

## SOT-23 Plastic-Encapsulate Transistors

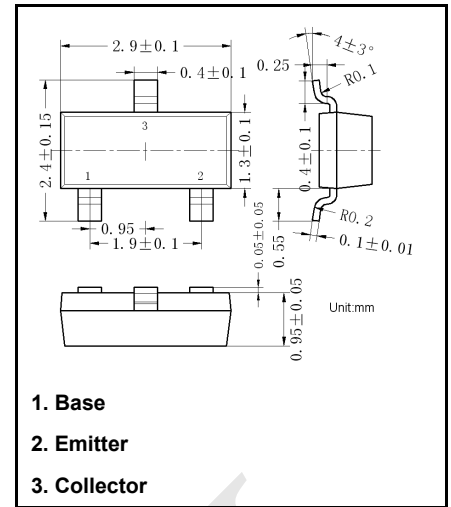
### MMBT2907A

PNP Transistors

#### Features

- Epitaxial planar die construction
- Complementary NPN Type available (MMBT2222A)

Marking: 2F



#### Maximum Ratings (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector Base Voltage	-60	V
V <sub>CEO</sub>	Collector Emitter Voltage	-40	V
V <sub>EBO</sub>	Emitter Base Voltage	-5	V
I <sub>c</sub>	Collector Current –Continuous	-600	mA
P <sub>D</sub>	Total Device Dissipation	250	mW
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55 to +150	°C
R <sub>θJA</sub>	Thermal Resistance Junction to Ambient	500	°C/W

**Electrical Characteristics (T<sub>a</sub>=25°C unless otherwise specified)**

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0	-60			V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> = -10mA, I <sub>B</sub> = 0	-40			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-5			V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> = -50V, I <sub>E</sub> = 0			-20	nA
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> = -30V, V <sub>BE(off)</sub> = -0.5V			-50	nA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> = -3V, I <sub>C</sub> = 0			-10	nA
h <sub>FE(1)</sub>	DC current gain	V <sub>CE</sub> = -5V, I <sub>C</sub> = -1mA	100			
h <sub>FE(2)</sub>		V <sub>CE</sub> = -10V, I <sub>C</sub> = -0.1mA	52			
h <sub>FE(3)</sub>		V <sub>CE</sub> = -10V, I <sub>C</sub> = -1mA	100			
h <sub>FE(4)</sub>		V <sub>CE</sub> = -10V, I <sub>C</sub> = -10mA	100			
h <sub>FE(5)</sub>		V <sub>CE</sub> = -10V, I <sub>C</sub> = -150mA	100		300	
h <sub>FE(6)</sub>		V <sub>CE</sub> = -10V, I <sub>C</sub> = -500mA	32			
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> = -150mA, I <sub>B</sub> = -15mA			-0.4	V
		I <sub>C</sub> = -500mA, I <sub>B</sub> = -50mA			-1.6	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> = -150mA, I <sub>B</sub> = -15mA			-1.3	V
		I <sub>C</sub> = -500mA, I <sub>B</sub> = -50mA			-2.6	V
f <sub>T</sub>	Transition frequency	V <sub>CE</sub> = -20V, I <sub>C</sub> = -50mA, f = 100MHz	200			MHz
t <sub>d</sub>	Delay time	V <sub>CC</sub> = -30V, I <sub>C</sub> = -150mA, I <sub>B1</sub> = -15mA			10	ns
t <sub>r</sub>	Rise time				25	ns
t <sub>s</sub>	Storage time	V <sub>CC</sub> = -6V, I <sub>C</sub> = -150mA, I <sub>B1</sub> = -I <sub>B2</sub> = -15mA			225	ns
t <sub>f</sub>	Fall time				60	ns

# Typical Characteristics

Static Characteristic

