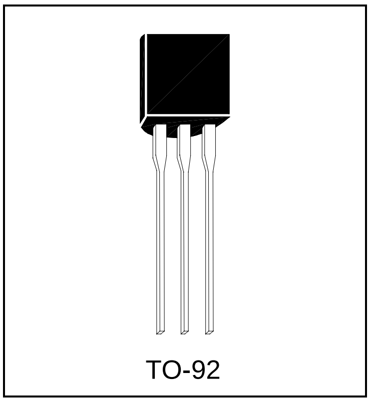
HMPSA14

NPN SILICON TRANSISTOR


TO-92

Description

The HMPSA14 is designed for applications requiring extremely high current gain collector current to 500mA.

Features

- High D.C current Gain
- HMPSA14 Complementary to HMPSA64

Absolute Maximum Ratings

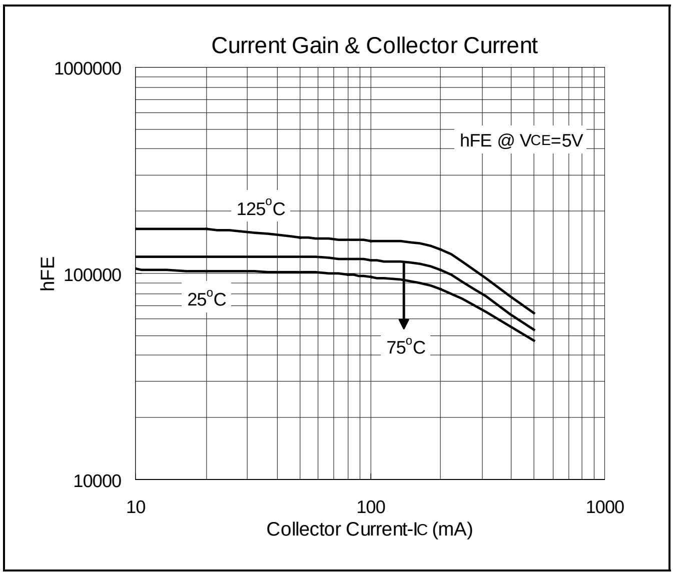
- Maximum Temperatures
  Storage Temperature .... -55 ~ +150 °C
  Junction Temperature .... +150 °C Maximum
- Maximum Power Dissipation
  Total Power Dissipation (Ta=25°C) .... 625 mW
- Maximum Voltages and Currents (Ta=25°C)
  VCBO Collector to Base Voltage .... 30 V
  VCES Collector to Emitter Voltage .... 30 V
  VEBO Emitter to Base Voltage .... 10 V
  IC Collector Current .... 500 mA

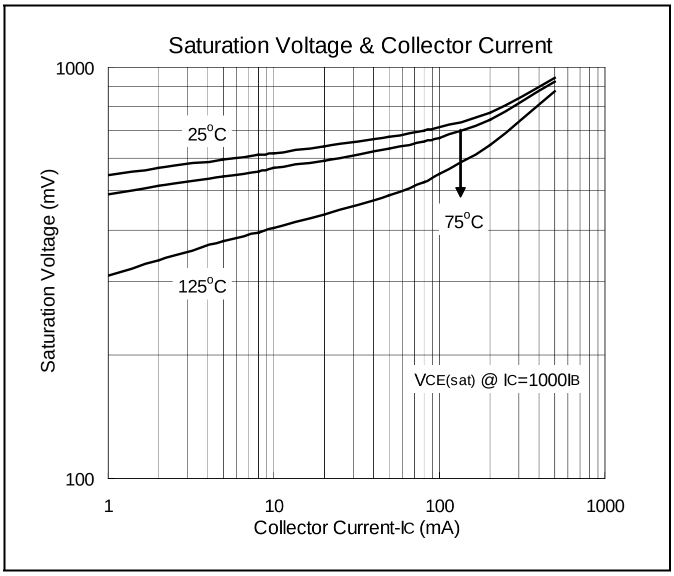
Characteristics (Ta=25°C)

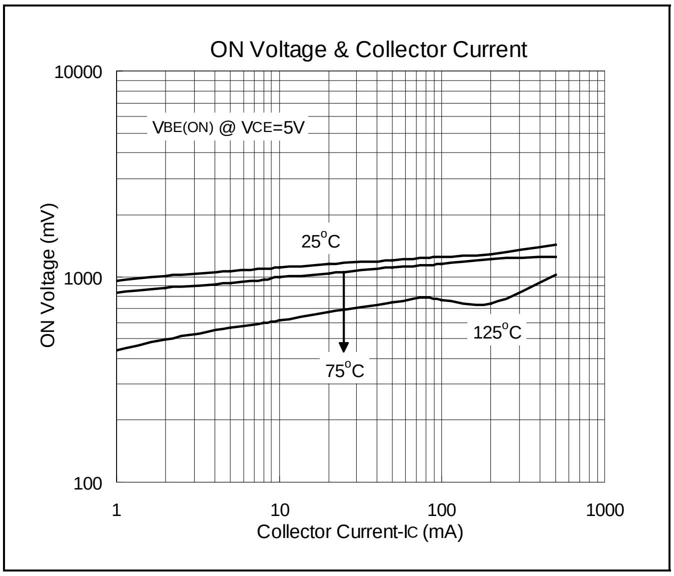
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	30	-	-	V	IC=100uA, IE=0
BVCES	30	-	-	V	IC=0.1mA, VBE=0
BVEBO	10	-	-	V	IE=10uA, IC=0
ICBO	-	-	100	nA	VCB=30V, IE=0
IEBO	-	-	100	nA	VEB=10V, IC=0
*VCE(sat)	-	-	1.5	V	IC=100mA, IB=0.1mA
VBE(on)	-	-	2	V	VCE=5V, IC=100mA
*hFE1	10K	-	-		IC=10mA, VCE=5V
*hFE2	20K	-	-		IC=100mA, VCE=5V
fT	125	-	-	MHz	IC=10mA, VCE=5V, f=100MHz
Cob	-	-	6	pF	VCB=10V, f=1MHz

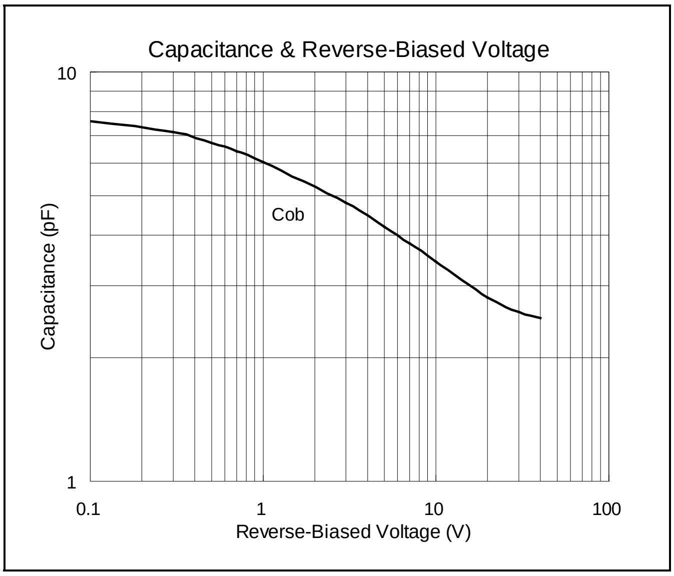
*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

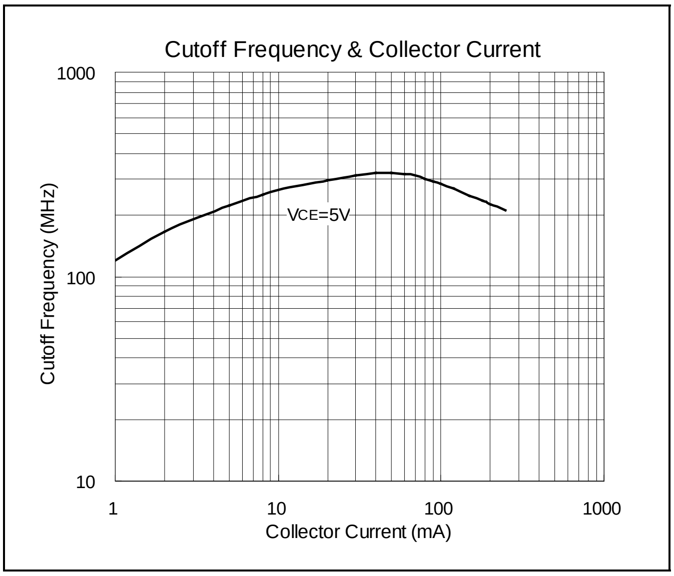
Characteristics Curve

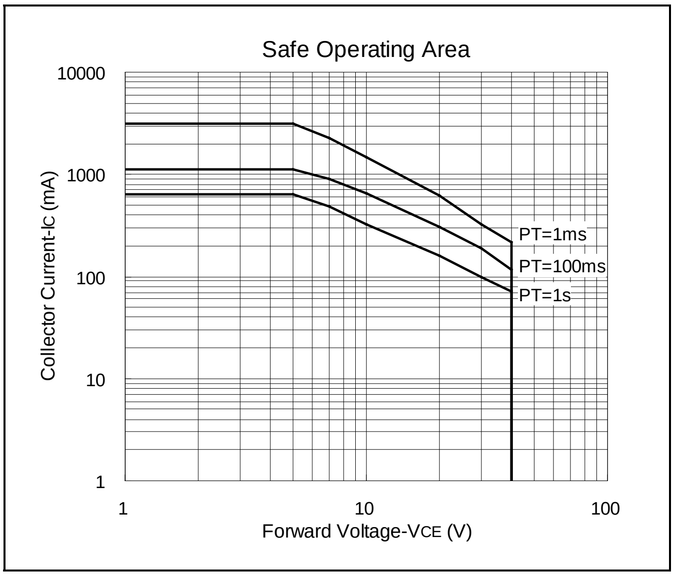


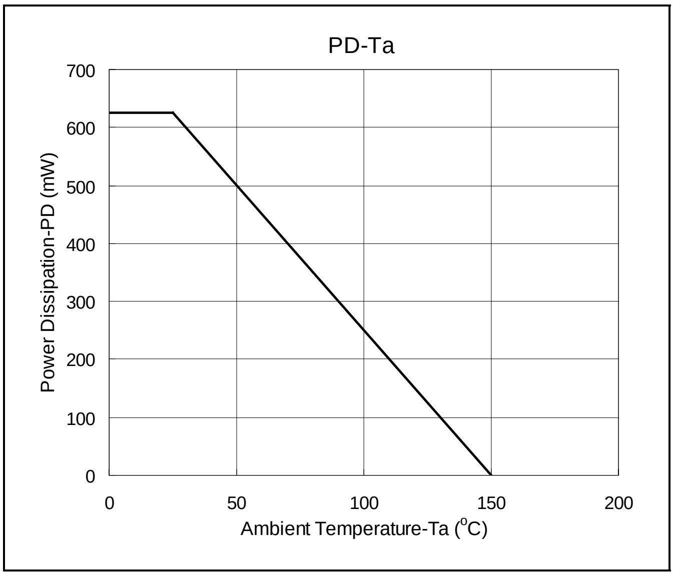




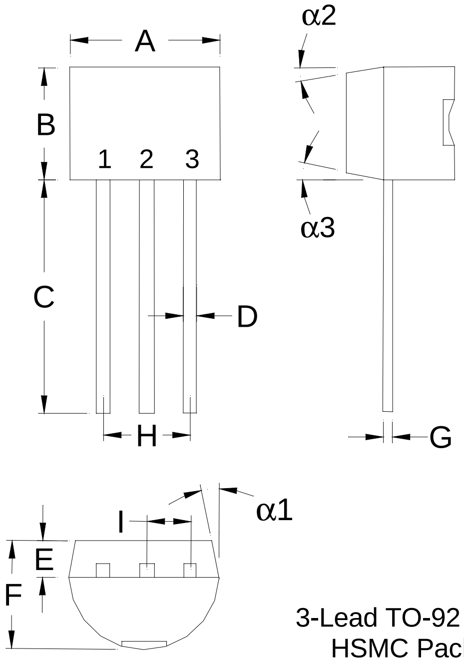




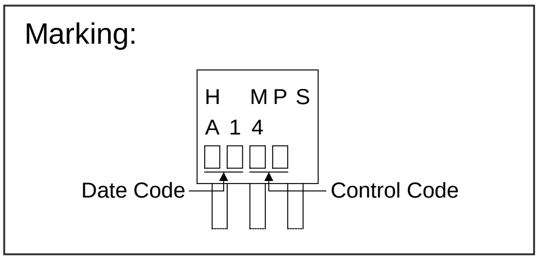



PD-Ta
Power Dissipation-PD (mW)
0
100
200
300
400
500
600
700
Ambient Temperature-Ta (°C)
0
50
100
150
200

TO-92 Dimension



3-Lead TO-92 Plastic Package
HSMC Package Code: A



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

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1704	0.1902	4.33	4.83	G	0.0142	0.0220	0.36	0.56
B	0.1704	0.1902	4.33	4.83	H	-	*0.1000	-	*2.54
C	0.5000	-	12.70	-	I	-	*0.0500	-	*1.27
D	0.0142	0.0220	0.36	0.56	α1	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	α2	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	α3	-	*2°	-	*2°

Notes: 1.Dimension and tolerance based on our Spec. dated Apr. 25,1996.
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

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