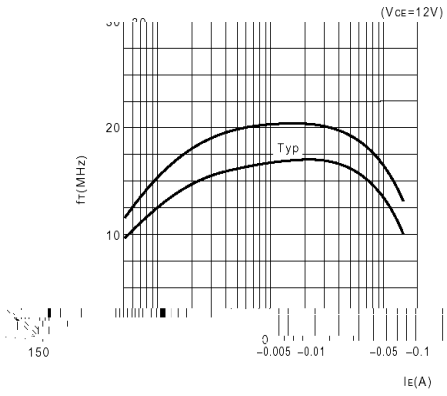
hFE–IC



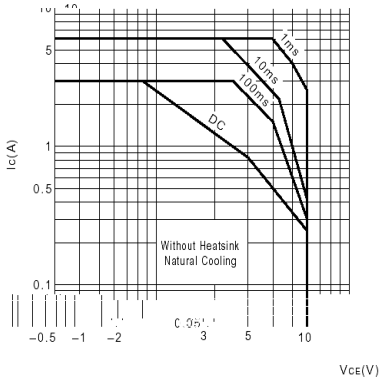
θj-a–t



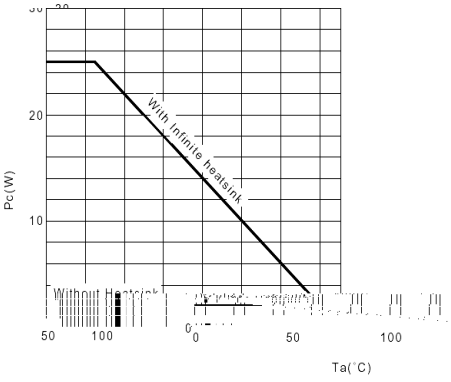
fT–IE



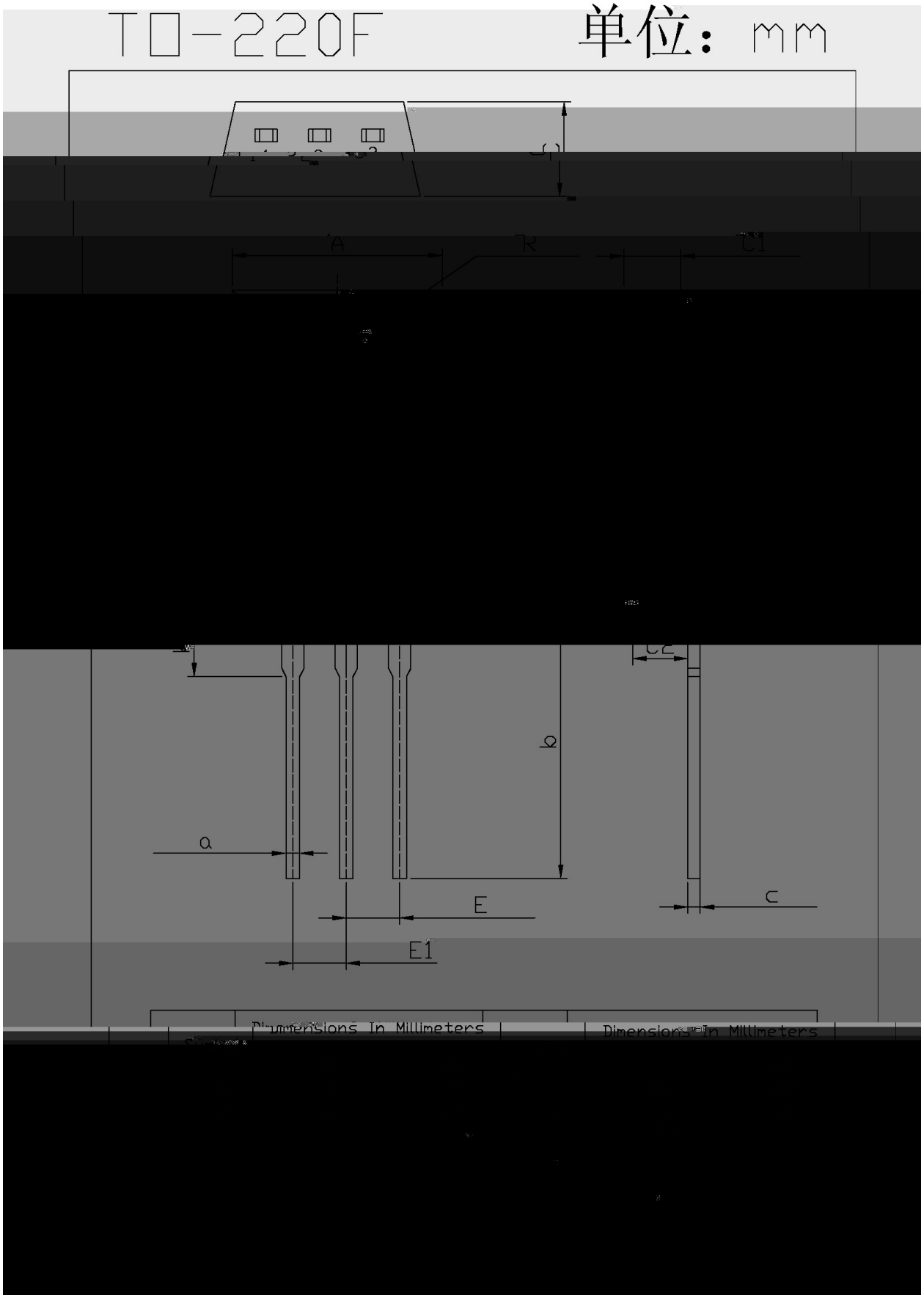
Safe Operating Area



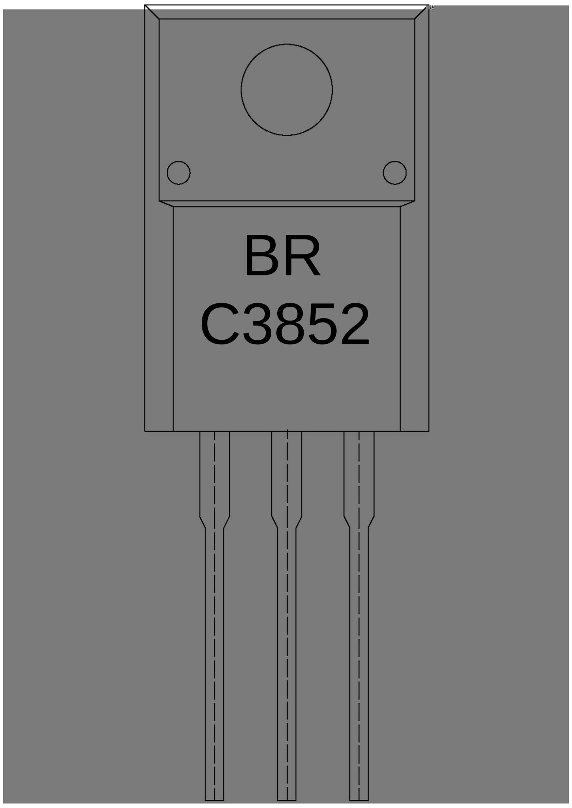
Pc–Ta



/ Package Dimensions



/ Marking Instructions



ب ˝ χ

EU χ ꟷ ३ ᴎ ᒥϧ

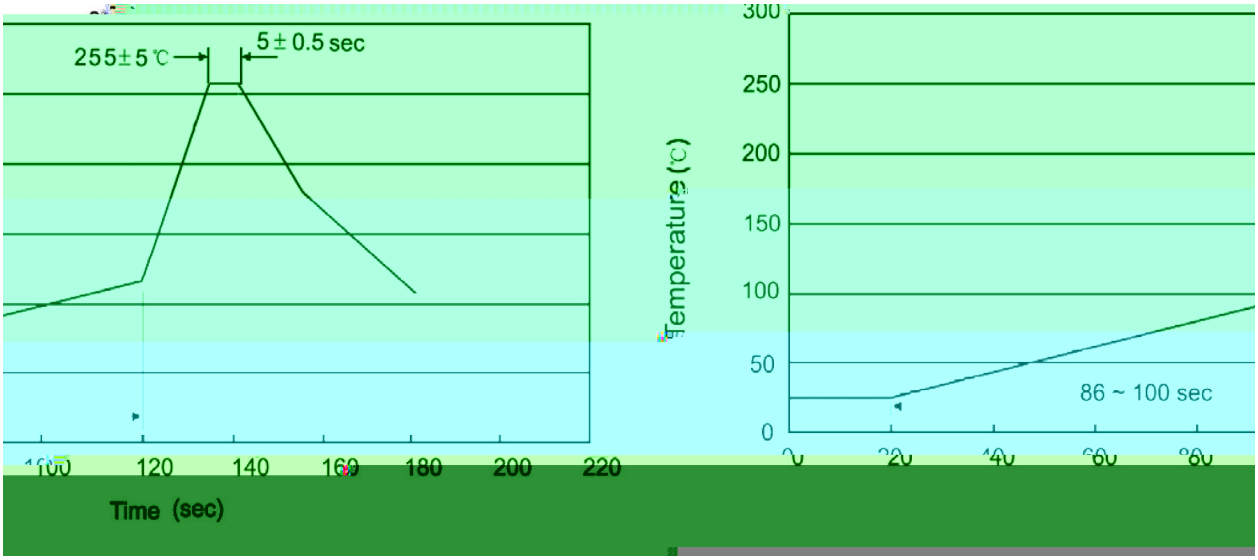
F6 ; 85 χ ꟷ ʒ ᴺ ᒥϧ

- - - - χ ꟷ ꟷ ꞙ ῆ ᴺ ᒥϧ ɩ ɕ ꟷ ꞙ ῆ ᴺ ψ ꝓ

Note:

BR:	Company Code.
C3852:	Product Type.
****:	Lot No. Code, code change with Lot No.

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



ب ˝ χ

1 Ĺ ♬ □ ỷ 25 Ḱ 150 ł ı `H ڑ 60 Ḱ 90sec;

Note:

1.Preheating:25~150 ł