HFZT

MMBT2907A

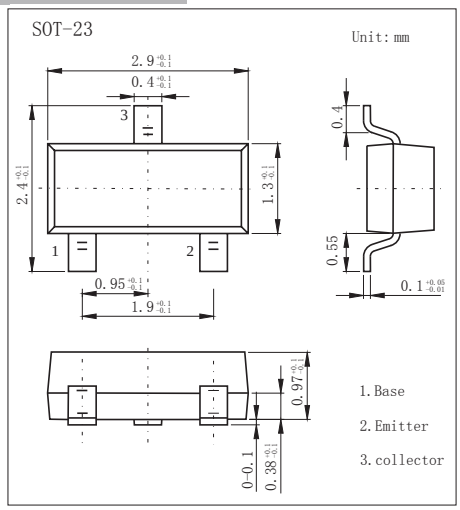
SOT-23 Plastic-Encapsulate Transistors

Features

- Epitaxial planar die construction.
- Complementary NPN type available(MMBT2222A)
- PNP Transistors

MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-60	V
Collector - Emitter Voltage	V_{CEO}	-60	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	600	mA
Power Dissipation	P_D	250	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	500	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

PACKAGE INFORMATION

Device	Package	Shipping
MMBT2222A	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -100 μ A, I_E = 0	-60		V
Collector-Emitter Breakdown Voltage*	$V_{(BR)CEO}$	I_C = -10 mA, I_B = 0	-60		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -100 μ A, I_C = 0	-5		V
Collector Cutoff Current	I_{CBO}	V_{CB} = -50 V, I_E = 0		-20	nA
Collector Cutoff Current	I_{CEX}	V_{CE} = -30 V,$V_{EB(off)}$ =0.5V		-50	nA
DC Current Gain	h_{FE}	V_{CE}=-10V,I_C=-0.1mA	75		
		V_{CE}=-10V,I_C=-1mA	100		
		V_{CE}=-10V,I_C=-10mA	100		
		V_{CE}=-10V,I_C=-150mA	100	300	
		V_{CE}=-10V,I_C=-500mA	50		
Collector-Emitter Saturation Voltage *	$V_{CE(sat)}$	I_C = -150 mA, I_B = -15 mA		-0.4	V
		I_C = -500 mA, I_B = -50 mA		-1.6	V
Base-Emitter Saturation Voltage *	$V_{BE(sat)}$	I_C = -150 mA, I_B = -15 mA		-1.3	V
		I_C = -500 mA, I_B = -50 mA		-2.6	V
Current Gain - Bandwidth Product	f_T	V_{CE}=-20V,I_C=-50mA,f=100MHz	200		MHz
Delay Time	t_d	V_{CC} = -30 V, I_C = -150 mA,I_{B1} = -15 mA		10	ns
Rise Time	t_r			40	ns
Storage Time	t_s	V_{CC} = -6.0 V, I_C = -150 mA,I_{B1} = I_{B2} = -15 mA		80	ns
Fall Time	t_f			30	ns

* Pulse test: Pulse width ≤ 300 μs, duty cycle ≤ 2.0%

■ Marking

Marking	2F

RATINGS AND CHARACTERISTIC CURVES

■ Typical Characterisitics

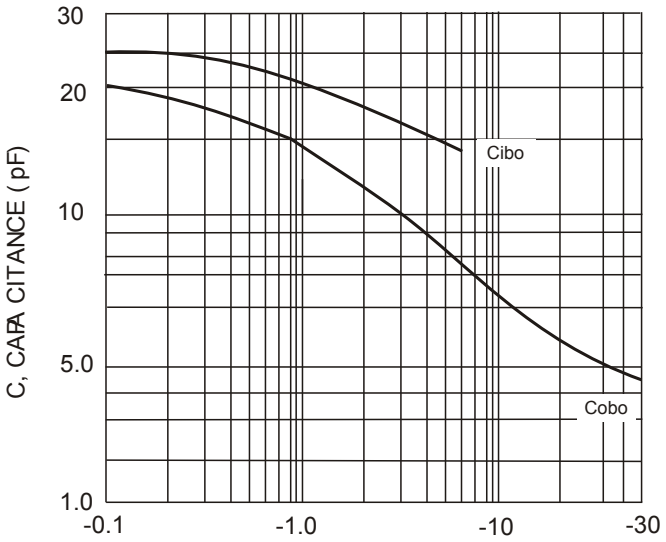


Fig. 1 Typical Capacitance

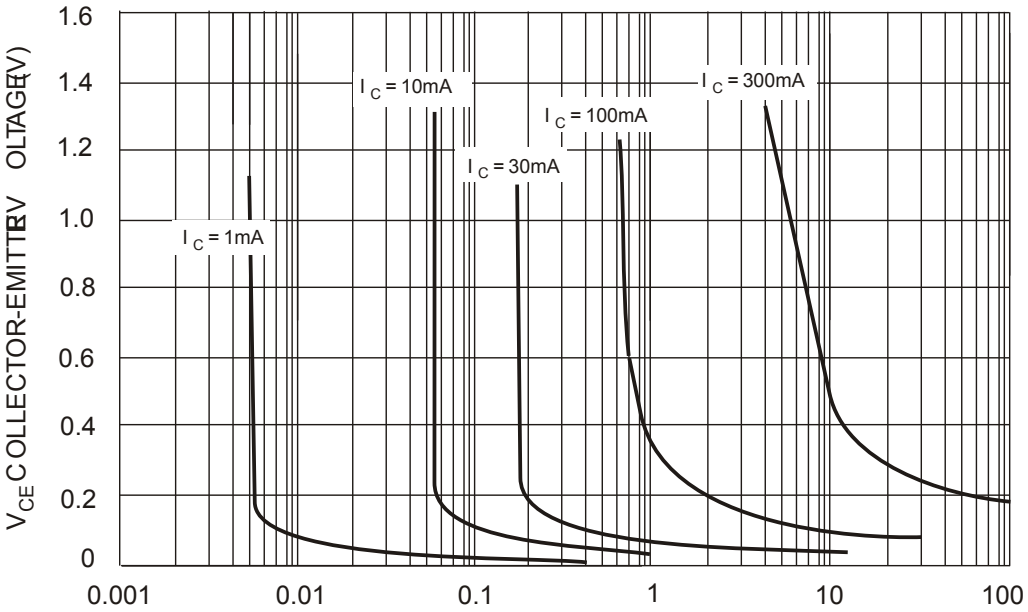


Fig. 2 Typical Collector Saturation Region