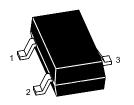


Features

- For switching and AF amplifier applications.
- As complementary type of the NPN transistor FMMT493 is recommended.

SOT-23 (TO-236)



1.Base 2.Emitter 3.Collector

Marking: 593

Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	-Vсво	120	V
Collector Emitter Voltage	-V _{CEO}	100	V
Emitter Base Voltage	-V _{EBO}	5	V
Collector Current	-I _C	1	А
Power Dissipation	P _D	250	mW
Junction Temperature	TJ	150	°C
Storage Temperature Range	T _{STG}	-55 to 150	°C

www.pingjingsemi.com Revision: 1.0 Apr-2019



Electrical Characteristics

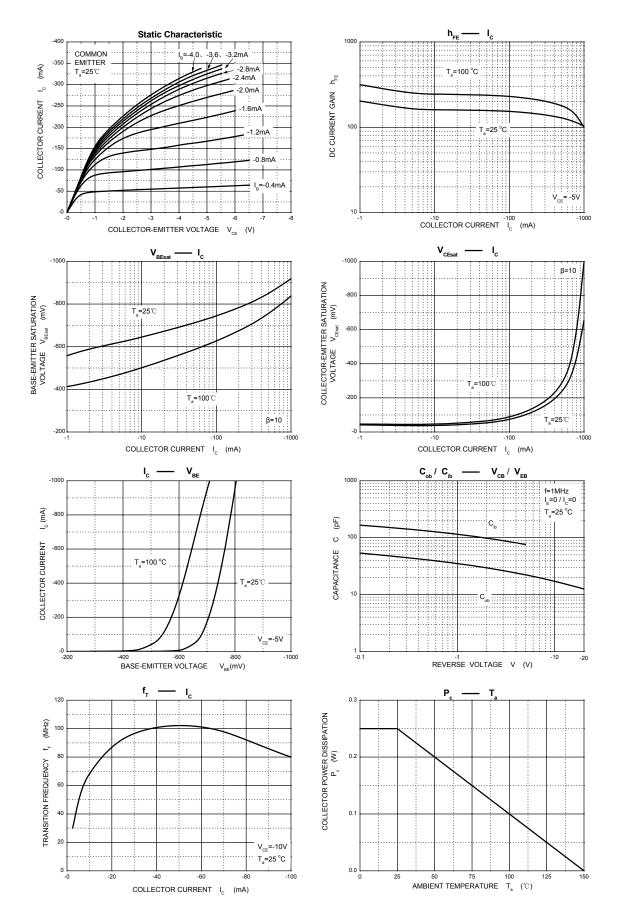
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min.	Тур.	Max.	Unit
DC Current Gain Note1					
at -Vc= = 5 V, -Ic = 1 mA		100		-	
at -Vc= = 5 V, -Ic = 250 mA	H _{FE}	100	-	-	_
at -Vc= = 5 V, -Ic = 0.5 A		100		300	
at -Vc= = 5 V, -Ic = 1 A		50		-	
Collector Base Cutoff Current at -VcB = 100 V	-I _{CBO}	-	-	0.1	μΑ
Collector Base Cutoff Current at -Vce = 100 V	-I _{CES}	-	-	0.1	μΑ
Emitter Base Cutoff Current at -V _{EB} = 4 V	-I _{EBO}	-	-	0.1	μA
Collector Base Breakdown Voltage at -lc = 100 µA	-V _{(BR)CBO}	120	-	-	V
Collector Emitter Breakdown Voltage at -lc = 1 mA	-V _{(BR)CEO}	100	-	-	V
Emitter Base Breakdown Voltage at -l∈ = 100 µA	-V _{(BR)EBO}	5	-	-	V
Collector Emitter Saturation Voltage					
at -I _C =250 mA, -I _B = 25 mA	-V _{CE(sat)}	_	-	0.2	V
at $-I_C = 500 \text{ mA}$, $-I_B = 50 \text{ mA}$	5 52(501)			0.3	
Base Emitter Saturation Voltage at −l _C = 500m A, −l _C = 50 mA	-V _{BE(sat)}	-	-	1.1	V
Base Emitter Voltage at -Vc= = 5 V, -I _B = 1 mA	-V _{BE(on)}	-	-	1.0	V
Transition Frequency at -Vce = 10 V, -lc = 50 mA, f= 100 MHz	F _T	150	-	-	MHz
Collector Output Capacitance at -VcB = 10 V, f= 1MHz	Cob	-	-	5	pF

www.pingjingsemi.com Revision: 1.0 Apr-2019



Typical Characteristics Curves

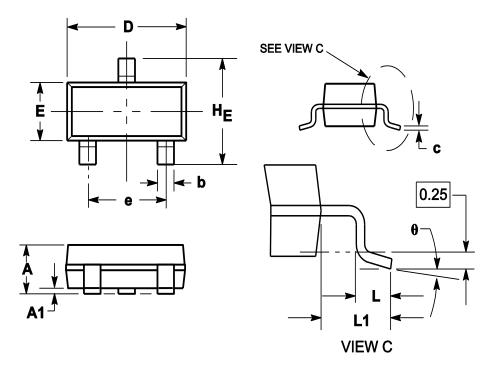


www.pingjingsemi.com 3/4

Revison: 1.0 Apr-2019



Package Outline(SOT-23)



Symbol	Dimensions in millimeter				
	Min.	Тур.	Max.		
А	0.900	1.025	1.150		
A1	0.000	0.050	0.100		
b	0.300	0.400	0.500		
С	0.080	0.115	0.150		
D	2.800	2.900	3.000		
E	1.200	1.300	1.400		
HE	2.250	2.400	2.550		
е	1.800	1.900	2.000		
L1	0.550REF				
L	0.300		0.500		
θ	0°		8°		

Ordering Information

Device	Package	Reel Dimension (inch)	Shipping
FMMT593	SOT-23	7	3,000

www.pingjingsemi.com Revision: 1.0 Apr-2019 4/4