MMBT2222

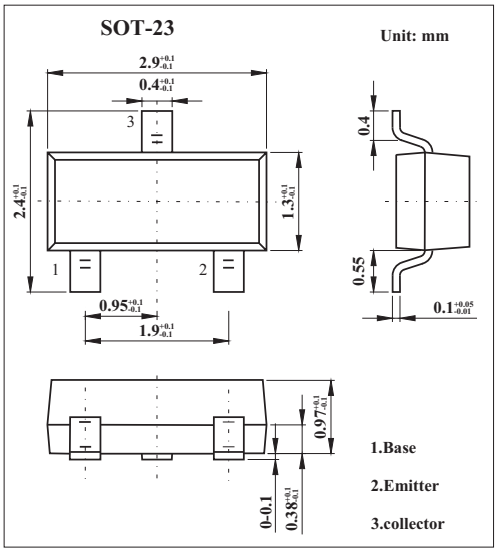
SOT-23 Plastic-Encapsulate Transistors

Features

- Epitaxial planar die construction.
- Complementary PNP type available(MMBT2907)
- NPN General Purpose Amplifier

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}	30	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	600	mA
Power dissipation	P_D	250	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	500	℃/W
Operating and Storage and Temperature Range	T_j, T_{STG}	-55 to +150	℃

PACKAGE INFORMATION

Device	Package	Shipping
2SD1782	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 10 μA, I_E = 0	75			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10 mA, I_B = 0	40			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_C = 10 μA, I_C = 0	6			V
Collector cutoff current	I_{CBO}	V_{CB}=50V, I_E=0			10	nA
Emitter cutoff current	I_{EBO}	V_{EB}= 3V, I_C=0			100	nA
DC current gain	h_{FE}	V_{CE}=10V, I_C= 0.1mA	35			
		V_{CE}=10V, I_C= 150mA	100		300	
		V_{CE}=10V, I_C= 500mA	30			
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
Transition frequency	f_T	I_C = 20 mA; V_{CE} = 20 V; f = 100 MHz	250			MHz
Delay time	t_d	V_{CC}=30V, $V_{BE(off)}$=-0.5V,			10	ns
Rise time	t_r	I_C=150mA , I_{B1}= 15mA			25	ns
Storage time	t_s	V_{CC}=30V, I_C=150mA,I_{B1}=-I_{B2}=15mA			225	ns
Fall time	t_f				60	ns

* pulse test: Pulse Width ≤300μs, Duty Cycle≤ 2.0%.

■ Marking

Marking	M1B