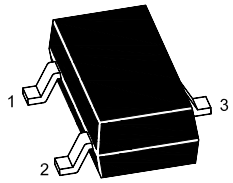
FMMT493

Features

- For switching and AF amplifier applications.
- As complementary type of the PNP transistor FMMT593 is recommended.

SOT-23



1.Base 2.Emitter 3.Collector

Marking:493

Absolute Maximum Ratings

Ratings at 25˚C ambient temperature unless otherwise specified.

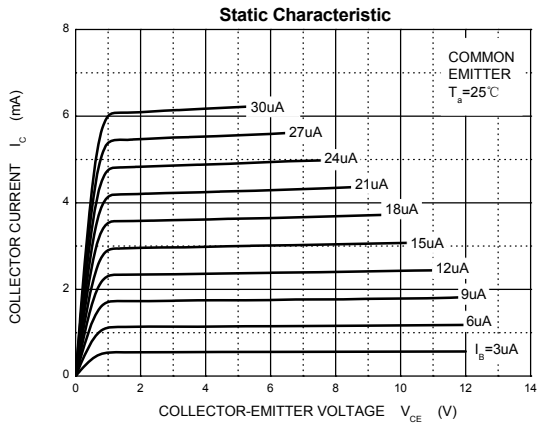
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	120	V
Collector Emitter Voltage	V_{CEO}	100	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Power Dissipation	P_D	250	mW
Junction Temperature	T_J	150	˚C
Storage Temperature Range	T_{STG}	-55 to 150	˚C

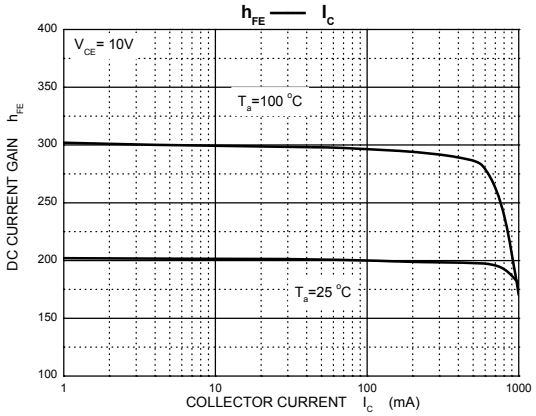
Electrical Characteristics

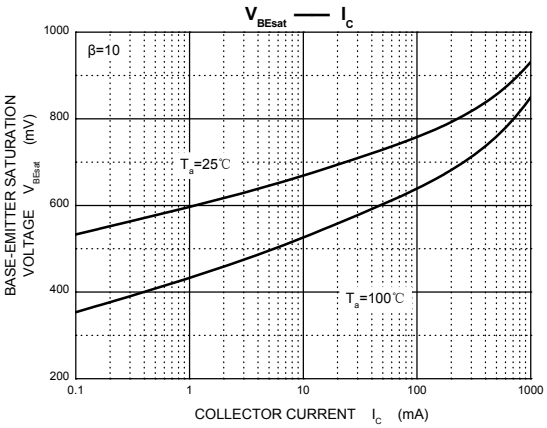
Ratings at 25℃ ambient temperature unless otherwise specified.

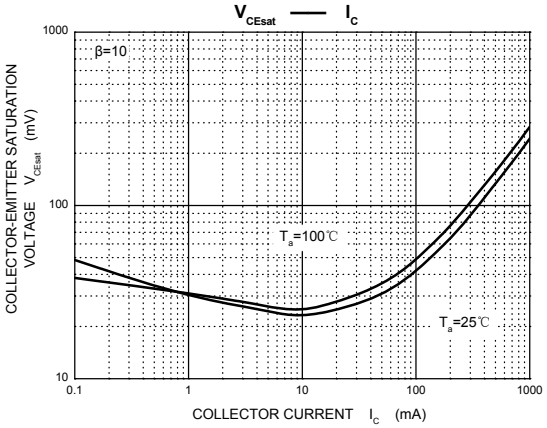
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 10 V, I_C = 1 mA at V_{CE} = 10 V, I_C = 250 mA at V_{CE} = 10 V, I_C = 500 mA at V_{CE} = 10 V, I_C = 1000 mA	H_{FE}	 100 100 60 20	 - 300 - -	-
Collector Base Cutoff Current at V_{CB} = 100 V	I_{CBO}	-	0.1	μA
Collector Base Cutoff Current at V_{CE} = 100 V	I_{CES}	-	0.1	μA
Emitter Base Cutoff Current at V_{EB} = 4 V	I_{EBO}	-	0.1	μA
Collector Base Breakdown Voltage at I_C = 100 μA	$V_{(BR)CBO}$	120	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	100	-	V
Emitter Base Breakdown Voltage at I_E = 100 μA	$V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at I_C = 500 mA, I_B = 50 mA at I_C = 1 A, I_B = 100 mA	$V_{CE(sat)}$	 - -	 0.3 0.6	V
Base Emitter Saturation Voltage at I_C = 1 A, I_B = 100 mA	$V_{BE(sat)}$	-	1.15	V
Base Emitter Saturation Voltage at V_{CE} = 10 A, I_C = 1 A	$V_{BE(on)}$	-	1	V
Transition Frequency at V_{CE} = 10 V, I_C = 50 mA, f = 100 MHz	f_T	150	-	MHz
Collector Base Capacitance at V_{CB} = 10 V, f = 1 MHz	C_{ob}	-	10	pF

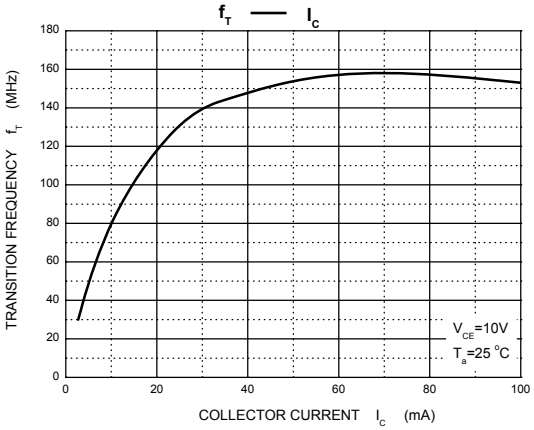
Typical Characteristics Curves

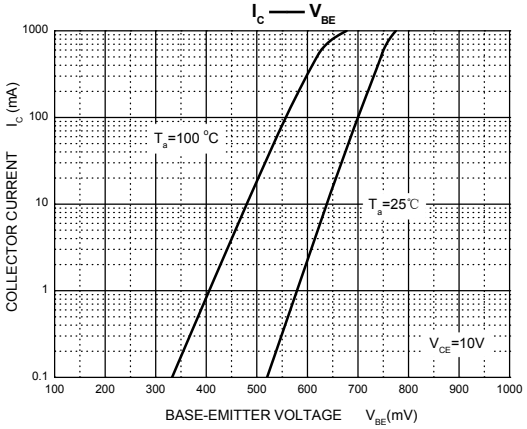


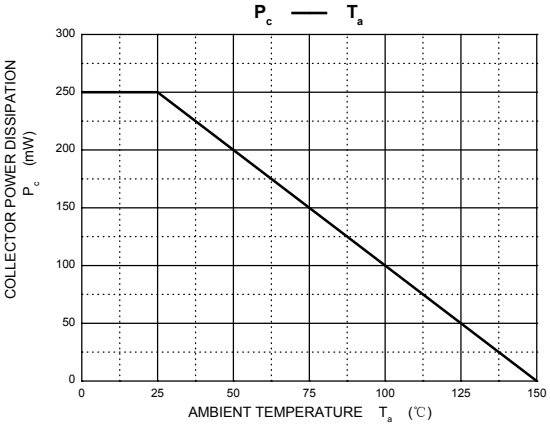




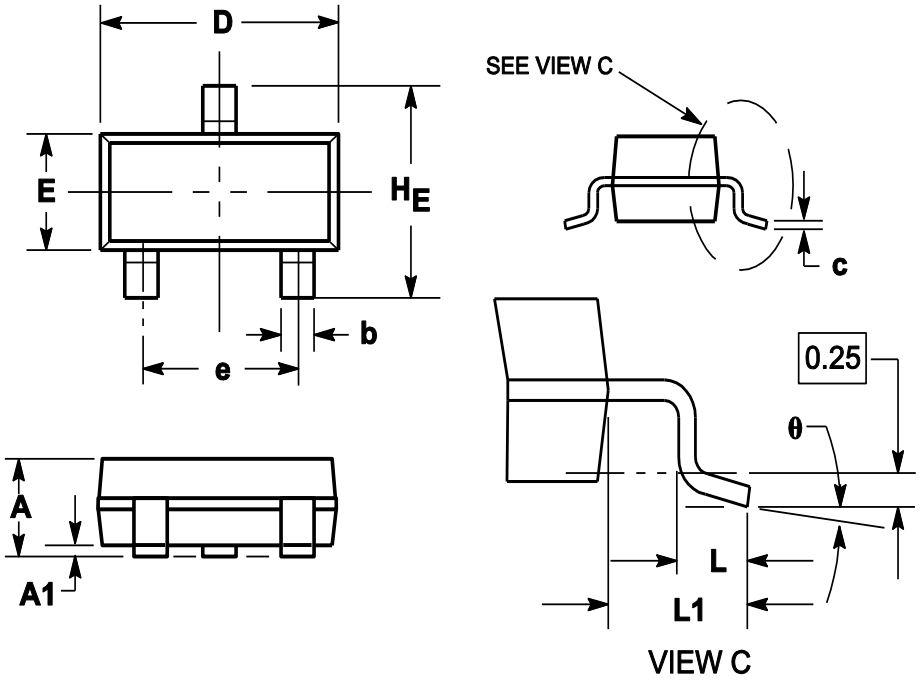








Package Outline(SOT-23)



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.900	1.025	1.150
A1	0.000	0.050	0.100
b	0.300	0.400	0.500
c	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
e	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
FMMT493	SOT-23	7	3,000