

/ Descriptions

Silicon NPN transistor in a TO-220 Plastic Package.

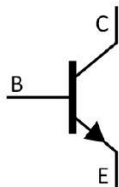
/ Features

Low collector-to-emitter saturation voltage, high-speed switching, high allowable power dissipation.

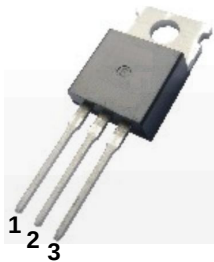
/ Applications

DC-DC converter, relay drivers, lamp drivers motor drivers.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

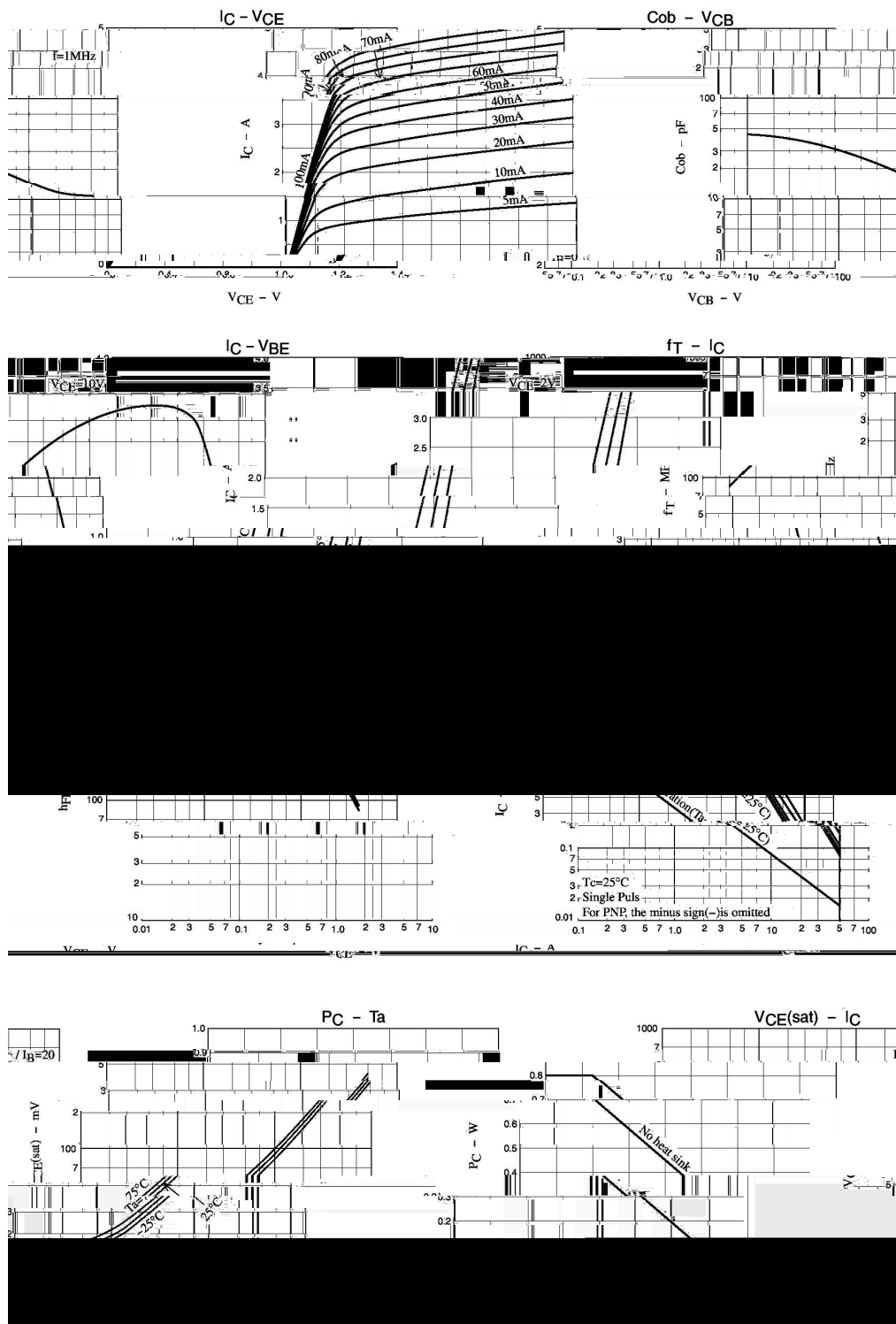
/ h_{FE} Classifications & Marking

See Marking Instructions.

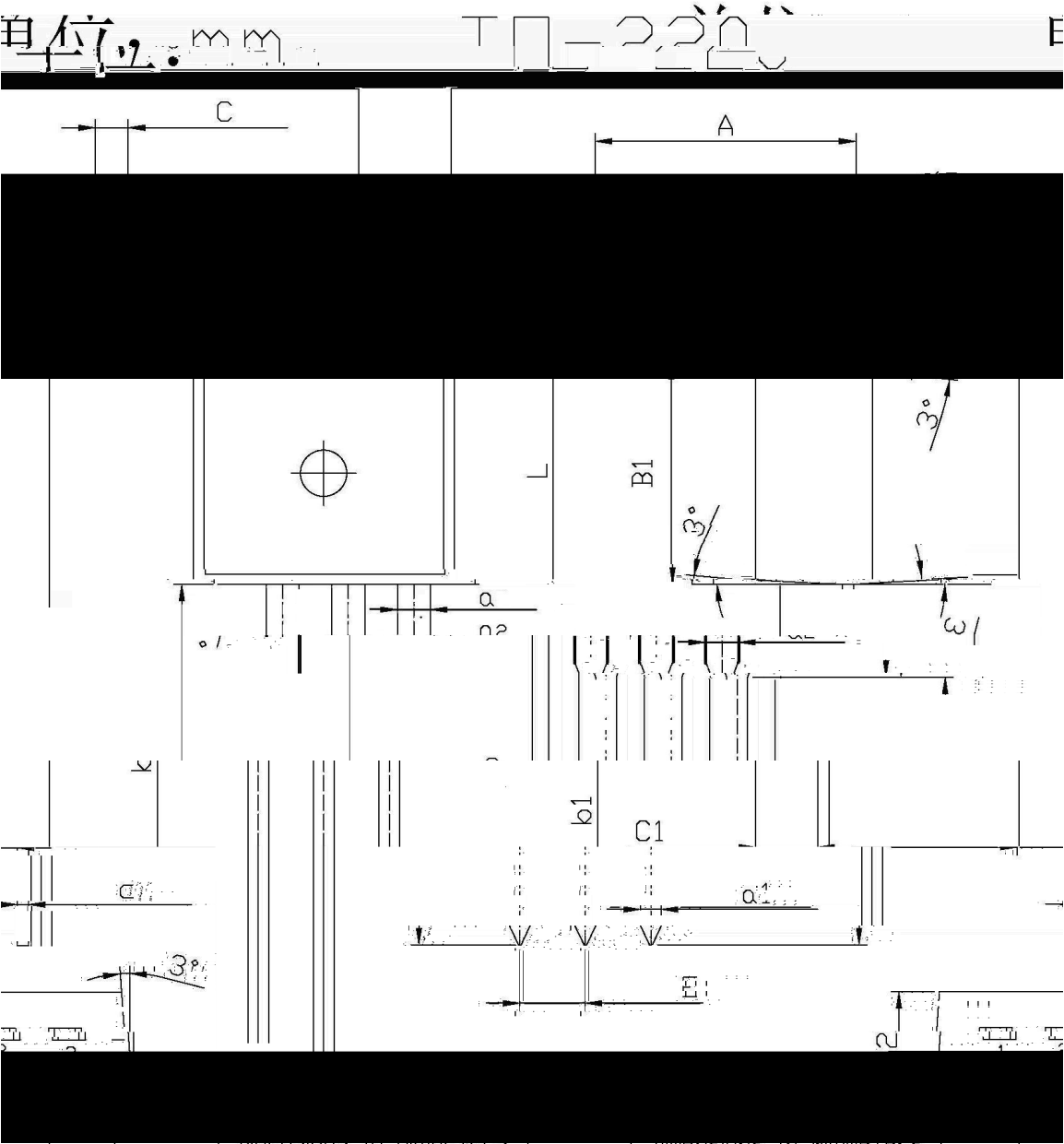
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	50	V
Collector to Emitter Voltage	V_{CES}	80	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	5.0	A
Peak Collector Current	I_{CP}	7.5	A
Base Current - Continuous	I_B	1.2	A
Collector Power Dissipation	P_C	2	W
	$P_C(T_C=25^\circ\text{C})$	15	W
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=0.01\text{mA}$ $I_E=0$	80			V
Collector to Emitter Breakdown Voltage	V_{CES}	$I_C=0.1\text{mA}$ $R_{BE}=0$	80			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0\text{mA}$ $R_{BE}=\infty$	50			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_C=0.01\text{mA}$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=40\text{V}$ $I_E=0$			1.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4.0\text{V}$ $I_C=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=2.0\text{V}$ $I_C=0.5\text{A}$	200		560	
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=1.0\text{A}$ $I_B=0.05\text{A}$		0.09	0.135	V
	$V_{CE(sat)(2)}$	$I_C=2.0\text{A}$ $I_B=0.1\text{A}$		0.16	0.24	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$V_{CE}=2.0\text{V}$ $I_C=0.1\text{A}$		0.89	1.2	V

/ Electrical Characteristic Curve

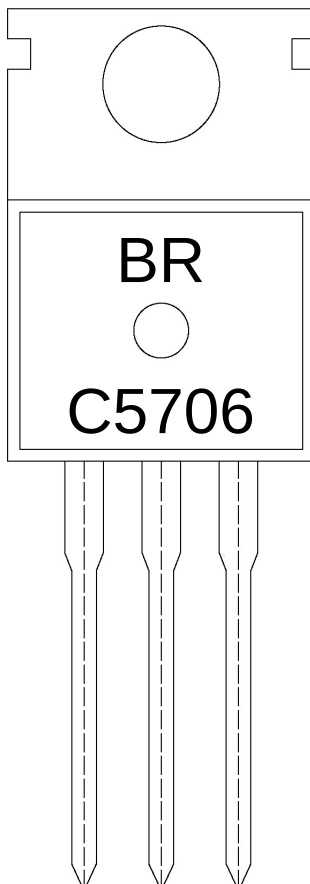


I Package Dimensions



Dimensions in inches			Dimensions in millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	0.394	0.500	C	0.047	0.059
B	0.256	0.268	B1	0.020	0.025
C1	0.008	0.010	E	0.118	0.125

/ Marking Instructions



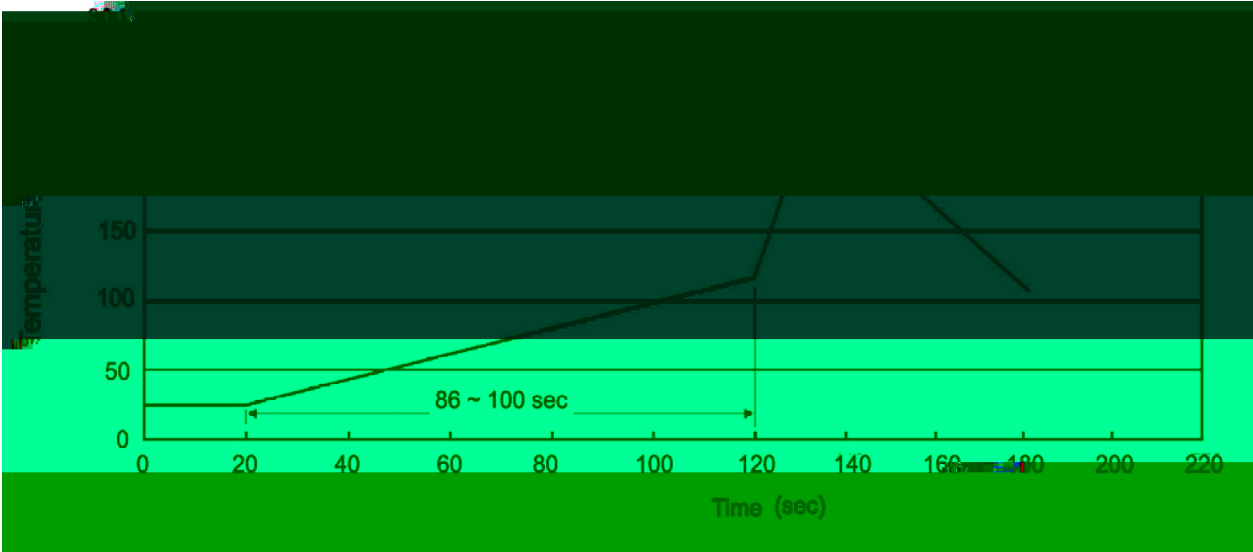
Note:

BR: Company Code

C5706: Product Type.

***: Lot No. Code, code change with Lot No.

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



Note:

1 25 150 60 90sec;

1.Preheating:25~150