

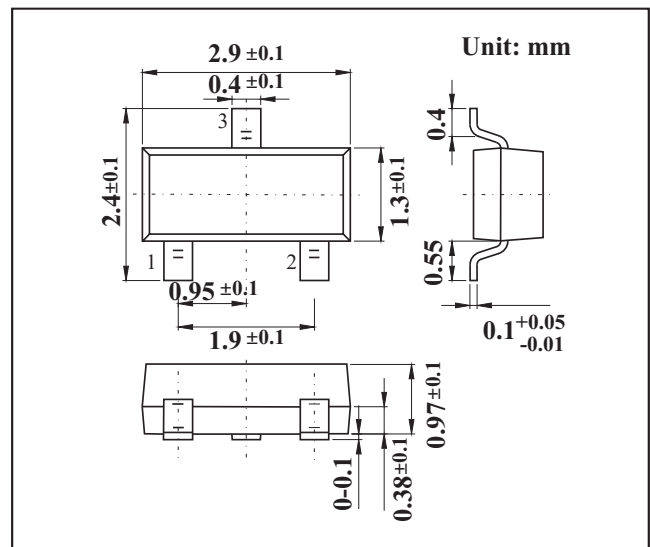
SOT-23 Plastic-Encapsulate Transistors

Features

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

Note.1: Pulse width=300us. Duty cycle ≤ 2%

Marking

Marking	493
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RATINGS AND CHARACTERISTIC CURVES

■ Typical Characteristics

