

/ Descriptions

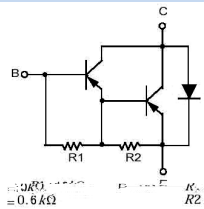
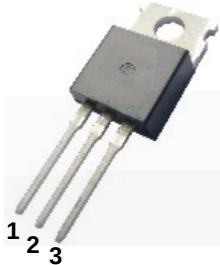
Silicon PNP transistor in a TO-220 Plastic Package.

/ Features

Complement to TIP112.

/ Applications

Medium power linear switching applications.

/ Equivalent Circuit**/ Pinning**

PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

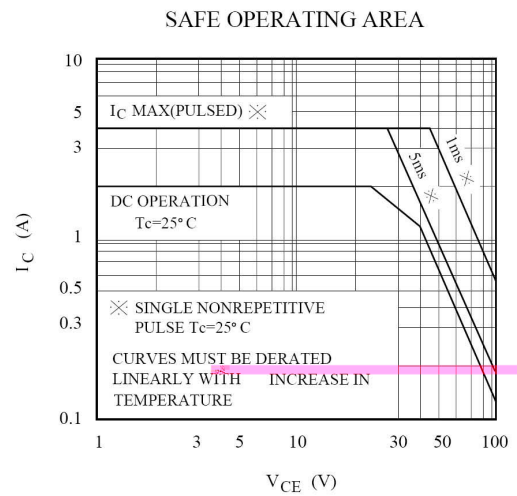
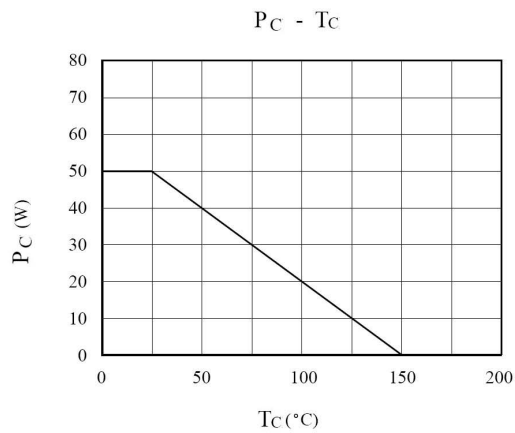
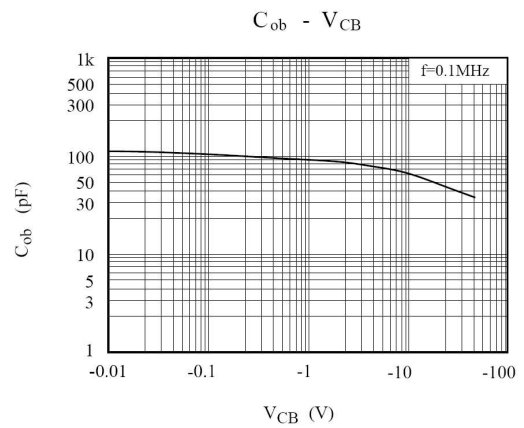
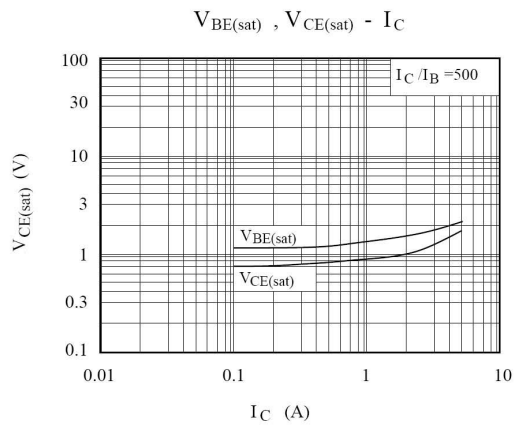
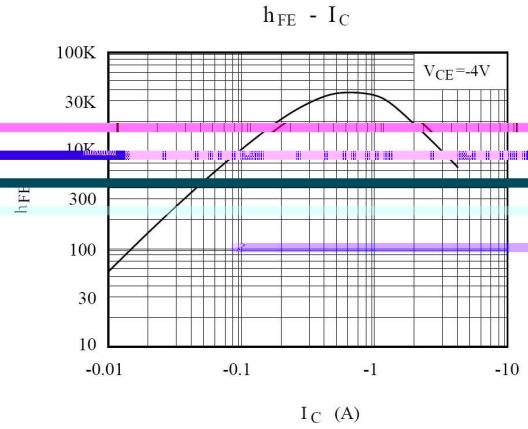
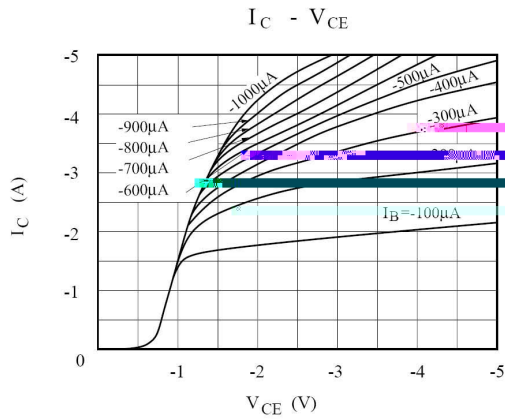
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-100	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-2.0	A
Peak Collector Current	I_{CP}	-4.0	A
Base Current - Continuous	I_B	-50	mA
Collector Power Dissipation	$P_C(T_C=25)$	50	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-30mA$ $I_B=0$	-100			V
Collector Cut-Off Current	I_{CEO}	$V_{CE}=-50V$ $I_B=0$			-2.0	mA
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-100V$ $I_E=0$			-1.0	mA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5V$ $I_C=0$			-2.0	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-4V$ $I_C=-1A$	1000			
	$h_{FE(2)}$	$V_{CE}=-4V$ $I_C=-2A$	500			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-2A$ $I_B=-8mA$			-2.5	V
Base to Emitter On Voltage	$V_{BE(on)}$	$I_C=-2A$ $V_{CE}=-4V$			-2.8	V
Collector output capacitance	C_{ob}	$V_{CB}=-10V$ $I_E=0$ $f=0.1MHz$			200	pF



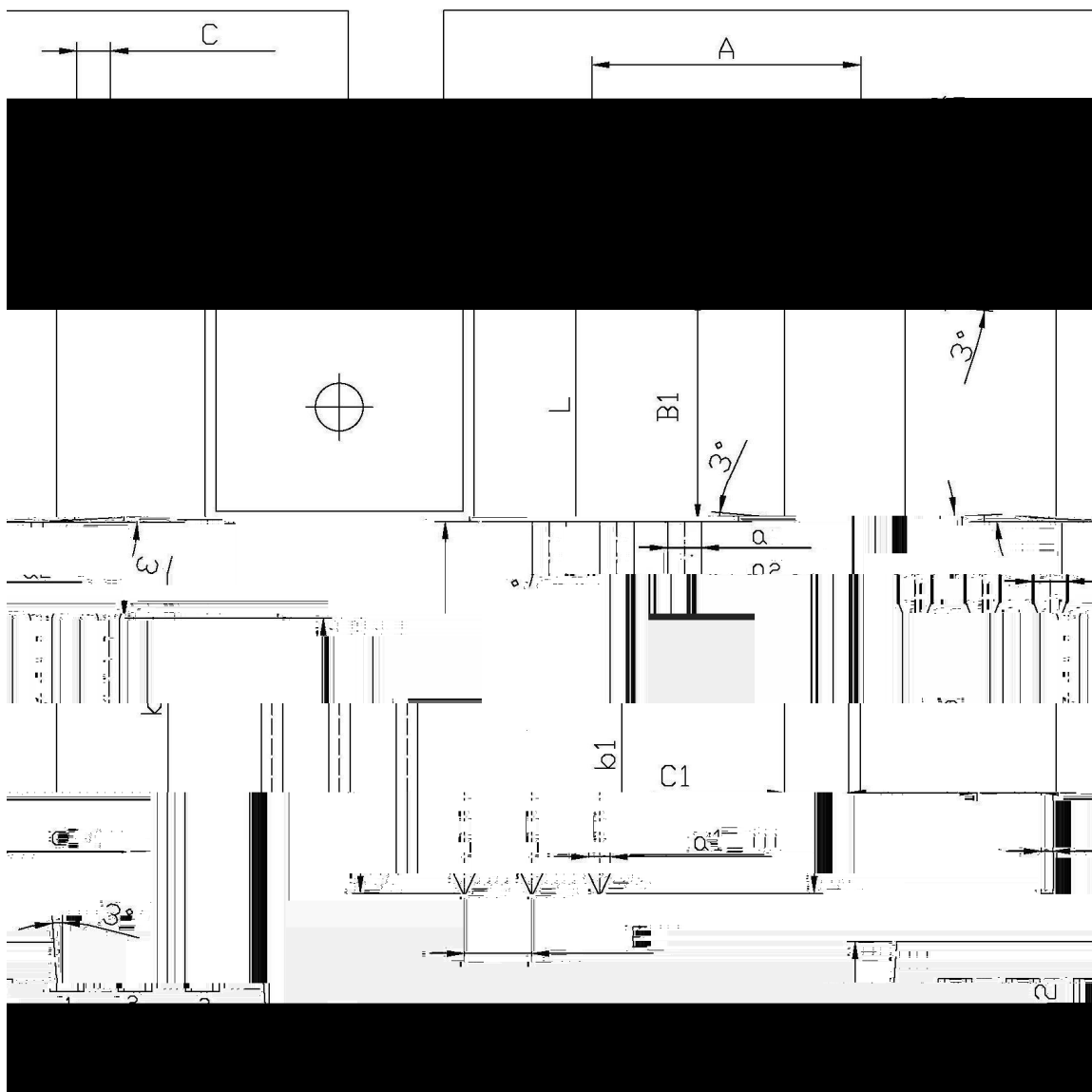
Electrical Characteristic Curve



/ Package Dimensions

单位: mm

T0-220

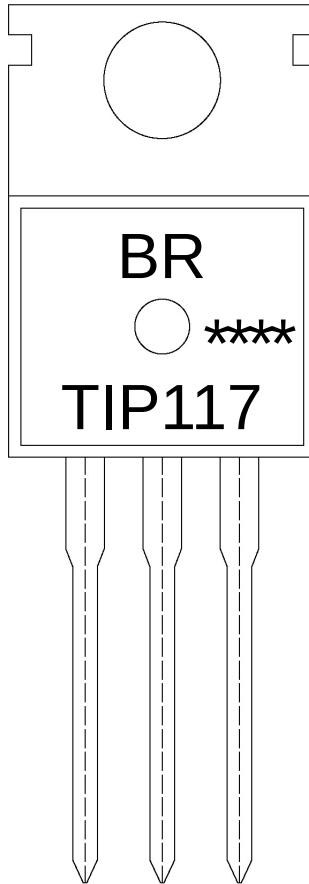


Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeters	
	Min	Max		Min	Max
A	9.8	10.2	C	1.2	1.4
B1	15.7	16.1	a	0.4	0.6
L	0.4	0.6	b1	1.22	1.32
C1	1.45	1.55	C1	1.25	1.35

TIP117

Rev. H Oct.-2018

/ Marking Instructions



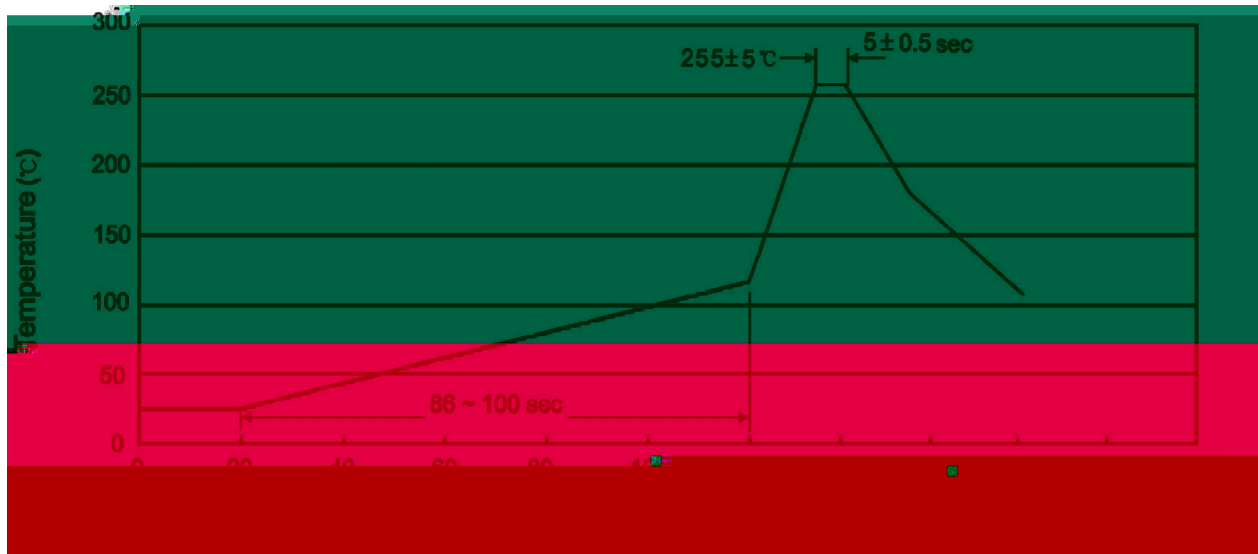
Note:

BR: Company Code

TIP117: 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 , 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. |

/ 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 /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices