



HT117

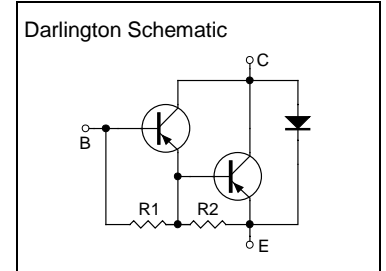
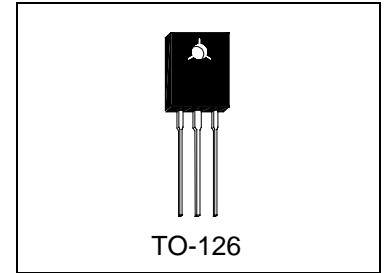
PNP EPITAXIAL PLANAR TRANSISTOR

Description

The HT117 is designed for use in general purpose amplifier and low-speed switching applications.

Absolute Maximum Ratings (T_A=25°C)

- Maximum Temperatures
 - Storage Temperature -55 ~ +150 °C
 - Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
 - Total Power Dissipation (T_C=25°C) 10 W
- Maximum Voltages and Currents
 - BV_{CBO} Collector to Base Voltage -100 V
 - BV_{CEO} Collector to Emitter Voltage -100 V
 - BV_{EBO} Emitter to Base Voltage -5 V
 - I_C Collector Current (Continue) -4 A
 - I_C Collector Current (Peak) -6 A



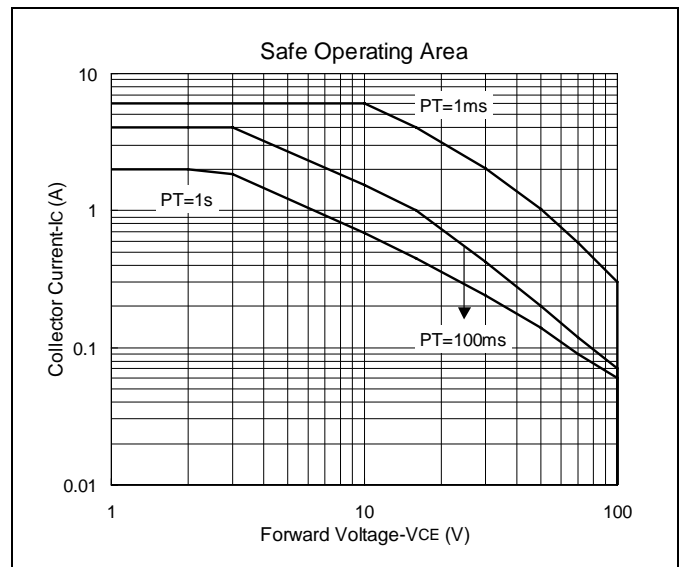
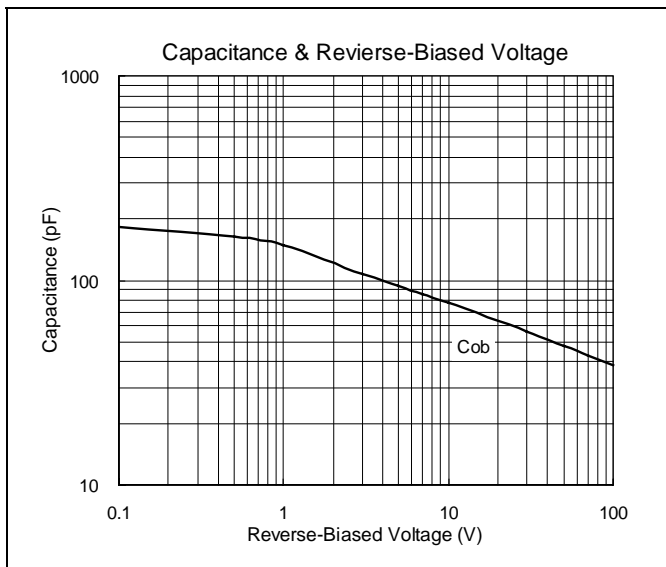
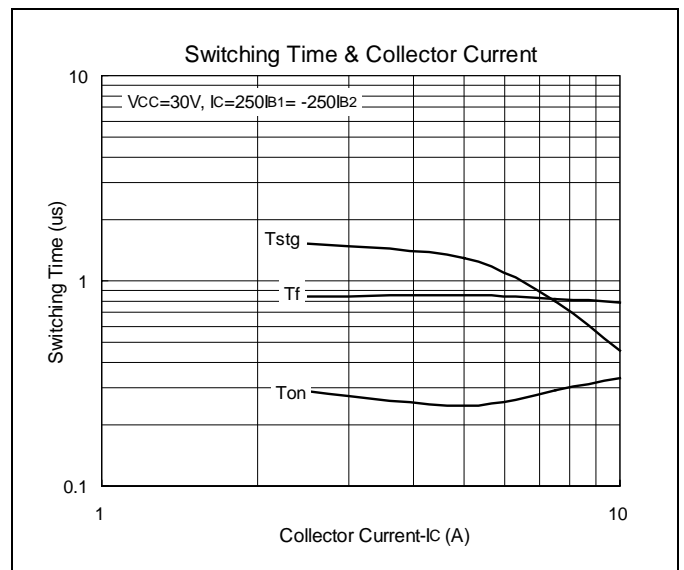
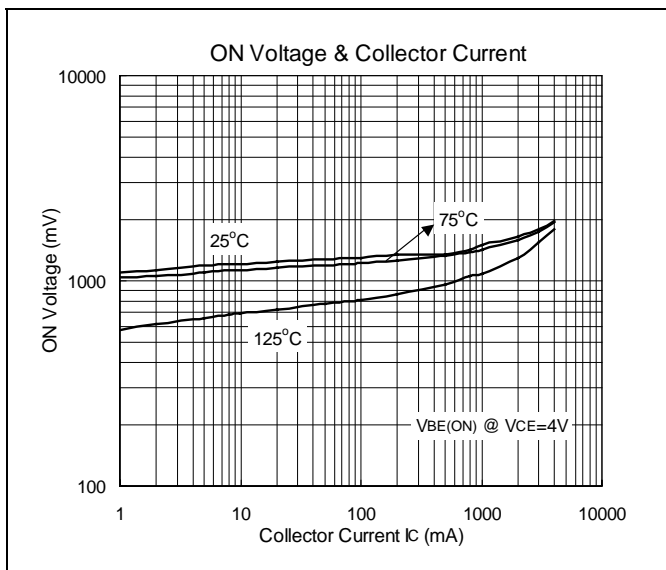
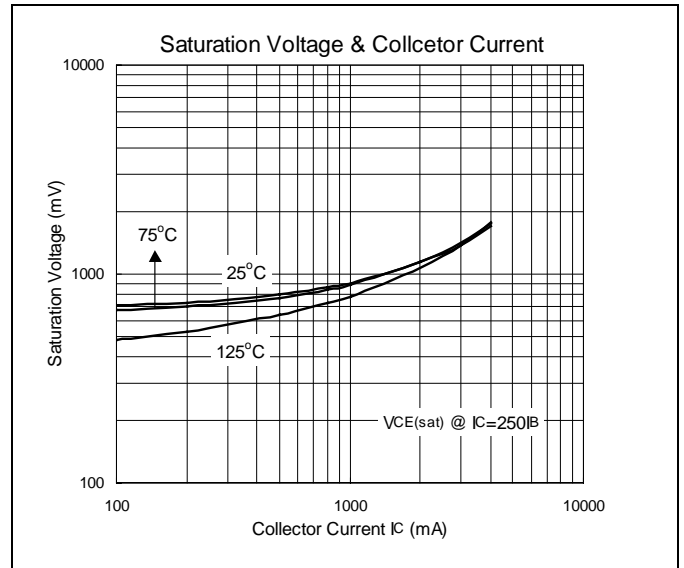
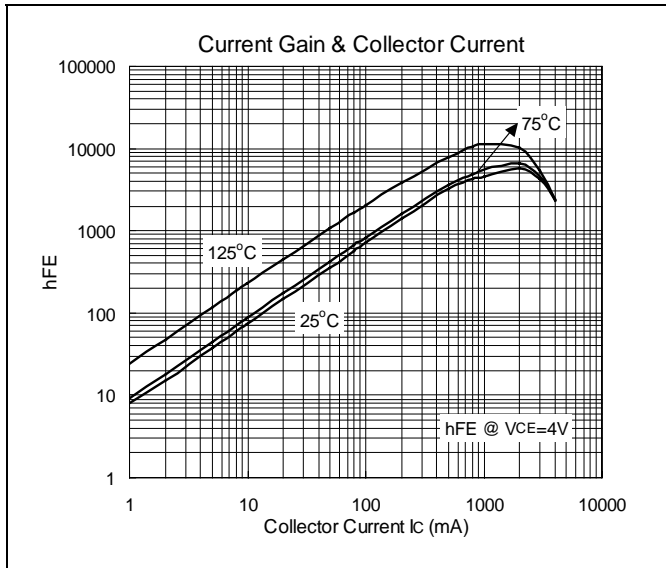
Electrical Characteristics (T_A=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	-100	-	-	V	I _C =-1mA
BV _{CEO}	-100	-	-	V	I _C =-30mA
I _{CBO}	-	-	-1	mA	V _{CB} =-100V
I _{CEO}	-	-	-2	mA	V _{CE} =-50V
I _{EBO}	-	-	-2	mA	V _{EB} =-5V
*V _{CE(sat)}	-	-	-2.5	V	I _C =-2A, I _B =-8mA
*V _{BE(on)}	-	-	-2.8	V	I _C =-2A, V _{CE} =-4V
*h _{FE1}	1	-	-	K	I _C =-1A, V _{CE} =-4V
*h _{FE2}	500	-	-		I _C =-2A, V _{CE} =-4V
Cob	-	-	200	pF	V _{CB} =-10V, f=0.1MHz

*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%



Characteristics Curve





TO-126 Dimension

3-Lead TO-126
Plastic Package
HSMC Package Code: T

Marking:

Note: Green label is used for pb-free packing

Pin Style: 1. Emitter 2. Collector 3. Base

Material:

- Lead solder plating: Sn60/Pb40 (Normal), Sn/3.0Ag/0.5Cu or Pure-Tin (Pb-free)
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

DIM	Min.	Max.
A	3.81	3.91
B	6.99	7.09
C	13.50	15.50
D	7.52	7.72
E	0.95	1.05
F	0.71	0.81
G	1.22	1.32
H	4.34	4.80
I	2.41	2.66
J	1.14	1.39
K	1.14	1.39
L	-	*0.55
M	3.50	3.86
a1	-	*3°

*: Typical, Unit: mm

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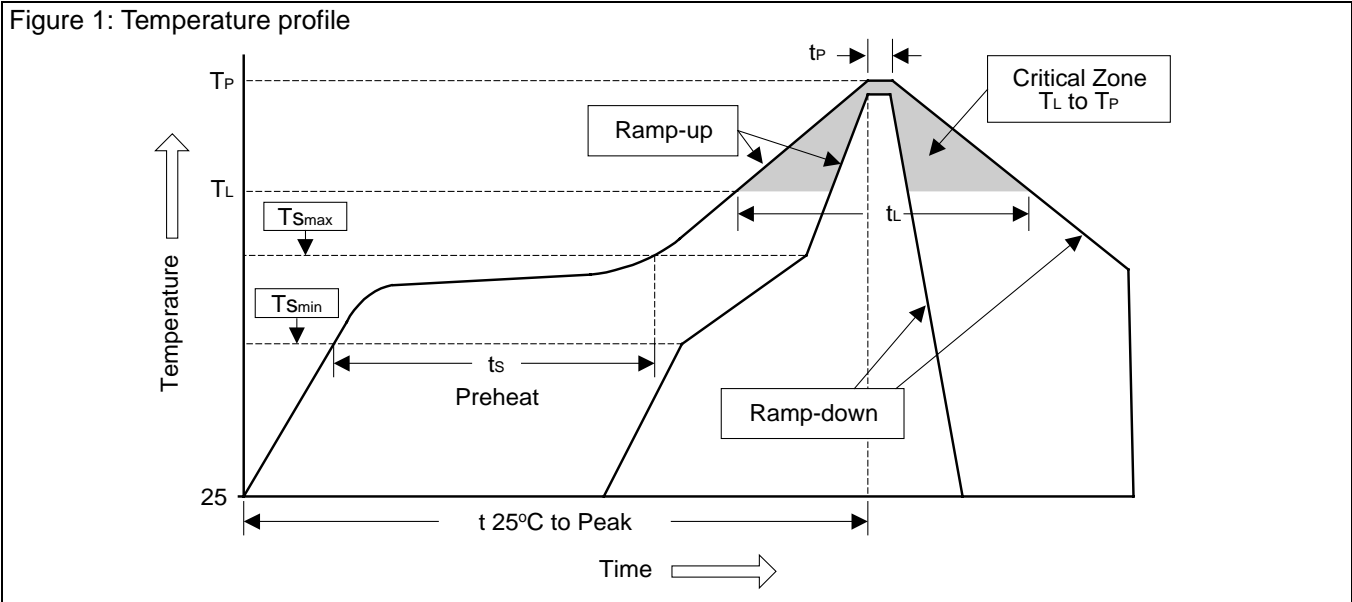
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Soldering Methods for HSMC's Products

1. Storage environment: Temperature=10°C~35°C Humidity=65%±15%
2. Reflow soldering of surface-mount devices



Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average ramp-up rate (T _L to T _p)	<3°C/sec	<3°C/sec
Preheat		
- Temperature Min (T _{smin})	100°C	150°C
- Temperature Max (T _{smax})	150°C	200°C
- Time (min to max) (ts)	60~120 sec	60~180 sec
T _{smax} to T _L		
- Ramp-up Rate	<3°C/sec	<3°C/sec
Time maintained above:		
- Temperature (T _L)	183°C	217°C
- Time (t _L)	60~150 sec	60~150 sec
Peak Temperature (T _p)	240°C +0/-5°C	260°C +0/-5°C
Time within 5°C of actual Peak Temperature (t _p)	10~30 sec	20~40 sec
Ramp-down Rate	<6°C/sec	<6°C/sec
Time 25°C to Peak Temperature	<6 minutes	<8 minutes

3. Flow (wave) soldering (solder dipping)

Products	Peak temperature	Dipping time
Pb devices.	245°C ±5°C	5sec ±1sec
Pb-Free devices.	260°C +0/-5°C	5sec ±1sec