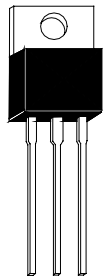
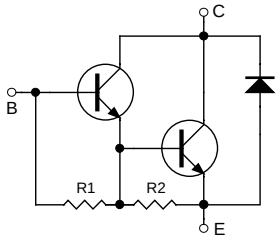
HTIP122

NPN EPITAXIAL PLANAR TRANSISTOR



TO-220

Darlington Schematic



Description

The HTIP122 is designed for use in general purpose amplifier and low-speed switching applications.

Absolute Maximum Ratings (Ta=25°C)

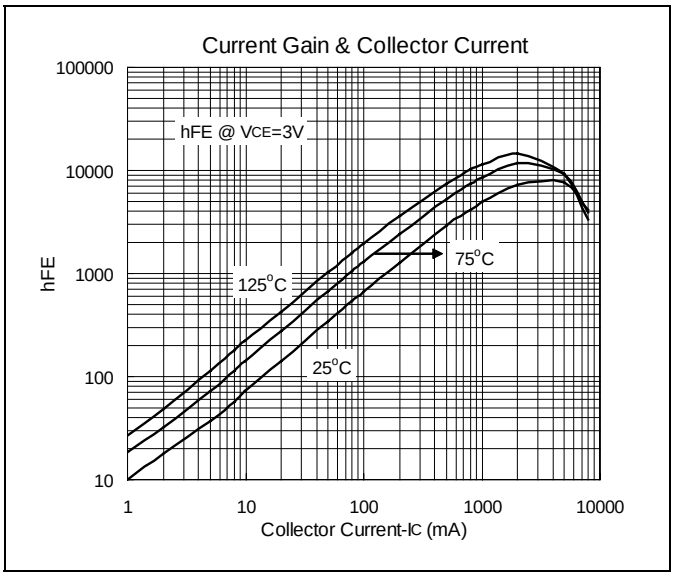
- Maximum Temperatures
  Storage Temperature ..... -55 ~ +150 °C
  Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation
  Total Power Dissipation (Tc=25°C)..... 65 W
  Total Power Dissipation (Ta=25°C)..... 2 W
- Maximum Voltages and Currents
  BVCBO Collector to Base Voltage ..... 100 V
  BVCEO Collector to Emitter Voltage ..... 100 V
  BVEBO Emitter to Base Voltage ..... 5 V
  IC Collector Current (Continuous)..... 5 A
  IC Collector Current (Peak)..... 8 A

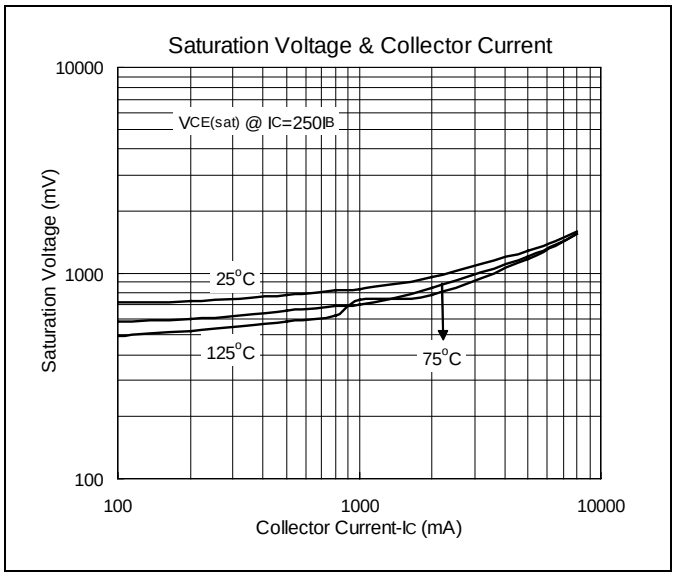
Electrical Characteristics (Ta=25°C)

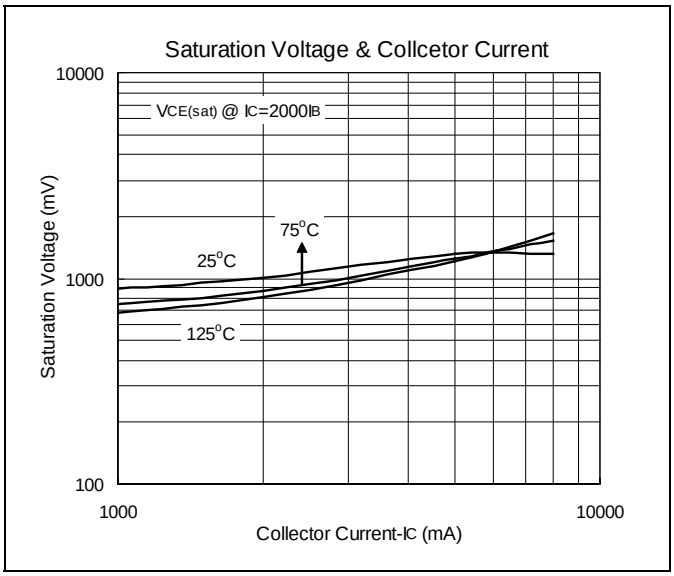
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	100	-	-	V	IC=1mA, IE=0
ICBO	-	-	200	uA	VCB=100V
ICEO	-	-	500	uA	VCE=100V
IEBO	-	-	2	mA	VEB=5V
*VCE(sat)1	-	-	2	V	IC=3A, IB=12mA
*VCE(sat)2	-	-	4	V	IC=5A, IB=20mA
*VBE(on)	-	-	2.5	V	IC=3A, VCE=3V
*hFE1	1	-	-	K	IC=0.5A, VCE=3V
*hFE2	1	-	-	K	IC=3A, VCE=3V
Cob	-	-	200	pF	VCB=10V, f=1MHz

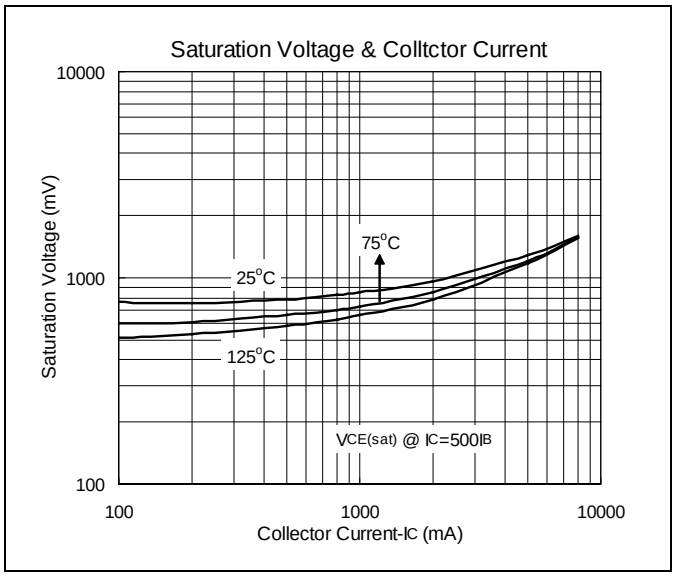
*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

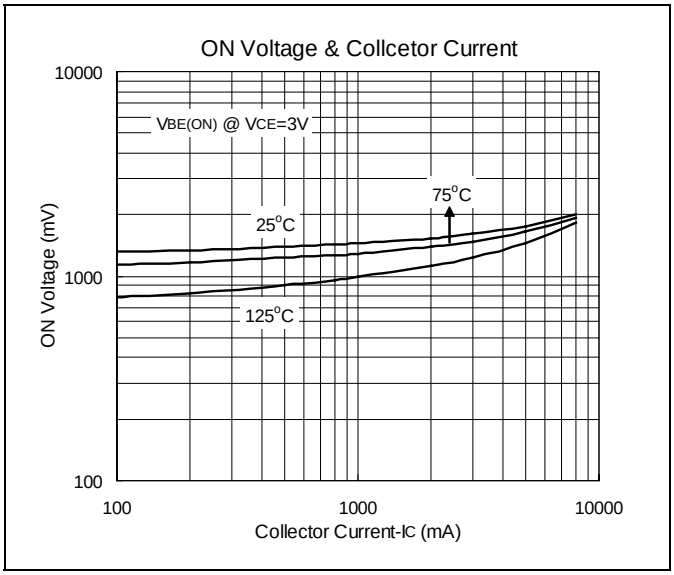
Characteristics Curve

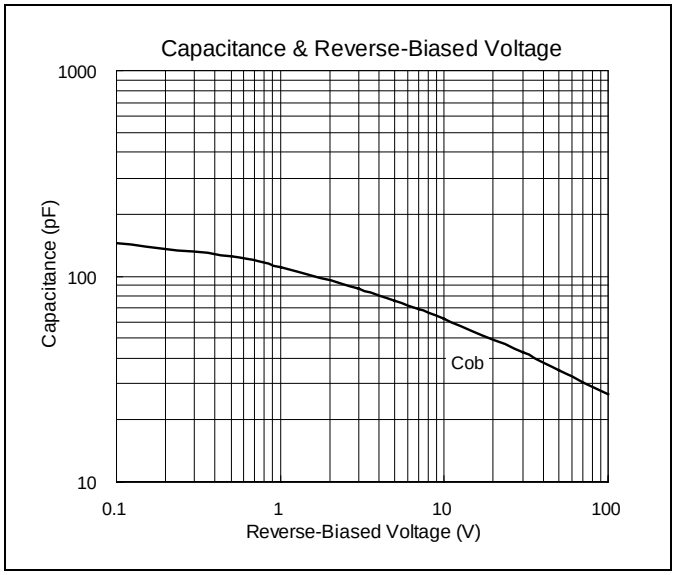


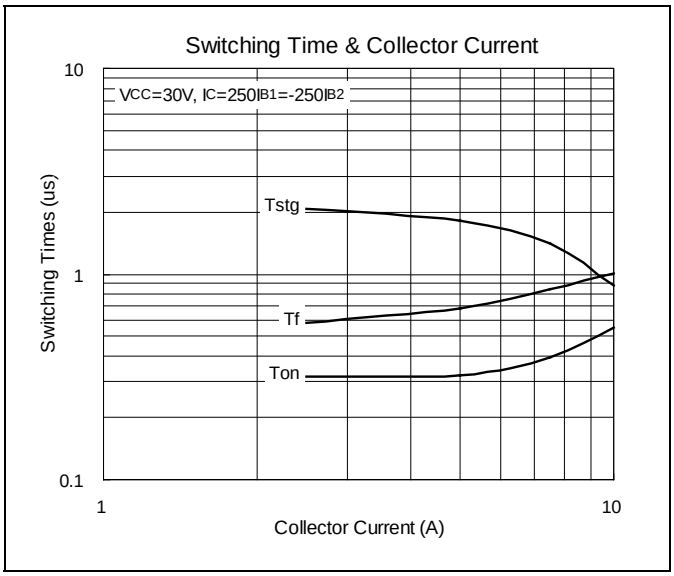


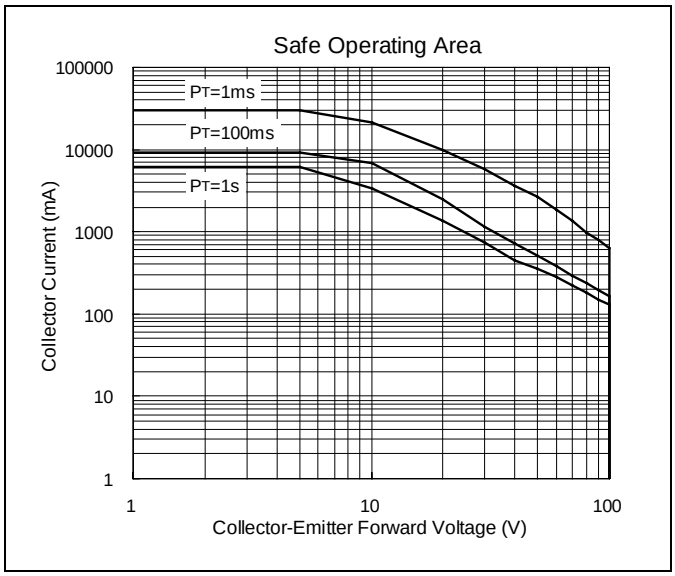




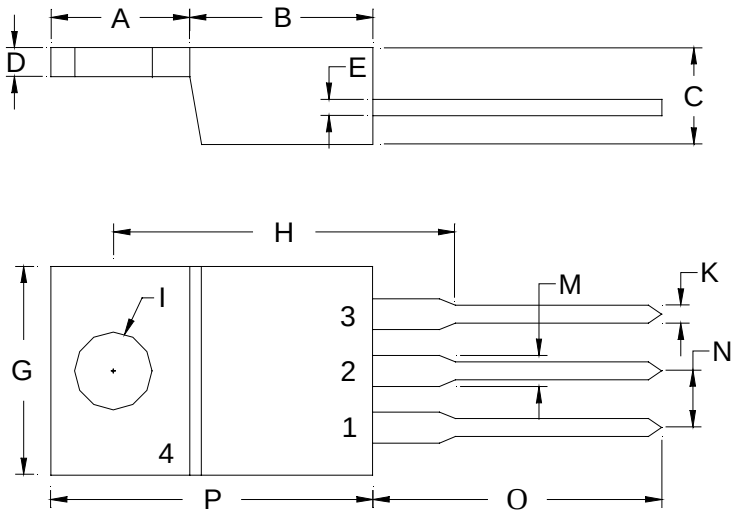




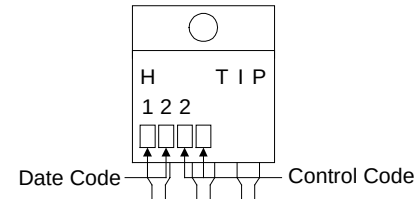

Switching Time & Collector Current
VCC=30V, IC=250IB1=-250IB2
Tstg
Tf
Ton
Switching Times (us)
10
1
0.1
1
10
Collector Current (A)


Safe Operating Area
PT=1ms
PT=100ms
PT=1s
Collector Current (mA)
100000
10000
1000
100
10
1
1
10
100
Collector-Emitter Forward Voltage (V)

TO-220AB Dimension



Marking:



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

3-Lead TO-220AB Plastic Package
HSMC Package Code: E

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.2197	0.2949	5.58	7.49	I	-	*0.1508	-	*3.83
B	0.3299	0.3504	8.38	8.90	K	0.0295	0.0374	0.75	0.95
C	0.1732	0.185	4.40	4.70	M	0.0449	0.0551	1.14	1.40
D	0.0453	0.0547	1.15	1.39	N	-	*0.1000	-	*2.54
E	0.0138	0.0236	0.35	0.60	O	0.5000	0.5618	12.70	14.27
G	0.3803	0.4047	9.66	10.28	P	0.5701	0.6248	14.48	15.87
H	-	*0.6398	-	*16.25					

Notes: 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.
2.Controlling dimension: millimeters.
3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

Material:

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

Head Office And Factory:

- **Head Office** (Hi-Sincerity Microelectronics Corp.): 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.
  Tel: 886-2-25212056 Fax: 886-2-25632712, 25368454
- **Factory 1:** No. 38, Kuang Fu S. Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
  Tel: 886-3-5983621~5 Fax: 886-3-5982931