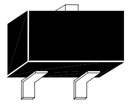
HMBT5401

PNP EPITAXIAL PLANAR TRANSISTOR



SOT-23

Description

The HMBT5401 is designed for general purpose applications requiring high breakdown voltages.

Features

- High Collector-Emitter Breakdown Voltage (BVCEO=150V@ IC=1mA)
- Complements to NPN Type HMBT5551

Absolute Maximum Ratings

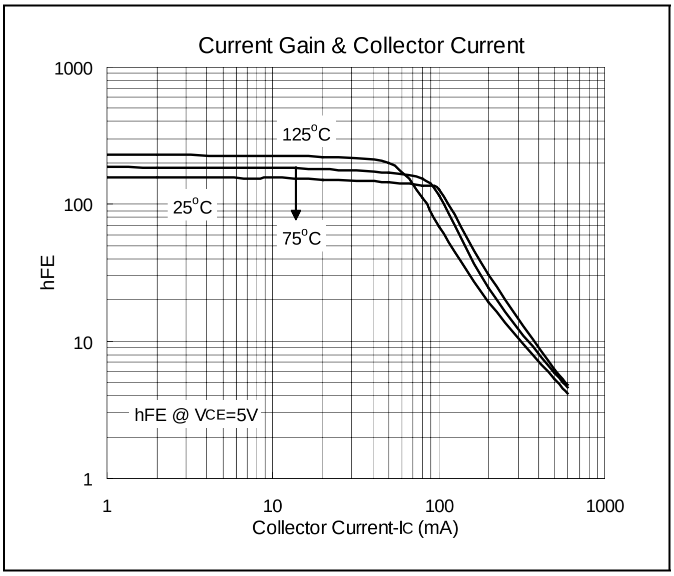
- Maximum Temperatures
  Storage Temperature .... -55 ~ +150 °C
  Junction Temperature .... +150 °C Maximum
- Maximum Power Dissipation
  Total Power Dissipation (Ta=25°C) .... 225 mW
- Maximum Voltages and Currents (Ta=25°C)
  VCBO Collector to Base Voltage .... -160 V
  VCEO Collector to Emitter Voltage .... -150 V
  VEBO Emitter to Base Voltage .... -5 V
  IC Collector Current .... -600 mA

Characteristics (Ta=25°C)

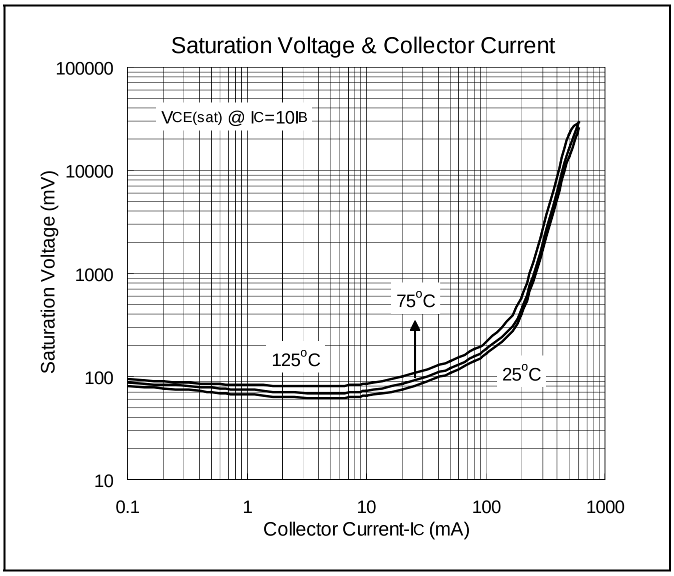
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-160	-	-	V	IC=-100uA
BVCEO	-150	-	-	V	IC=-1mA
BVEBO	-5	-	-	V	IE=-10uA
ICBO	-	-	-50	nA	VCB=-120V
*VCE(sat)1	-	-	-200	mV	IC=-10mA, IB=-1mA
*VCE(sat)2	-	-	-500	mV	IC=-50mA, IB=-5mA
*VBE(sat)1	-	-	-1	V	IC=-10mA, IB=-1mA
*VBE(sat)2	-	-	-1	V	IC=-50mA, IB=-5mA
*hFE1	50	-	-		VCE=-5V, IC=-1mA
*hFE2	60	-	240		VCE=-5V, IC=-10mA
*hFE3	50	-	-		VCE=-5V, IC=-50mA
fT	100	-	300	MHz	VCE=-10V, IC=-10mA, f=100MHz
Cob	-	-	6	pF	VCB=-10V, f=1MHZ

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

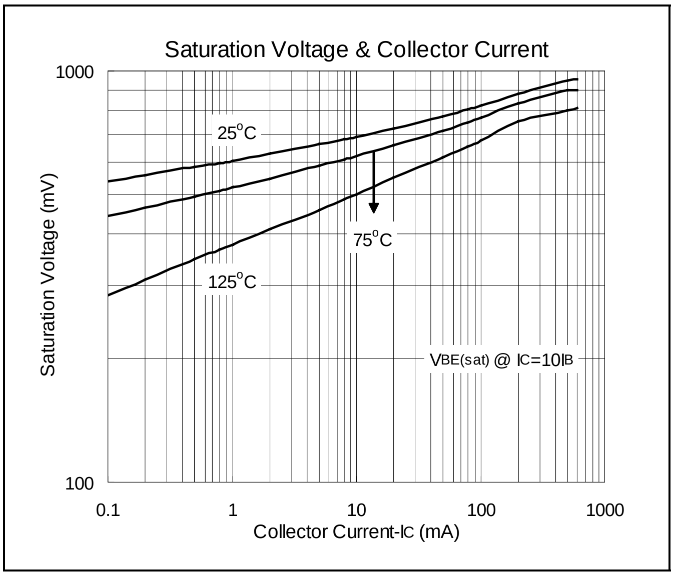
Characteristics Curve



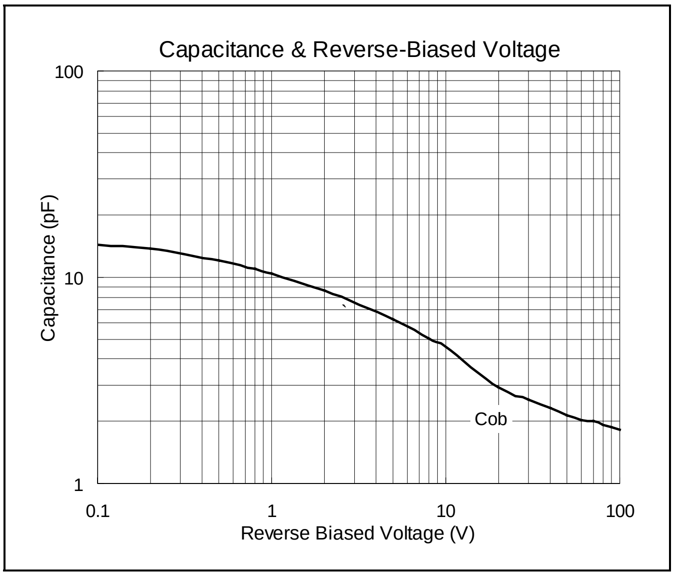
Current Gain & Collector Current



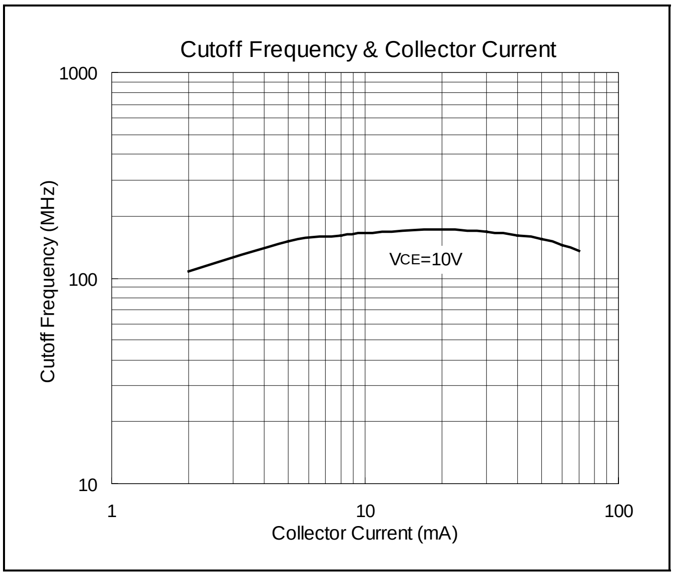
Saturation Voltage & Collector Current



Saturation Voltage & Collector Current

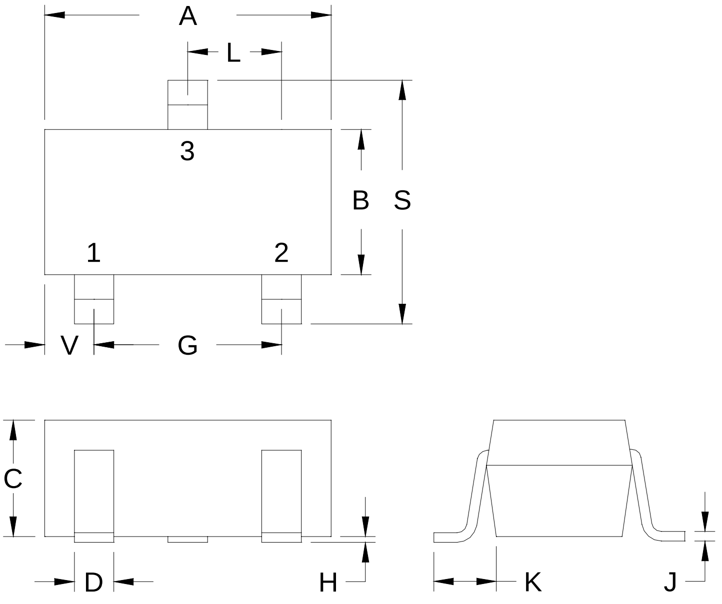


Capacitance & Reverse-Biased Voltage

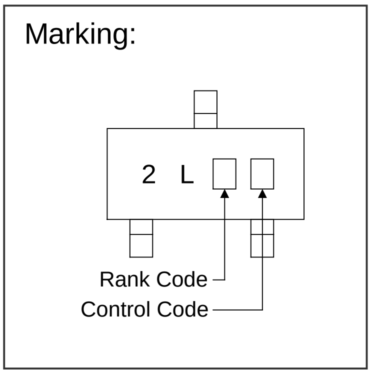


Cutoff Frequency & Collector Current

SOT-23 Dimension



Marking:



3-Lead SOT-23 Plastic
Surface Mounted Package
HSMC Package Code: N

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

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

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

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