

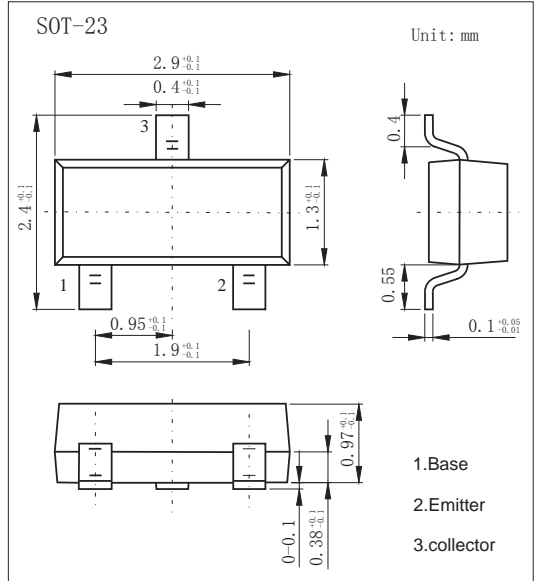
## SOT-23 Plastic-Encapsulate Transistors

### Features

- Collector Current Capability  $I_C=1A$
- Collector Emitter Voltage  $V_{CE0}=100V$
- Complementary to FMMT593
- NPN 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	$V_{CB0}$	120	V
Collector - Emitter Voltage	$V_{CE0}$	100	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_C$	1	A
Collector Current - Pulse	$I_{CP}$	2	
Base Current	$I_B$	0.2	
Collector Power Dissipation	$P_C$	500	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{stg}$	-55 to 150	

### PACKAGE INFORMATION

Device	Package	Shipping
FMMT493	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CB0}$	$I_C=100\mu A, I_E=0$	120			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_C=10mA, I_B=0$	100			
Emitter-base breakdown voltage	$V_{EB0}$	$I_E=100\mu A, I_C=0$	5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB}=100V, I_E=0$			100	nA
Collector-emitter cut-off current	$I_{CES}$	$V_{CE}=100V, I_E=0$			100	
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.3	V
		$I_C=1A, I_B=100mA$			0.6	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1A, I_B=100mA$			1.15	
Base-emitter turn-on voltage	$V_{BE(on)}$	$V_{CE}=10V, I_C=1A$			1	
DC current gain (Note.1)	$h_{FE}$	$V_{CE}=10V, I_C=1mA$	100			
		$V_{CE}=10V, I_C=250mA$	100		300	
		$V_{CE}=10V, I_C=500mA$	60			
		$V_{CE}=10V, I_C=1A$	20			
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, f=10MHz$			10	pF
Transition frequency	$f_T$	$V_{CE}=10V, I_C=50mA, f=100MHz$	150			MHz

Note.1: Pulse width=300us. Duty cycle  $\leq 2\%$

### Marking

Marking	493
---------	-----

# RATINGS AND CHARACTERISTIC CURVES

## ■ Typical Characteristics

