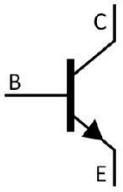
TO-220F NPN Silicon NPN transistor in a TO-220F Plastic Package.

2SB1375

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

Audio frequency power amplifier applications.

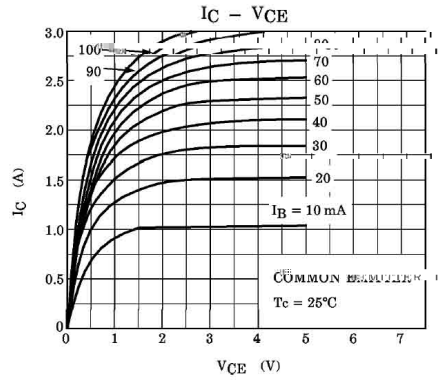


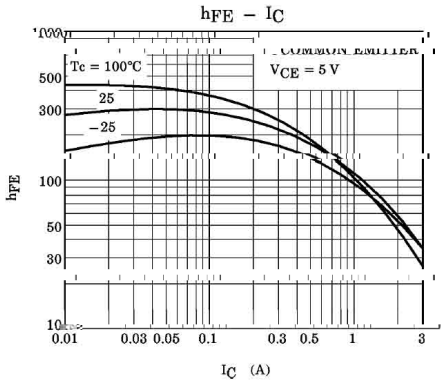
PIN1 Base PIN 2 Collector PIN 3 Emitter

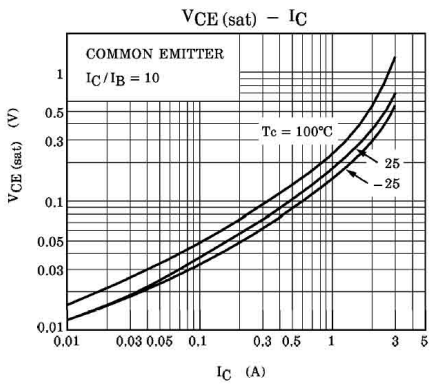
See Marking Instructions.

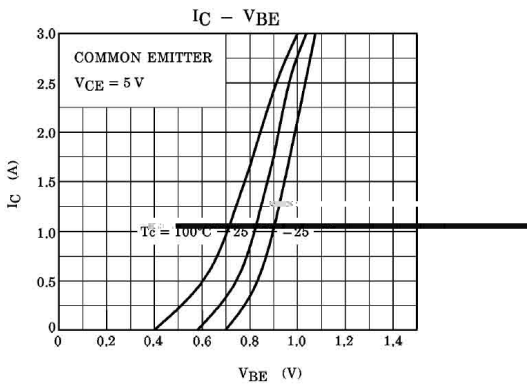
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	I_C	3	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	2	W
Collector Power Dissipation	P_C (T_c=25)	25	W
Junction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

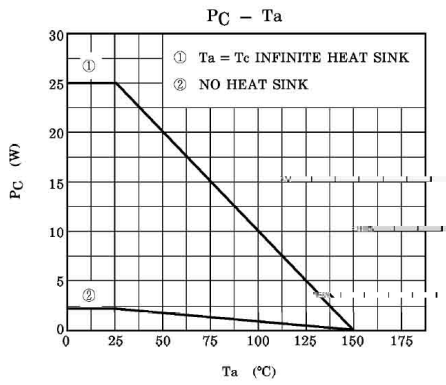
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=50mA I_B=0	60			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V I_E=0			100	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=7.0V I_C=0			100	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5V I_C=0.5A	100		320	
	$h_{FE(2)}$	V_{CE}=5V I_C=2A	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2A I_B=0.2A		0.4	1.0	V
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

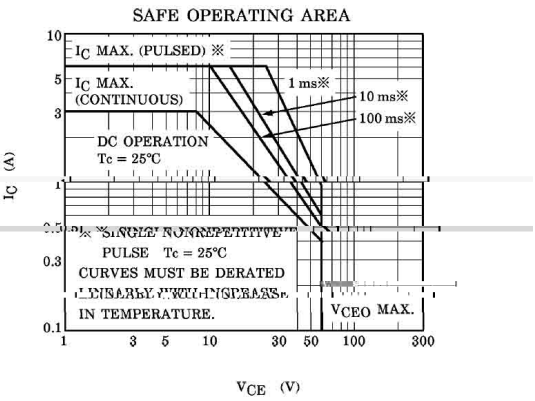

I_C – V_{CE}
I_B = 10 mA
COMMON EMITTER
Tc = 25°C
I_C (A)
V_{CE} (V)


h_{FE} – I_C
Tc = 100°C
25
–25
V_{CE} = 5 V
h_{FE}
I_C (A)

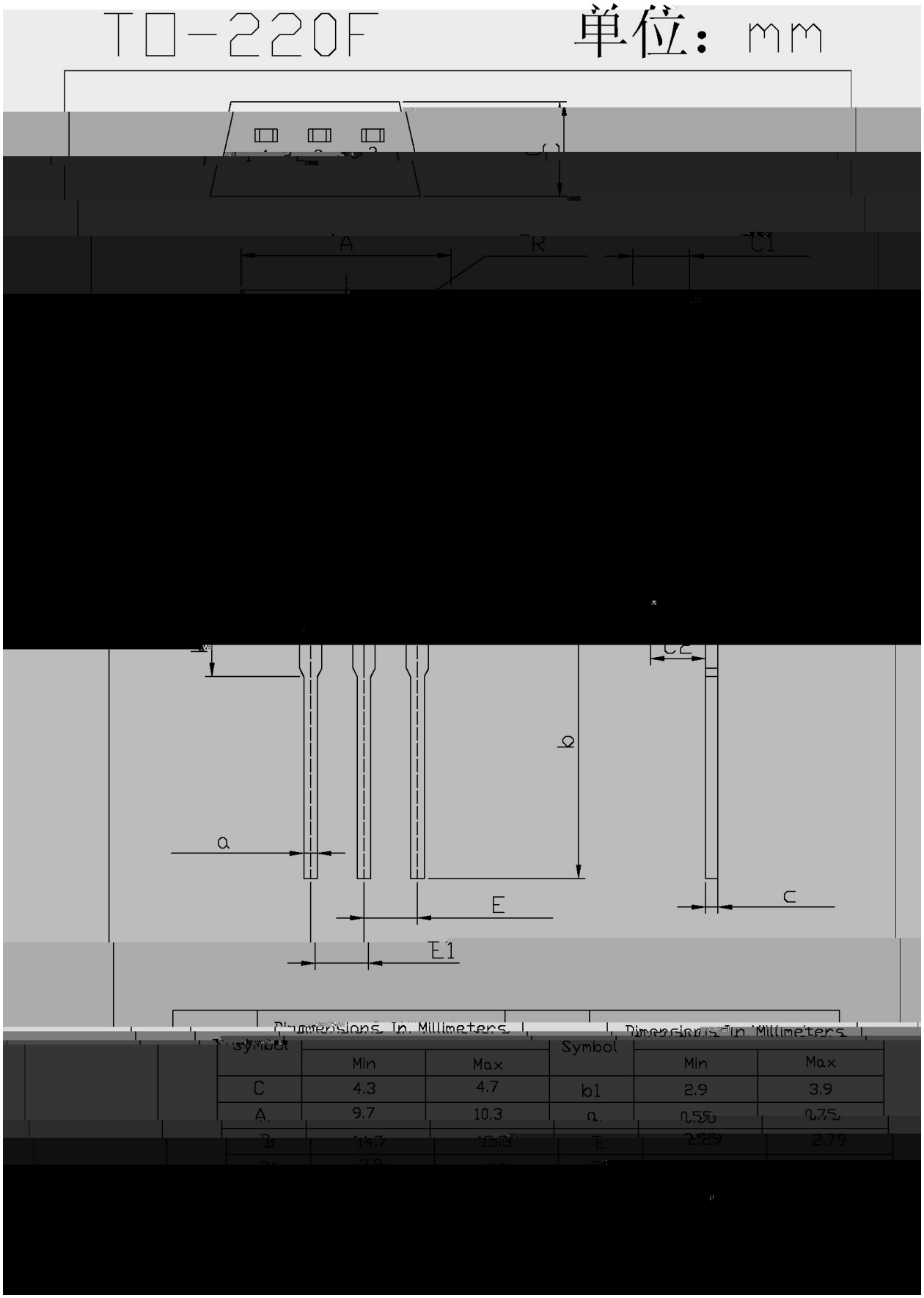

$V_{CE(sat)}$ – I_C
COMMON EMITTER
I_C/I_B = 10
Tc = 100°C
25
–25
$V_{CE(sat)}$ (V)
I_C (A)


I_C – V_{BE}
COMMON EMITTER
V_{CE} = 5 V
Tc = 100°C
25
–25
I_C (A)
V_{BE} (V)

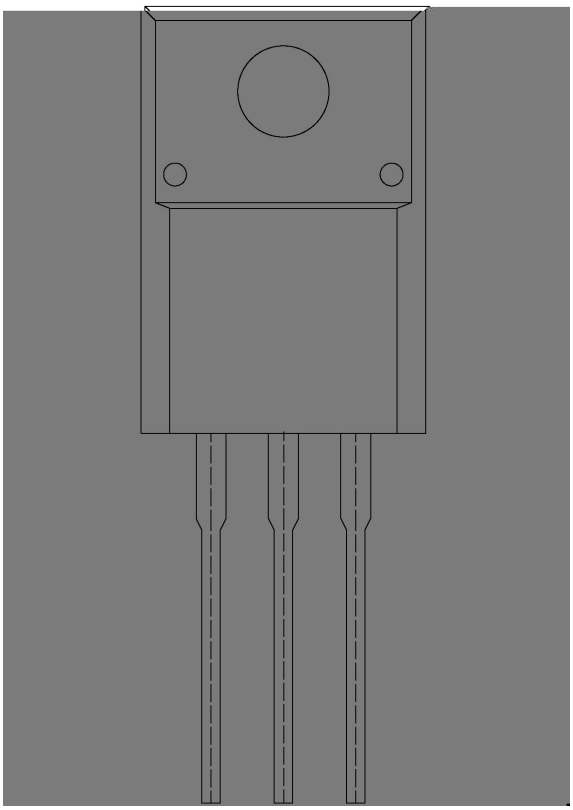

P_C – Ta
① Ta = Tc INFINITE HEAT SINK
② NO HEAT SINK
P_C (W)
Ta (°C)


SAFE OPERATING AREA
I_C MAX. (PULSED) ※
I_C MAX. (CONTINUOUS)
1 ms※
10 ms※
100 ms※
DC OPERATION
Tc = 25°C
※ SINGLE NONREPETITIVE PULSE Tc = 25°C
CURVES MUST BE DERATED LINEARLY WITH INCREASE IN TEMPERATURE.
V_{CEO} MAX.
I_C (A)
V_{CE} (V)

TO-220F 单位：mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
C	4.3	4.7	b1	2.9	3.9
A	9.7	10.3	a	0.55	0.75
B	14.7	15.3	E	2.29	2.79



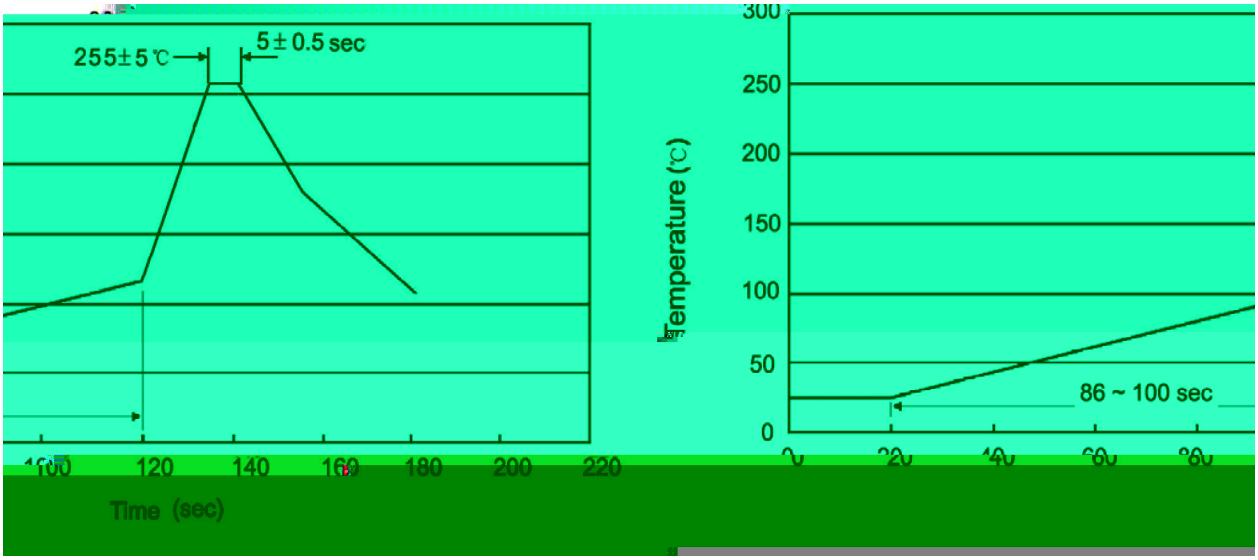
BR

D2012

****

Note:

BR: Company Code.



1	25	150	60	90sec;	Note: 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.

270±5	10±1 sec.	Temp.:270±5	Time:10±1 sec

/ BULK

Package Type	Units			Dimension (unit mm^3)
	Units/Bag	Bags/Inner Box	Units/Inner Box	
	/	/	/	