/ Descriptions

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

/ Features

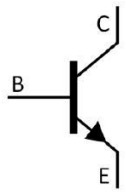
,V_{CESAT}

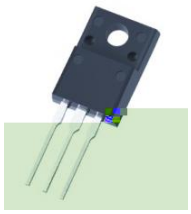
High DC current gain ,low collector saturation voltage.

/ Applications

For power amplification.

/ Equivalent Circuit





PIN1 Base PIN 2 Collector PIN 3 Emitter

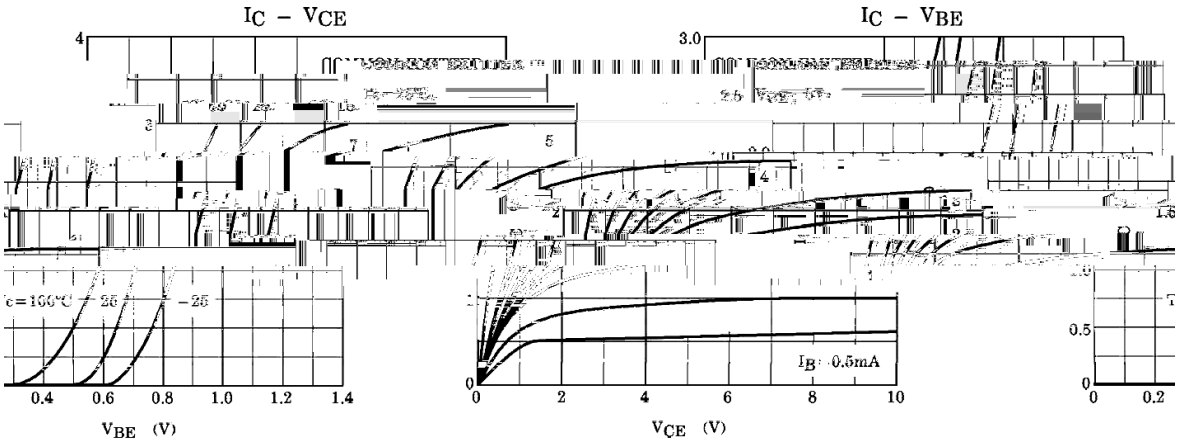
/ h_{FE} Classifications & Marking

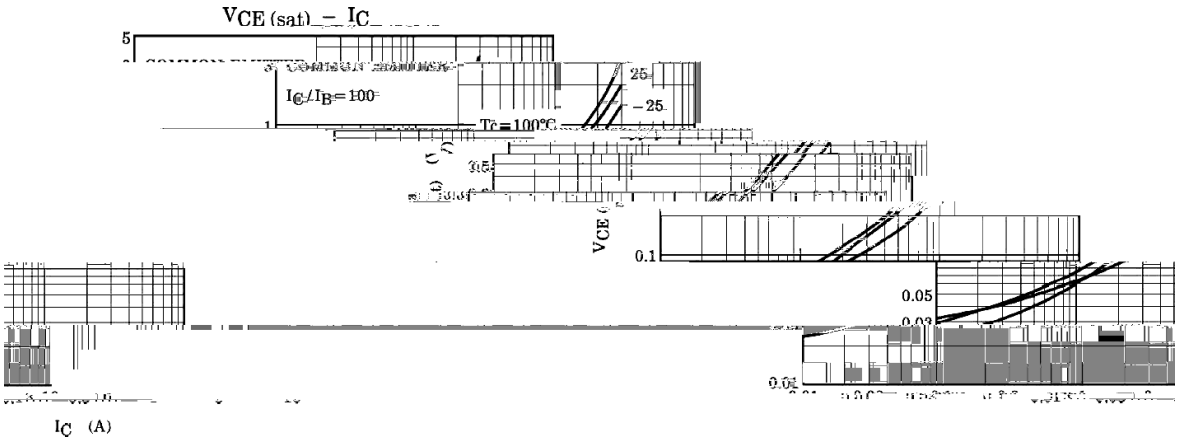
See Marking Instructions.

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	3.0	A
Collector Current – Continuous(Pulse)	I_{CP}	6.0	A
Base Current	I_B	0.6	A
Collector Power Dissipation	P_C	2.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

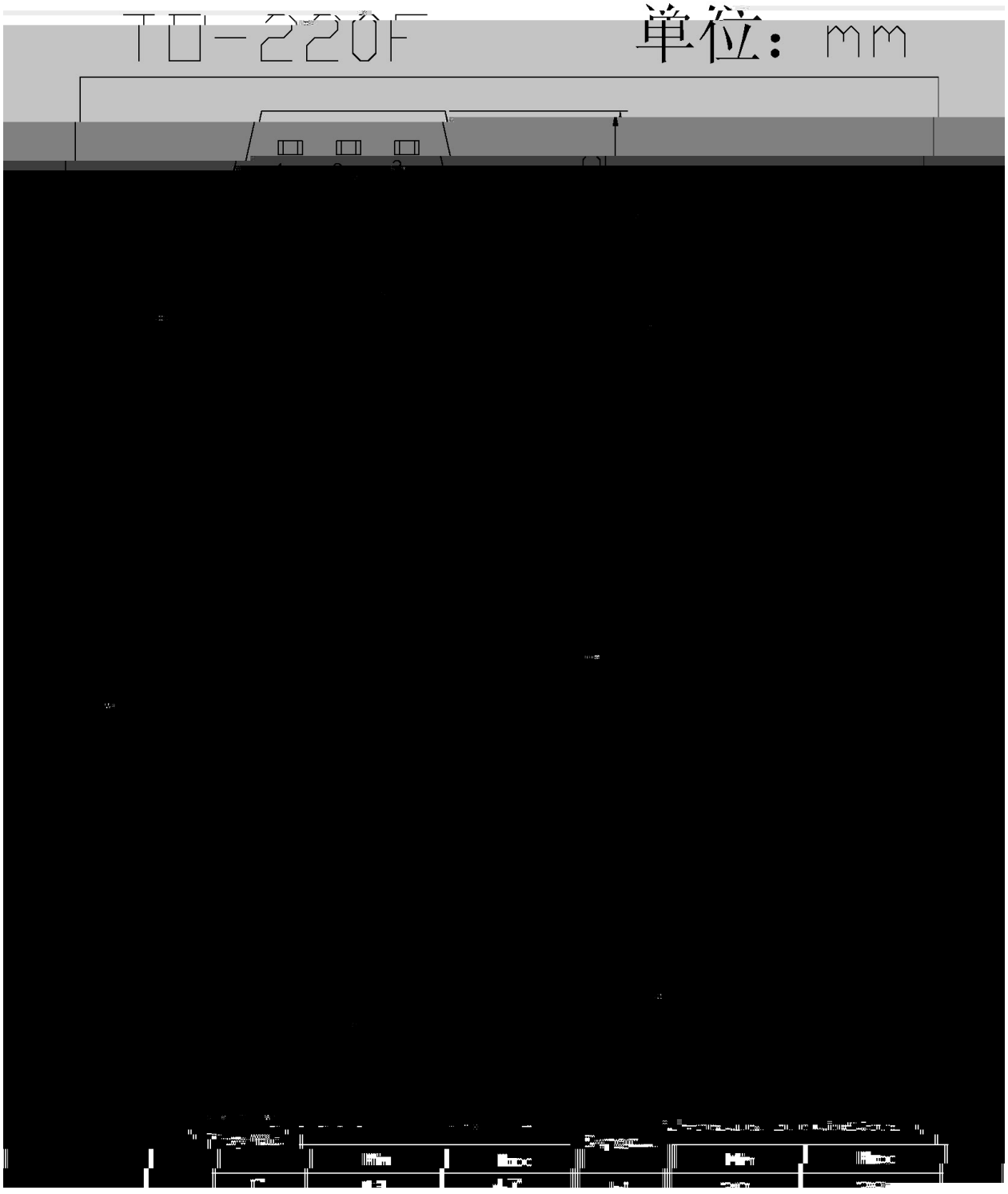
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=50mA I_B=0	60			V
Base to Emitter Voltage	V_{BE}	V_{CE}=5V I_C=0.5A		0.7	1.0	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V I_E=0			100	A
Emitter Cut-Off Current	I_{EBO}	V_{EB}=6.0V I_C=0			100	A
DC Current Gain	$h_{FE(1)}$	V_{CE}=5.0V I_C=0.2A	800		3200	
	$h_{FE(2)}$	V_{CE}=5.0V I_C=1.5 A	350			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=1.0A I_B=10mA		0.4	1.0	V
Transition Frequency	f_T	V_{CE}=5.0V I_C=0.5A		18		MHz

/ Electrical Characteristic Curve

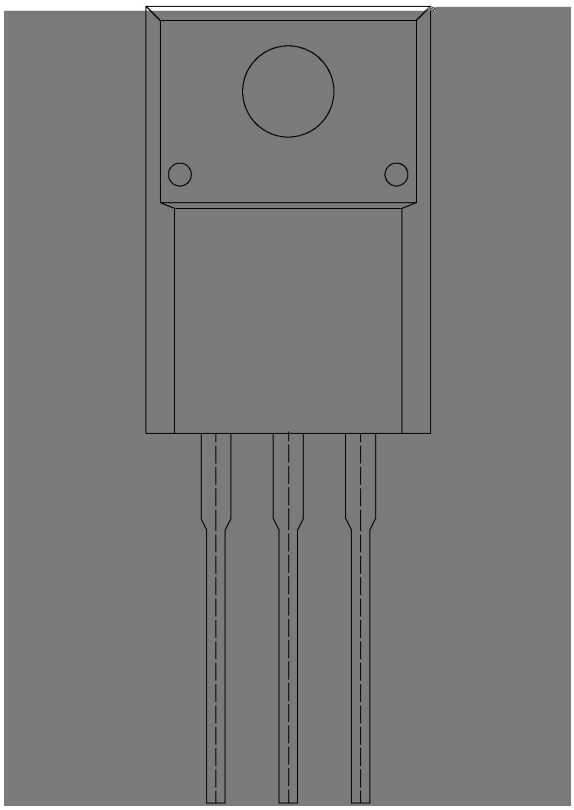




/ Package Dimensions



/ Marking Instructions



BR

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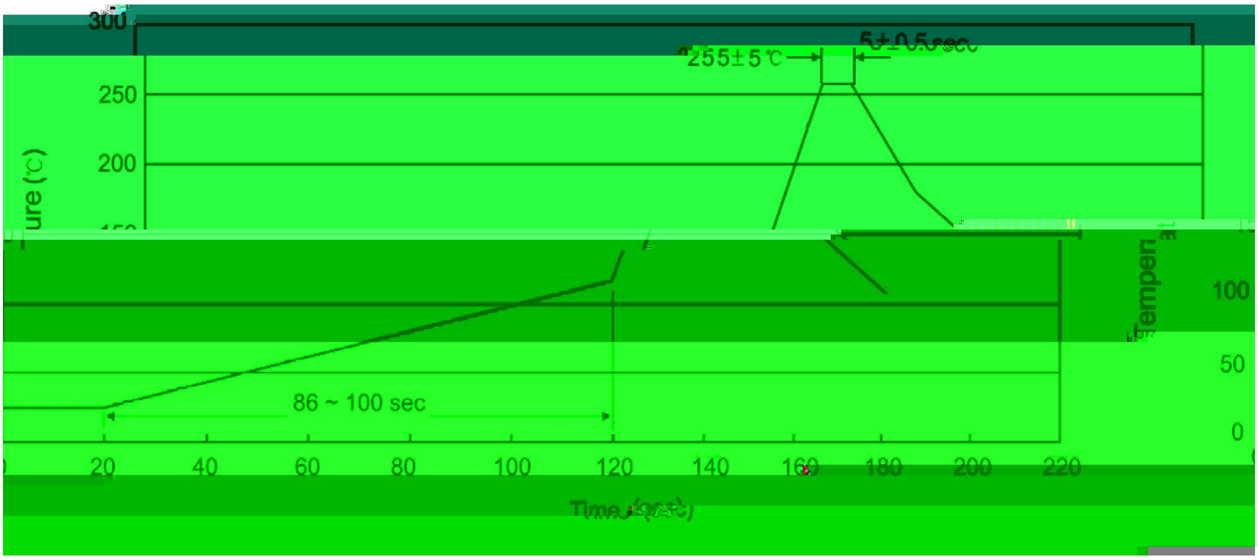
(　　) / Temperature Profile for Dip Soldering(Pb-Free)



	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.

5　•　ƕ　q　ɫ　˜　255±