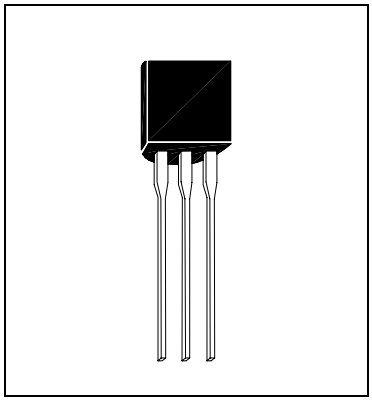
# HMPSA42M

NPN EPITACIAL PLANAR TRANSISTOR



## Description

The HMPSA42M is designed for application as a video output to drive color CRT, or as a dialer circuit in electronics telephone.

## Absolute Maximum Ratings

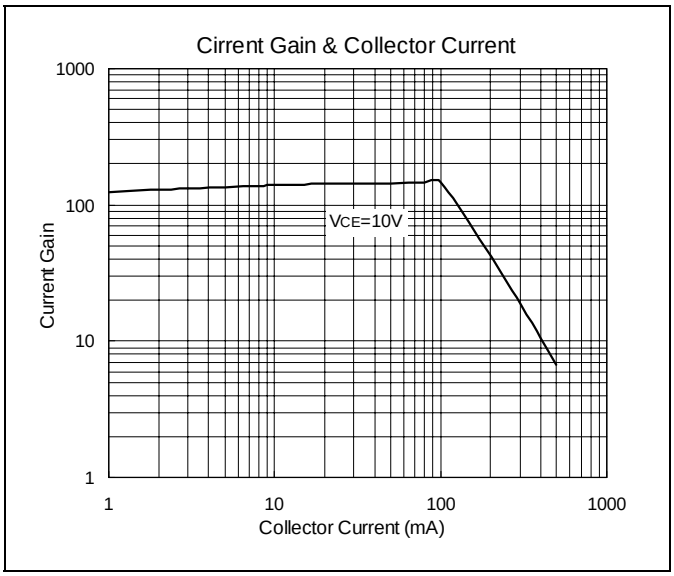
- Maximum Temperatures
  Storage Temperature ..... -55 ~ +150 °C
  Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation
  Total Power Dissipation (Ta=25°C) ..... 625 mW
- Maximum Voltages and Currents (Ta=25°C)
  VCBO Collector to Base Voltage ..... 300 V
  VCEO Collector to Emitter Voltage ..... 300 V
  VEBO Emitter to Base Voltage ..... 6 V
  IC Collector Current ..... 800 mA

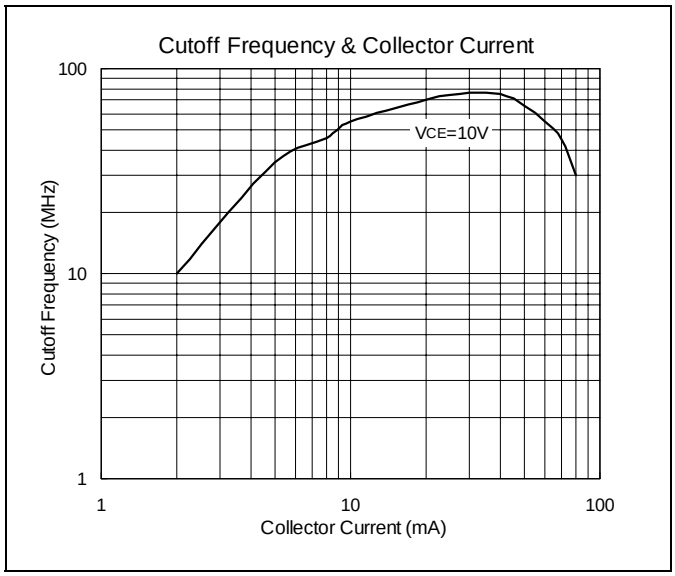
## Characteristics (Ta=25°C)

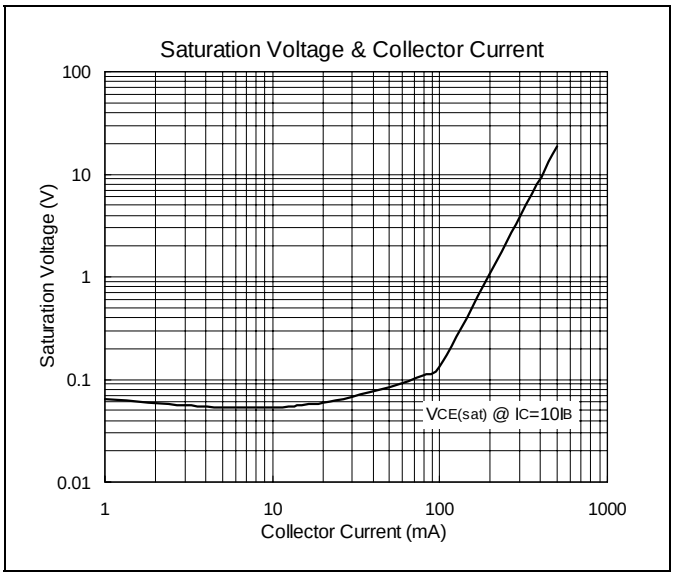
| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|
| BVCBO | 300 | - | - | V | IC=100uA, IE=0 |
| BVCEO | 300 | - | - | V | IC=1mA, IB=0 |
| BVEBO | 6 | - | - | V | IE=10uA, IC=0 |
| IEBO | - | - | 100 | nA | VEB=3V, IC=0 |
| *VCE(sat)1 | - | - | 200 | mV | IC=20mA, IB=2mA |
| *VCE(sat)2 | - | - | 750 | mV | IC=100mA, IB=10mA |
| *VBE(sat)1 | - | - | 900 | mV | IC=20mA, IB=2mA |
| *VBE(sat)2 | - | - | 1000 | mV | IC=100mA, IB=10mA |
| *hFE1 | 80 | - | - | | IC=10mA, VCE=10V |
| *hFE2 | 80 | - | - | | IC=100mA, VCE=10V |
| *hFE3 | 40 | - | - | | IC=200mA, VCE=10V |
| fT | 50 | - | - | MHz | IC=10mA, VCE=20V, f=100MHZ |

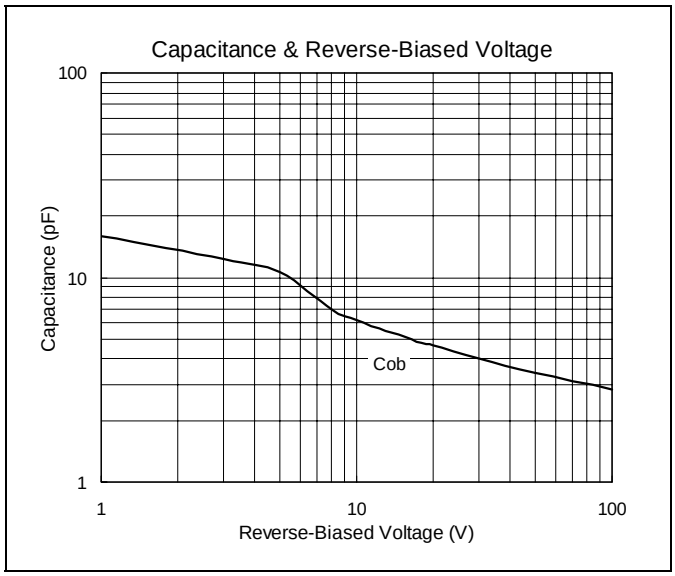
*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

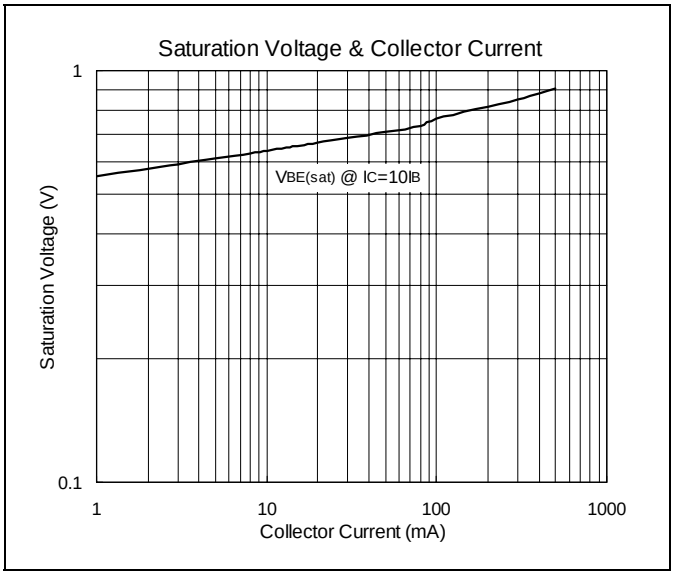
## Characteristics Curve

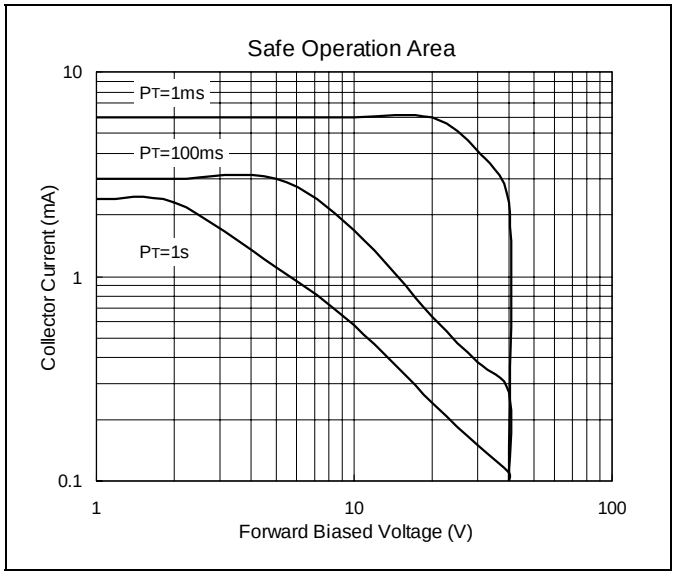


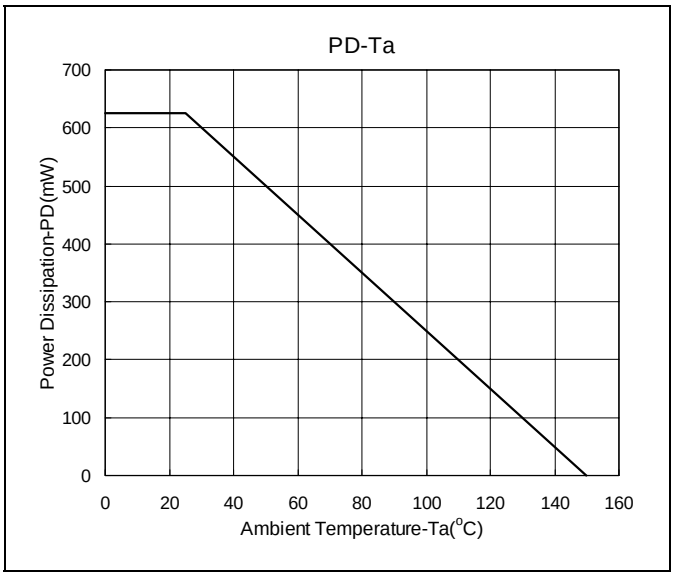



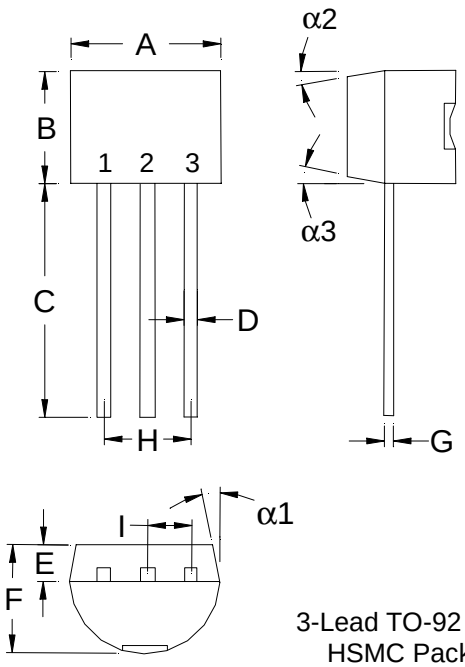



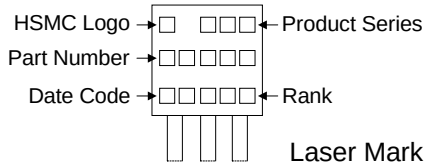

PD-Ta
Power Dissipation-PD(mW)
700
600
500
400
300
200
100
0
0
20
40
60
80
100
120
140
160
Ambient Temperature-Ta(°C)

## TO-92 Dimension

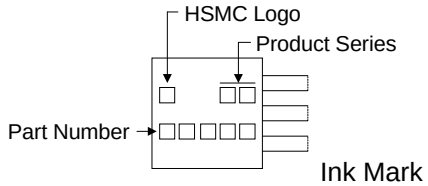



3-Lead TO-92 Plastic Package
HSMC Package Code : A

Marking :




Laser Mark




Ink Mark

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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