

/ Descriptions

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

/ Features

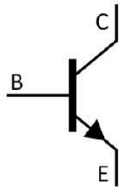
2SB1375

Low $V_{CE(sat)}$, High total power dissipation, complementary pair with 2SB1375.

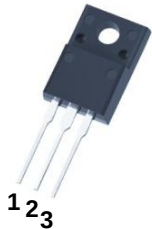
/ Applications

Audio frequency power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

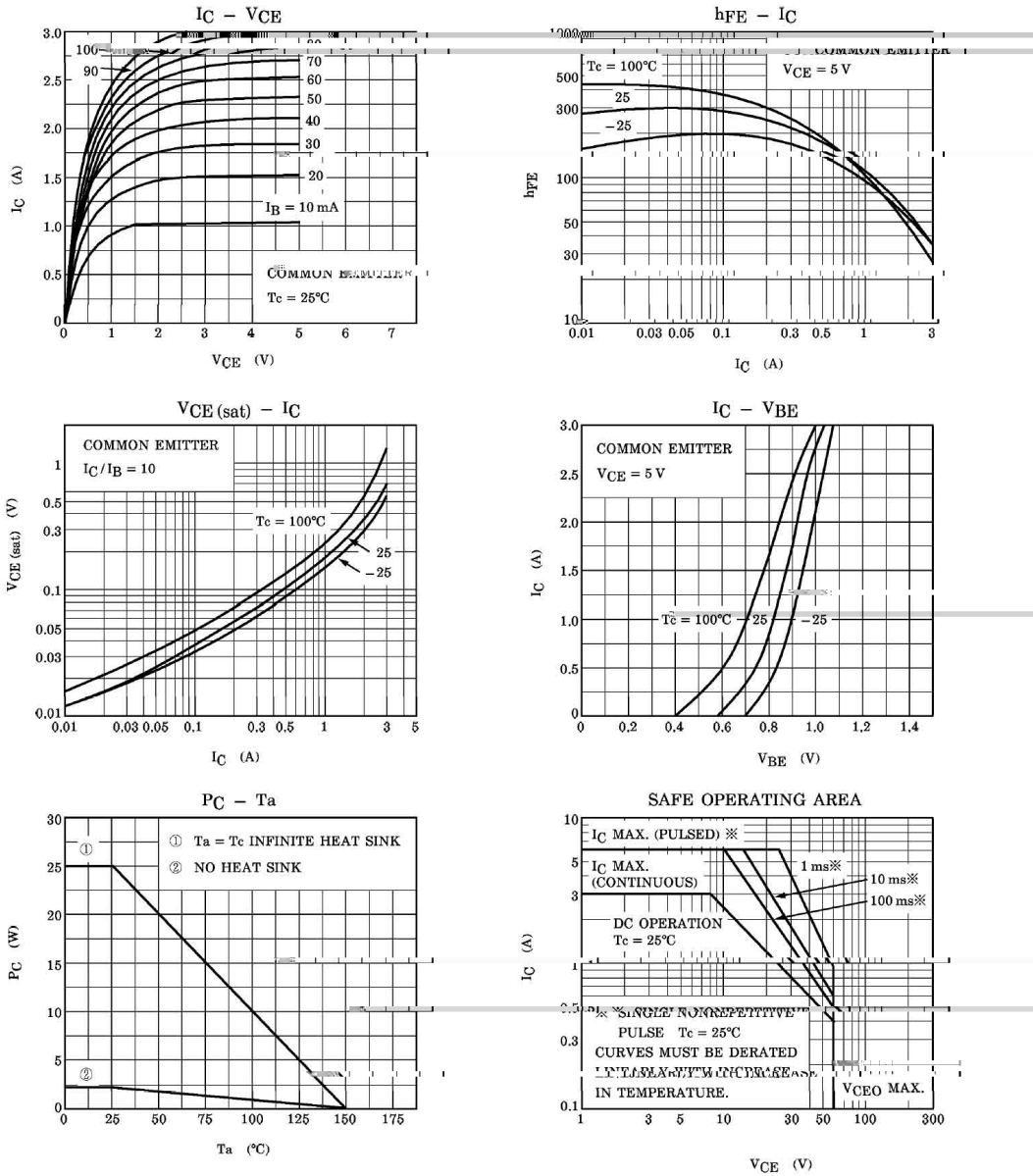
/ Absolute Maximum Ratings(Ta=25

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	I_C	3	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	2	W
Collector Power Dissipation	$P_C (T_c=25^\circ C)$	25	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

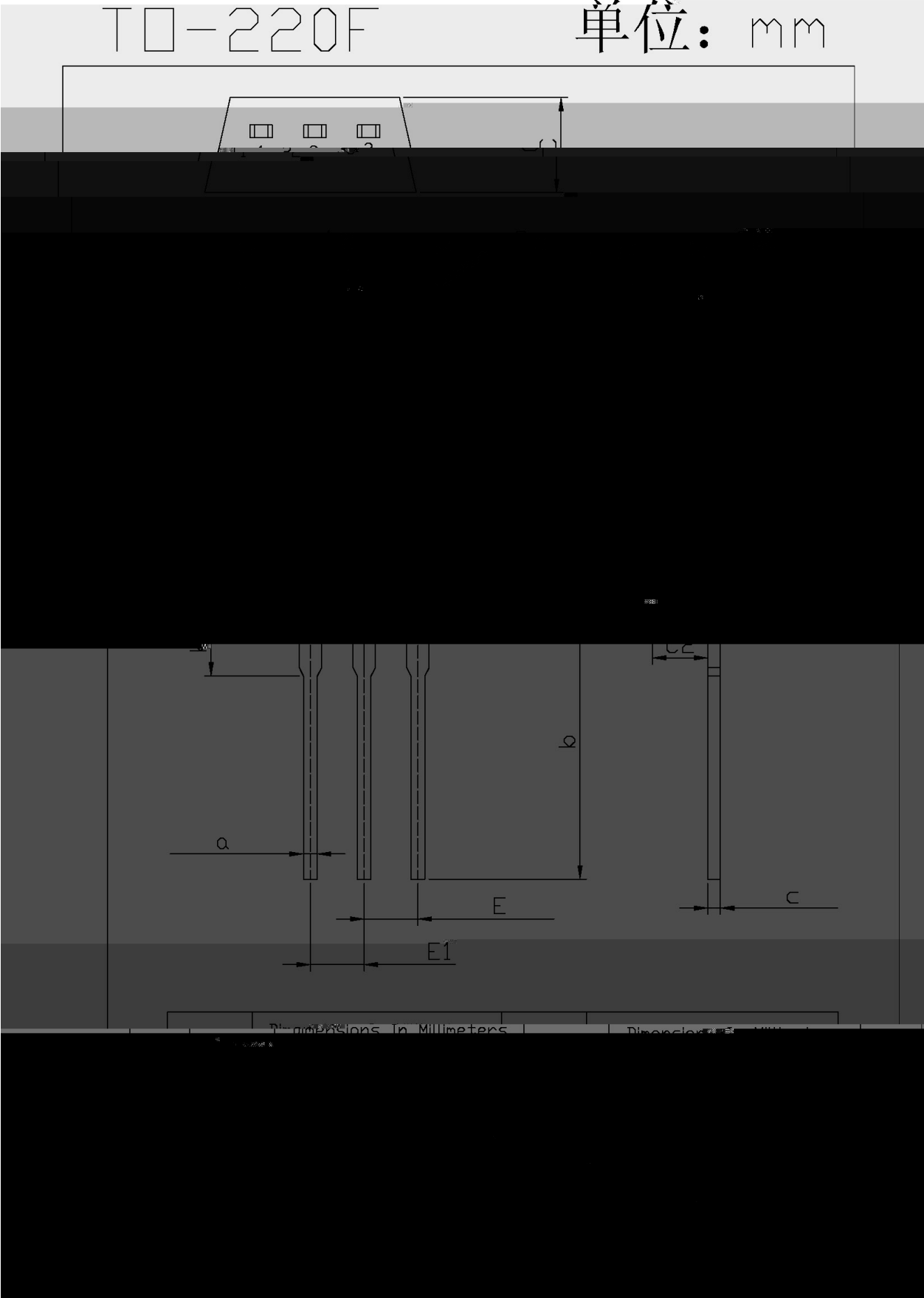
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=50mA$ $I_B=0$	60			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60V$ $I_E=0$			100	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=7.0V$ $I_C=0$			100	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V$ $I_C=0.5A$	100		320	
	$h_{FE(2)}$	$V_{CE}=5V$ $I_C=2A$	20			

Base to Emitter Voltage	V_{BE}	$V_{CE}=5V$ $I_C=0.5A$		0.75	1.0	V
Transition Frequency	f_T	$V_{CE}=5V$ $I_C=0.5A$		3.0		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1MHz$		35		pF

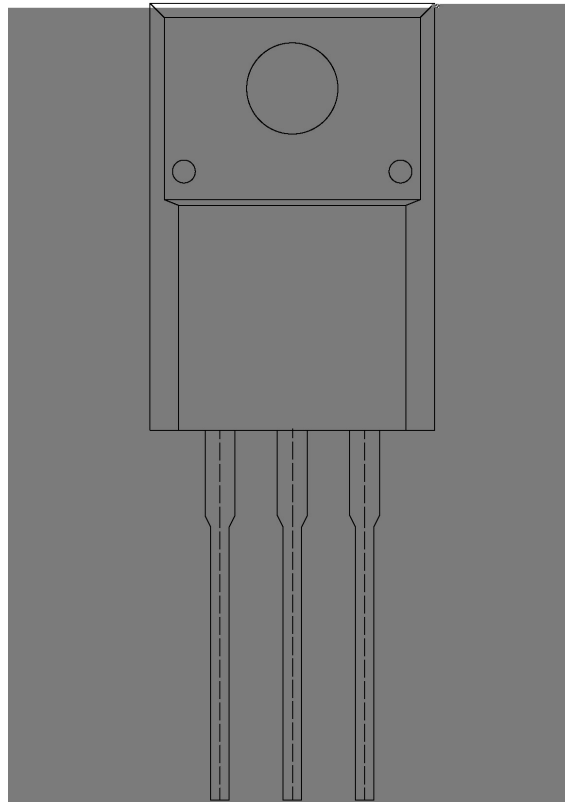
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



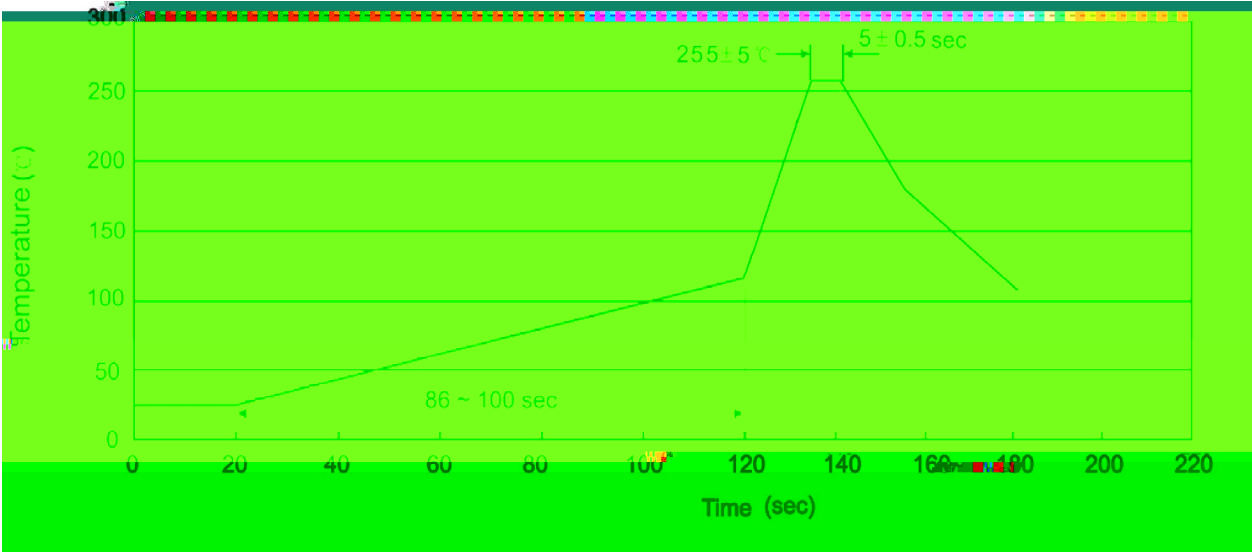
BR

D2012

Note:

BR: Company Code.

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



Note:

- 1

25 150

60 90sec;
- 2

255±5

5±0.5sec;
- 3

2 10

/sec.
- 1.Preheating:25~150

, Time:60~90sec.
- 2.Peak Temp.:255±5

, Duration:5±0.5sec.
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	Units/Inner Box	InnOu 705.teTT4 1 Tfo0 0 6.4247.731-0.9603 Tmi 8c0 Tw()TJET0T/TT13 131-0.96 0 0 6.4222.3 28.0403 Tm0 Tc	