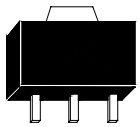
HM772

PNP EPITAXIAL PLANAR TRANSISTOR



SOT-89

Description

The HM772 is designed for use in output stage of amplifier, voltage regulator, DC-DC converter and driver.

Absolute Maximum Ratings

- Maximum Temperatures
  Storage Temperature ..... -55 ~ +150 °C
  Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation
  Total Power Dissipation (Ta=25°C) ..... 0.5 W (Note1)
  Total Power Dissipation (Ta=25°C) ..... 2 W (Note2)
  Total Power Dissipation (Tc=25°C) ..... 1 W (Note1)
  Total Power Dissipation (Tc=25°C) ..... 4 W (Note2)
- Maximum Voltages and Currents (Ta=25°C)
  VCBO Collector to Base Voltage ..... -40 V
  VCEO Collector to Emitter Voltage ..... -30 V
  VEBO Emitter to Base Voltage ..... -5 V
  IC Collector Current (continuous) ..... -3 A
  IC Collector Current (pulse) ..... -7 A (Note3)

Thermal Characteristic

Characteristic	Symbol	Max.	Unit
Thermal Resistance, junction to ambient (Note1)	Rθja	250	°C/W
Thermal Resistance, junction to ambient (Note2)	Rθja	62.5	°C/W
Thermal Resistance, junction to case (Note1)	Rθjc	125	°C/W
Thermal Resistance, junction to case (Note2)	Rθjc	31.25	°C/W

Note1: When tested in free air condition, without heat sinking.
Note2: When mounted on a 40X40X1mm ceramic board.
Note3: Single pulse PW=1ms

Characteristics (Ta=25°C)

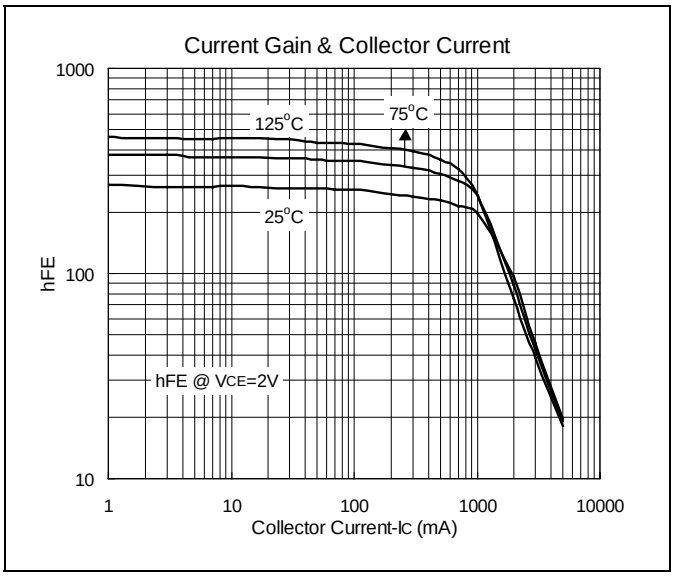
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-40	-	-	V	IC=-100uA
BVCEO	-30	-	-	V	IC=-1mA
BVEBO	-5	-	-	V	IE=-10uA
ICBO	-	-	-1	uA	VCB=-30V
IEBO	-	-	-1	uA	VEB=-3V
*VCE(sat)	-	-0.3	-0.5	V	IC=-2A, IB=-0.2A
*VBE(sat)	-	-1	-2	V	IC=-2A, IB=-0.2A
*hFE1	30	-	-		VCE=-2V, IC=-20mA
*hFE2	100	160	500		VCE=-2V, IC=-1A
fT	-	80	-	MHz	VCE=-5V, IC=-100mA, f=100MHz
Cob	-	55	-	pF	VCB=-10V, f=1MHz

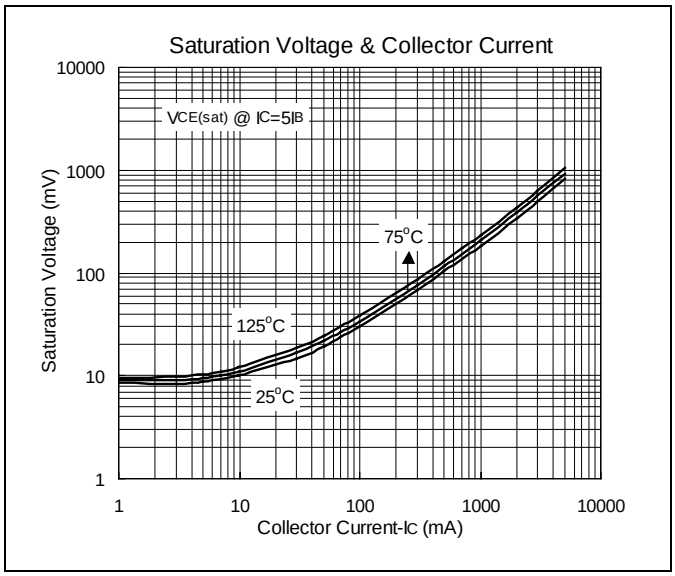
*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

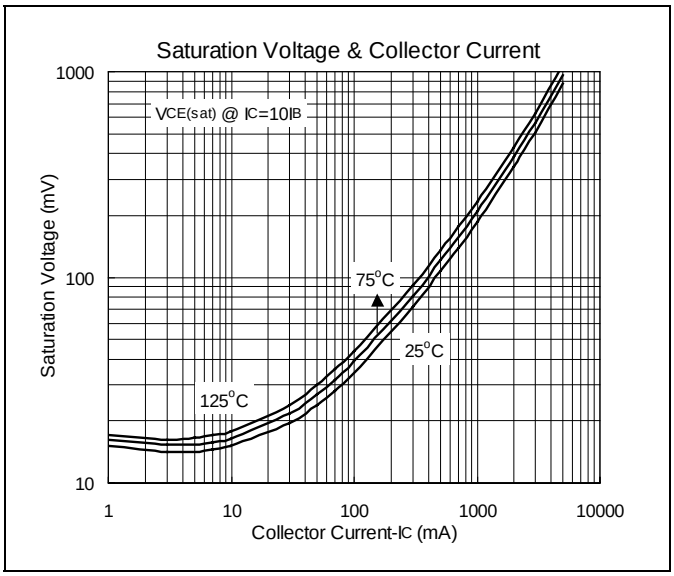
Classification Of hFE2

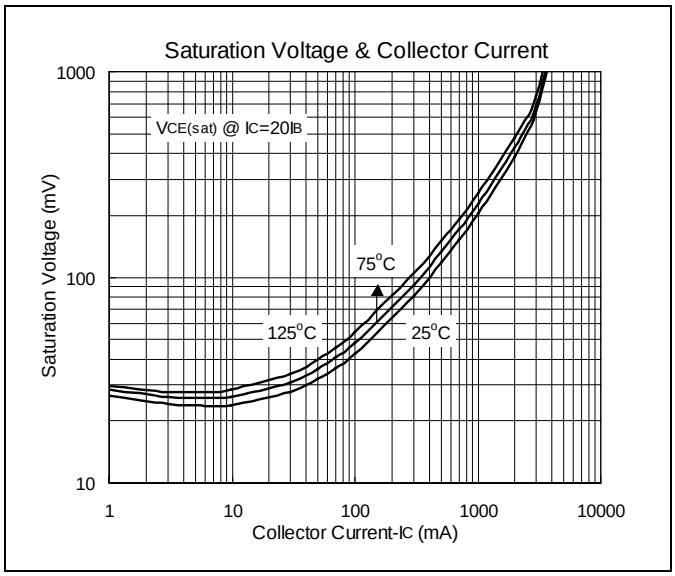
Rank	Q	P	E
Range	100-200	160-320	250-500

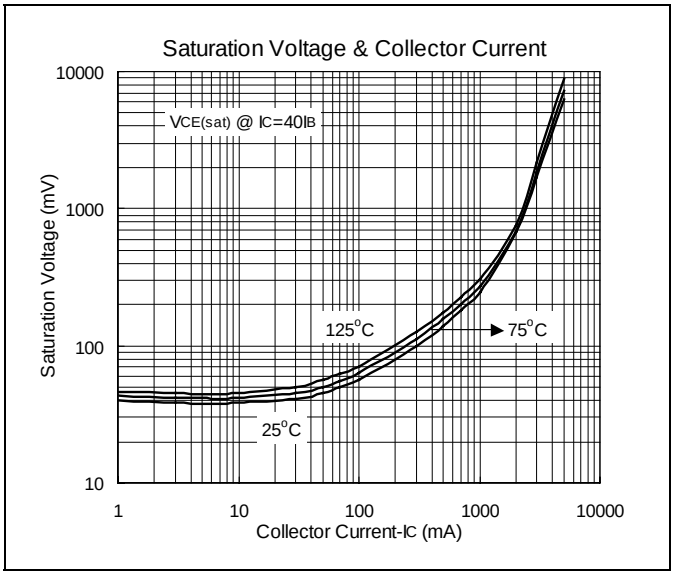
Characteristics Curve

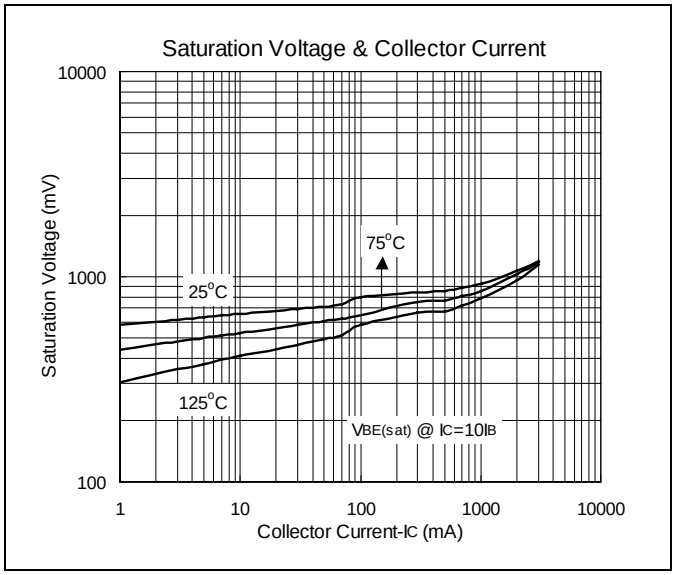


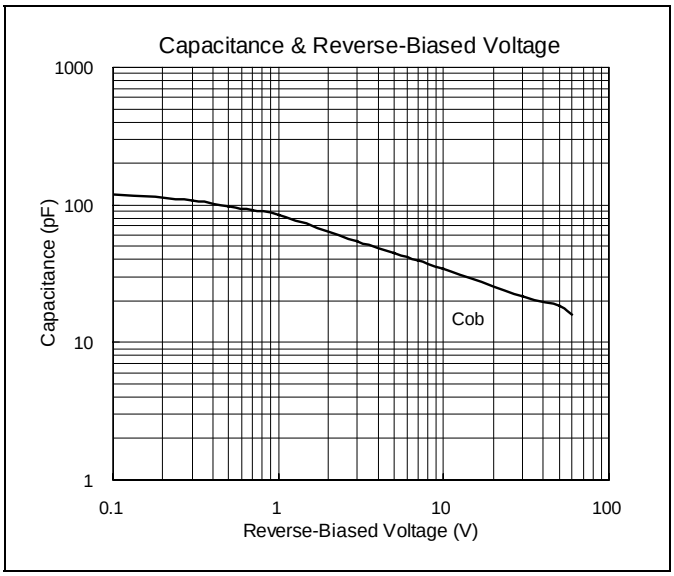


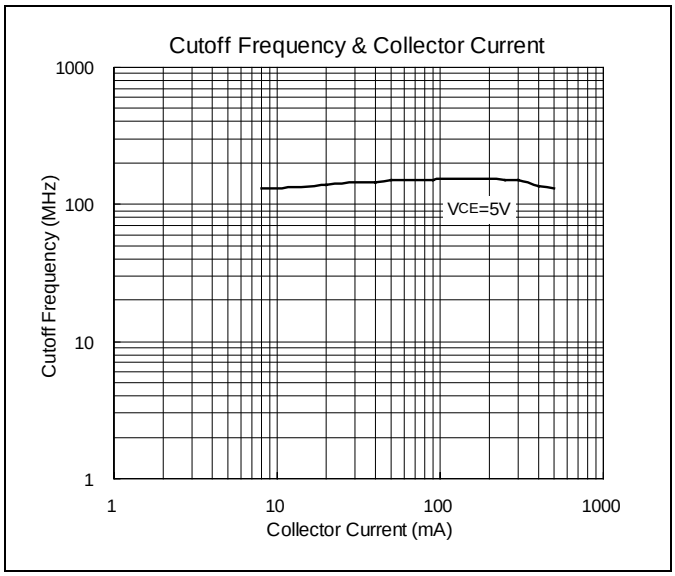


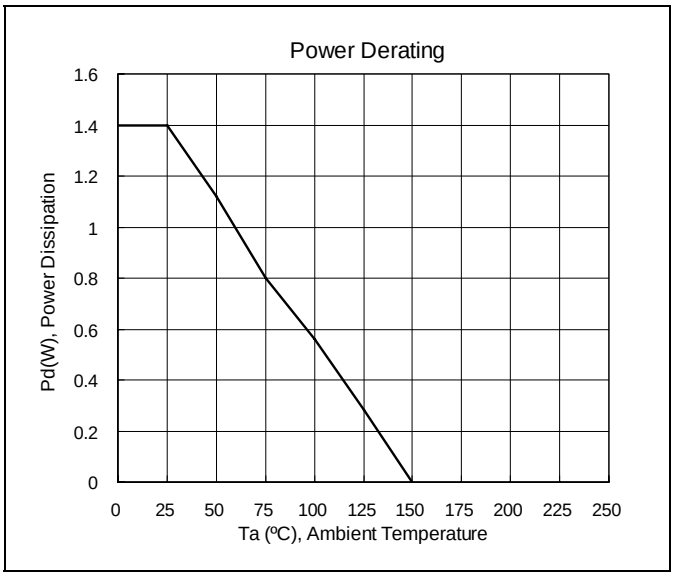


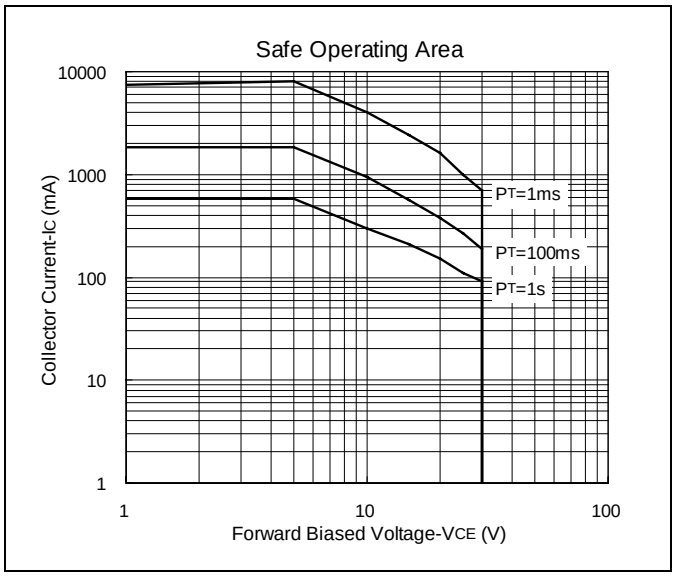




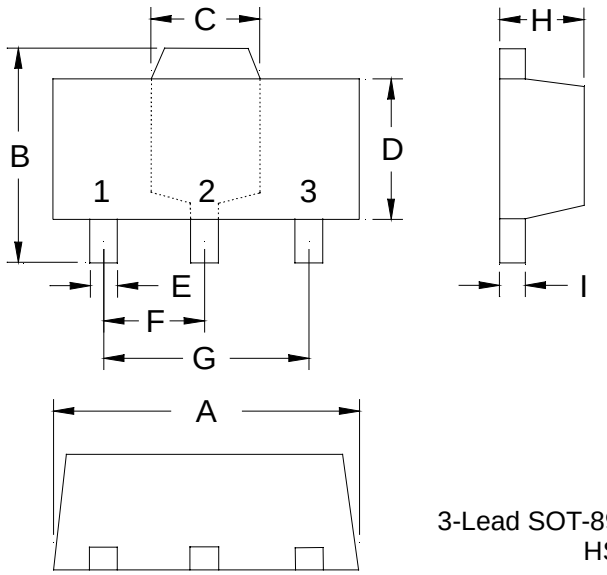

Capacitance & Reverse-Biased Voltage
1000
100
10
1
Capacitance (pF)
Cob
0.1
1
10
100
Reverse-Biased Voltage (V)


Cutoff Frequency & Collector Current
1000
100
10
1
Cutoff Frequency (MHz)
VCE=5V
1
10
100
1000
Collector Current (mA)

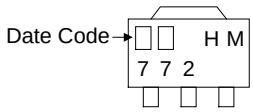

Power Derating
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Pd(W), Power Dissipation
0
25
50
75
100
125
150
175
200
225
250
Ta (ºC), Ambient Temperature


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

SOT-89 Dimension



Marking:



Laser Marking

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

3-Lead SOT-89 Plastic Surface Mounted Package
HSMC Package Code: M

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1732	0.1811	4.40	4.60	F	0.0583	0.0598	1.48	1.52
B	0.1594	0.1673	4.05	4.25	G	0.1165	0.1197	2.96	3.04
C	0.0591	0.0663	1.50	1.70	H	0.0551	0.0630	1.40	1.60
D	0.0945	0.1024	2.40	2.60	I	0.0138	0.0161	0.35	0.41
E	0.0141	0.0201	0.36	0.51					

Notes: 1.Dimension and tolerance based on our Spec. dated May. 05,1996.
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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