

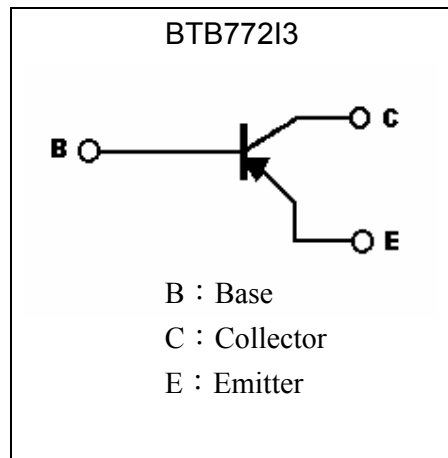
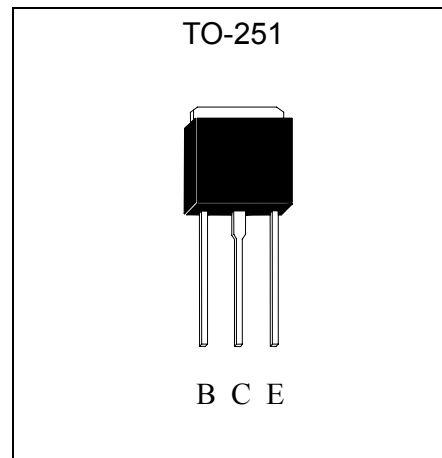
Low Vcesat PNP Epitaxial Planar Transistor

BTB772I3

BV_{CEO}	-30V
I_C	-3A
R_{CESAT}	150m Ω

Features

- Low $V_{CE(sat)}$, typically -0.3 V at $I_C / I_B = -2A / -0.2A$
- Excellent current gain characteristics
- Complementary to BTD882I3
- RoHS compliant package

Symbol

Outline

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	$I_C(\text{DC})$	-3	A
	$I_C(\text{pulse})$	-7 *1	A
Power Dissipation	$P_d(T_a=25^\circ\text{C})$	1	W
	$P_d(T_c=25^\circ\text{C})$	10	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~+150	$^\circ\text{C}$

 Note : *1. Single Pulse $P_w \leq 350\mu\text{s}$, Duty $\leq 2\%$.

**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	-40	-	-	V	I _C =-50μA, I _E =0
BV _{CEO}	-30	-	-	V	I _C =-1mA, I _B =0
BV _{EBO}	-5	-	-	V	I _E =-50μA, I _C =0
I _{CBO}	-	-	-1	μA	V _{CB} =-30V, I _E =0
I _{EBO}	-	-	-1	μA	V _{EB} =-3V, I _C =0
*V _{CE(sat)}	-	-0.3	-0.5	V	I _C =-2A, I _B =-0.2A
*V _{BE(sat)}	-	-1	-2	V	I _C =-2A, I _B =-0.2A
*h _{FE 1}	120	-	-	-	V _{CE} =-2V, I _C =-20mA
*h _{FE 2}	180	-	500	-	V _{CE} =-2V, I _C =-1A
f _T	-	80	-	MHz	V _{CE} =-5V, I _E =-0.1A, f=100MHz
C _{ob}	-	55	-	pF	V _{CB} =-10V, f=1MHz

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

Classification Of h_{FE 2}

Rank	P	E
Range	180~390	250~500

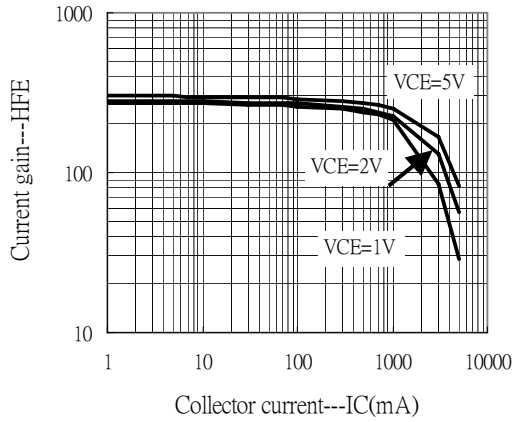
Ordering Information

Device	Package	Shipping	Marking
BTB772I3	TO-251 (RoHS compliant)	80 pcs / tube, 50 tubes / box	B772

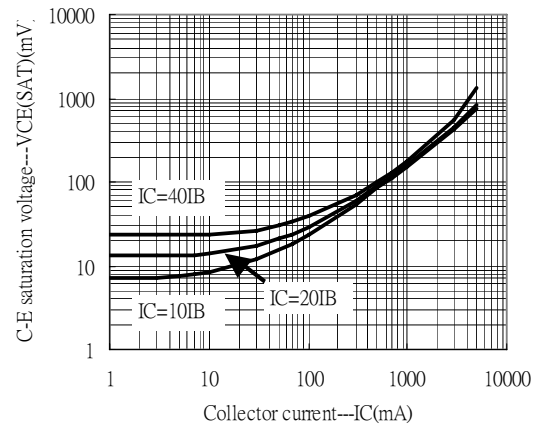


Characteristic Curves

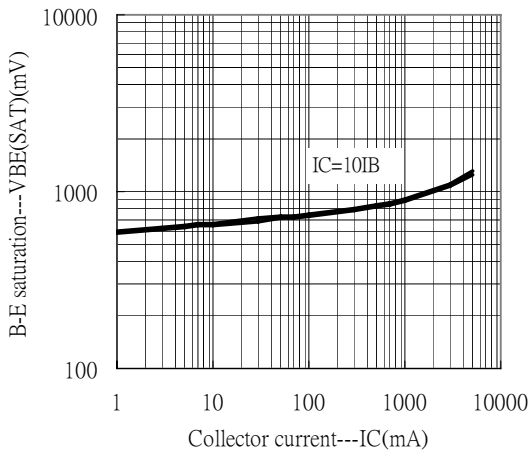
Current gain vs Collector current



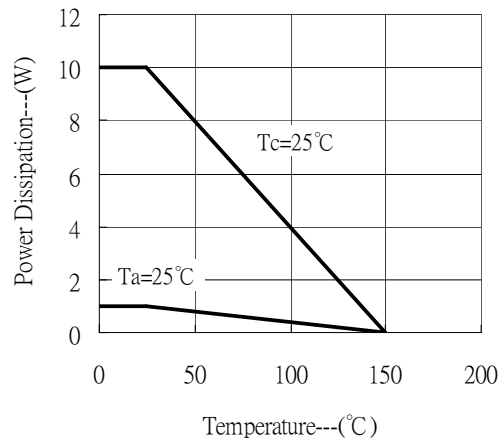
C-E saturation voltage vs Collector current



B-E saturation voltage vs Collector current



Power derating curves



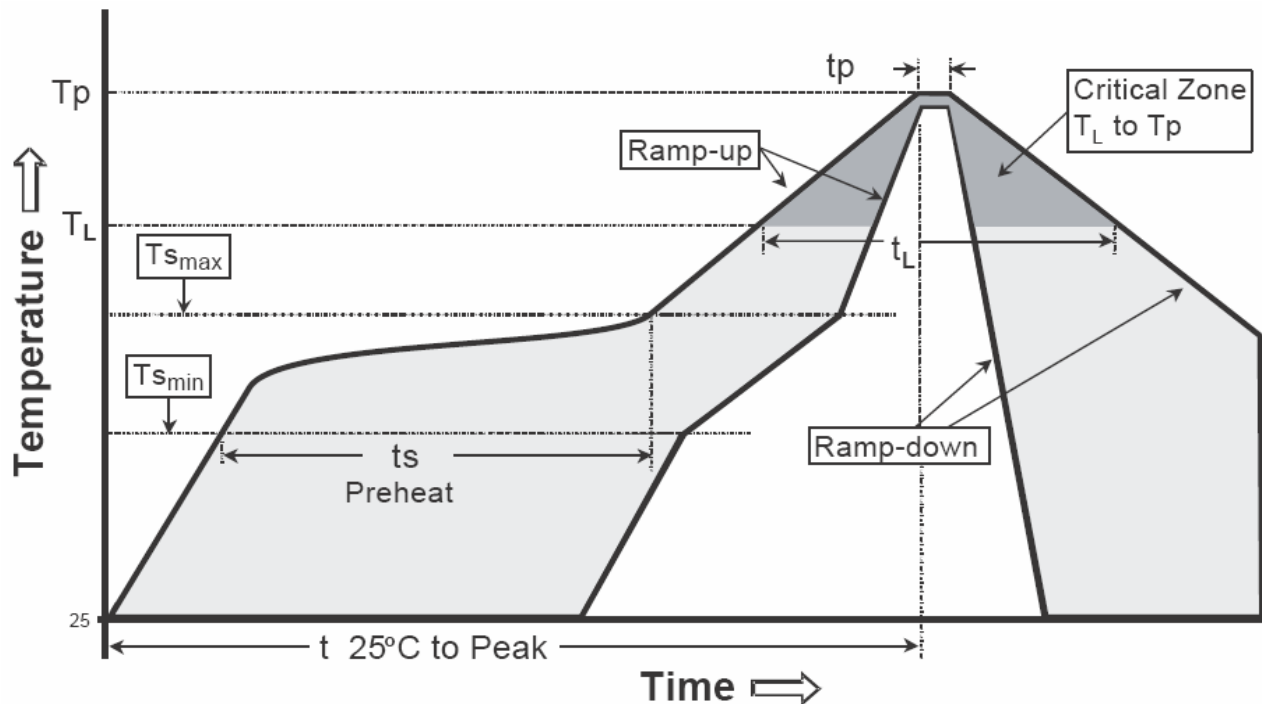
Recommended Storage Condition:

Temperature : 10~ 35 °C
Humidity : 30~ 60% RH

Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

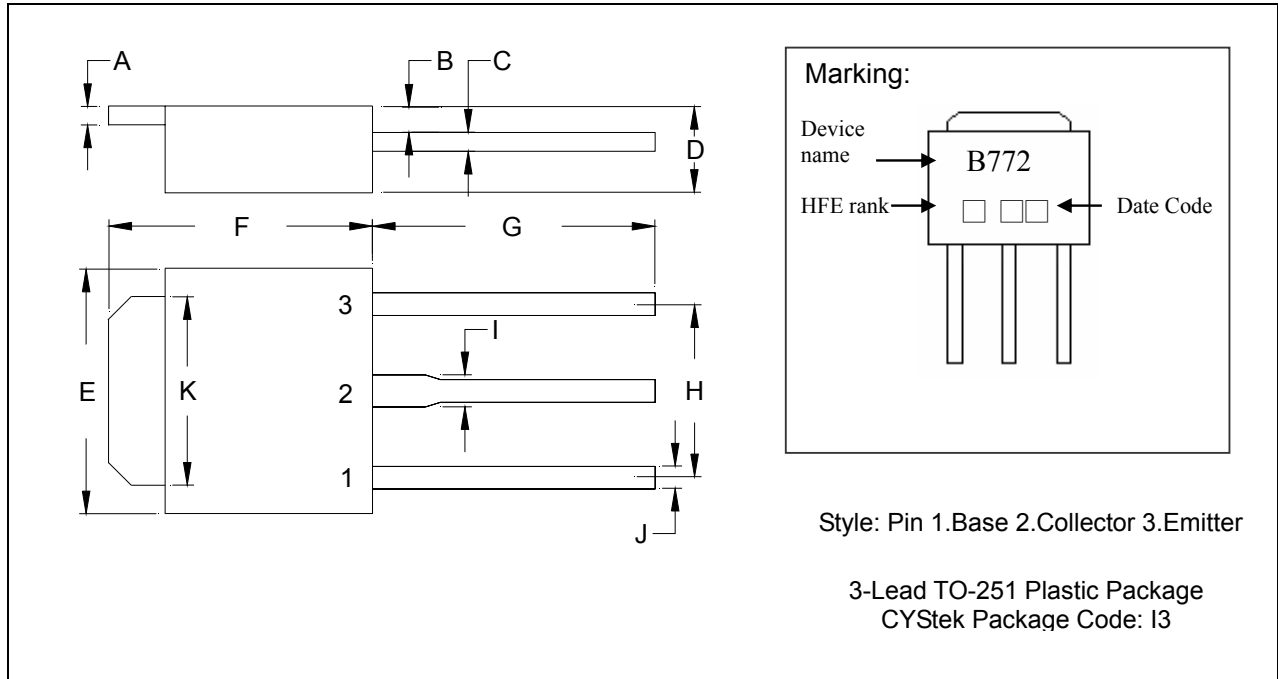
Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat		
-Temperature Min(Ts min)	100°C	150°C
-Temperature Max(Ts max)	150°C	200°C
-Time(ts min to ts max)	60-120 seconds	60-180 seconds
Time maintained above:		
-Temperature (Tl)	183°C	217°C
- Time (tL)	60-150 seconds	60-150 seconds
Peak Temperature(Tp)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

TO-251 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0177	0.0217	0.45	0.55	G	0.2559	-	6.50	-
B	0.0354	0.0591	0.90	1.50	H	-	*0.1811	-	*4.60
C	0.0177	0.0236	0.45	0.60	I	-	0.0449	-	1.14
D	0.0866	0.0945	2.20	2.40	J	-	0.0346	-	0.88
E	0.2441	0.2677	6.20	6.80	K	0.2047	0.2165	5.20	5.50
F	0.2677	0.2835	6.80	7.20					

Notes: 1.Controlling dimension: millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: KFC; pure tin plated
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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