



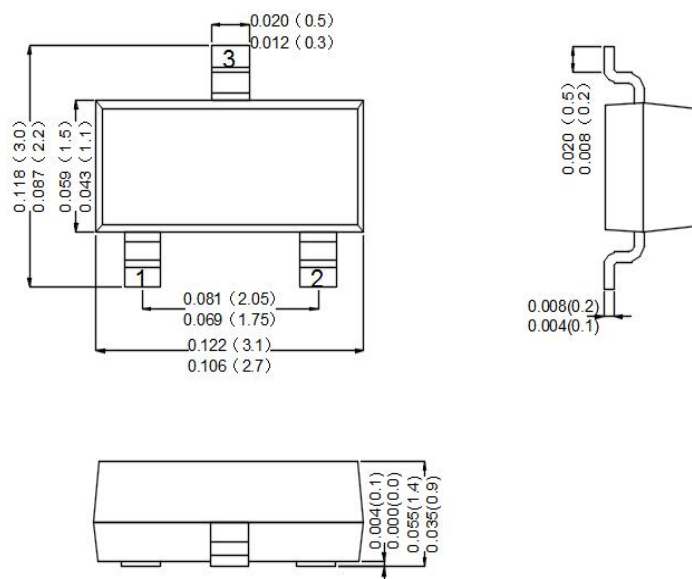
Features

- Complementary Type FMMT593

SOT-23

Mechanical Data

- Case: Molded Plastic, SOT-23
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking: 493
- Mounting Position : Any.
- Equivalent Circuit:



Dimensions in inches and (millimeters)

Maximum Ratings Maximum Ratings (Rating 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	1000	mA
Collector Power Dissipation	P_C	250	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	500	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

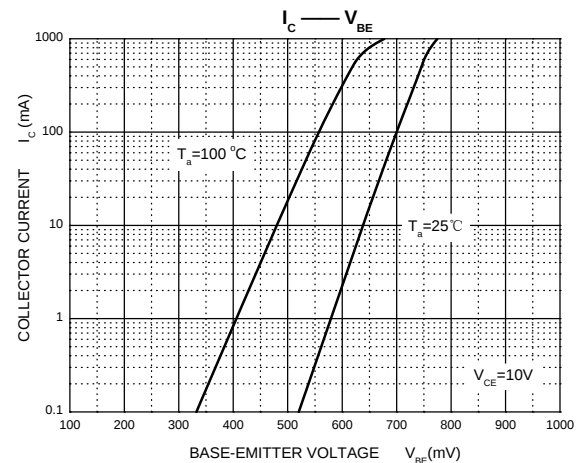
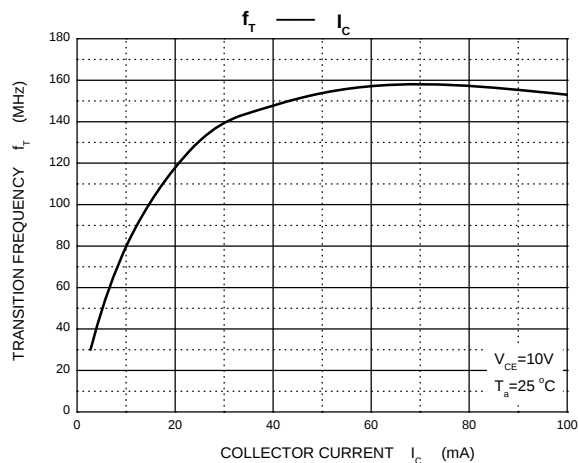
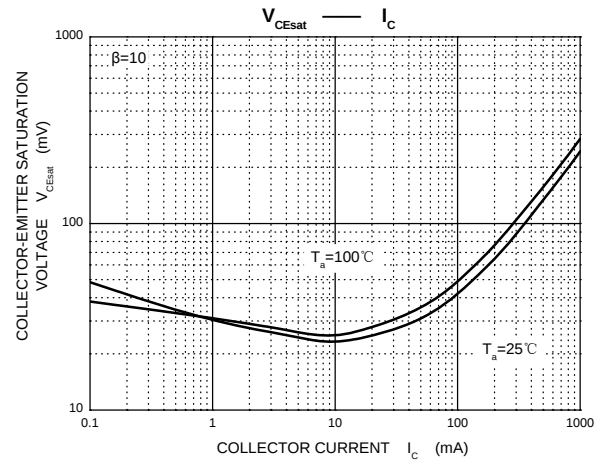
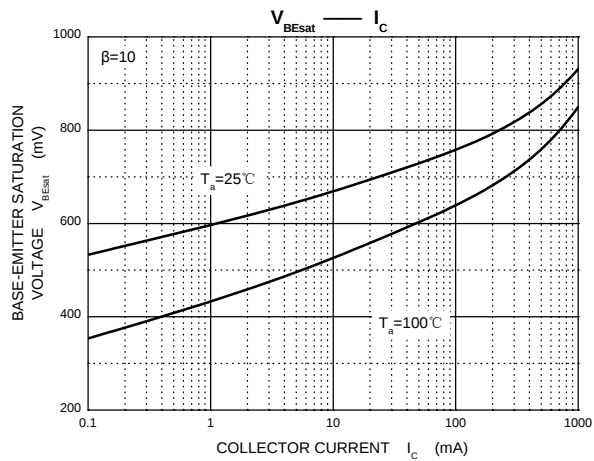
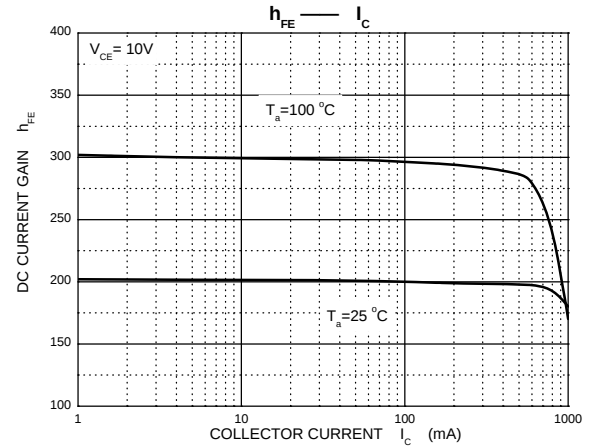
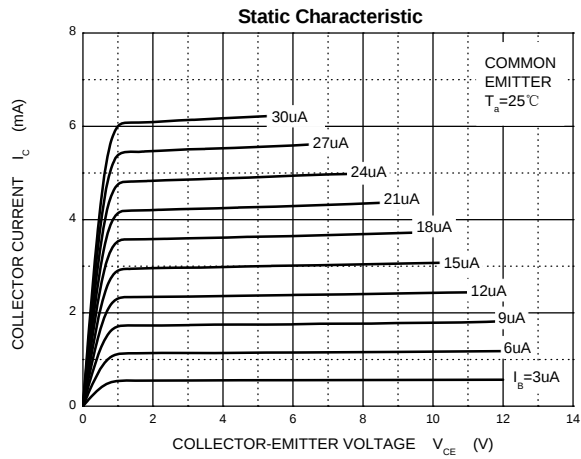
**Electrical Characteristics** (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=100V, I_E=0$			0.1	μA
Collector cut-off current	I_{CES}	$V_{CES}=100V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=10V, I_C=1mA$	100			
	$h_{FE(2)}^*$	$V_{CE}=10V, I_C=250mA$	100		300	
	$h_{FE(3)}^*$	$V_{CE}=10V, I_C=0.5A$	60			
	$h_{FE(4)}^*$	$V_{CE}=10V, I_C=1A$	20			
Collector-emitter saturation voltage	$V_{CE(sat)1}^*$	$I_C=500mA, I_B=50mA$			0.3	V
	$V_{CE(sat)2}^*$	$I_C=1A, I_B=100mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C=1A, I_B=100mA$			1.15	V
Base-emitter voltage	V_{BE}^*	$V_{CE}=10V, I_C=1A$			1	V
Transition frequency	f_T	$V_{CE}=10V, I_C=50mA, f=100MHz$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			10	pF

*Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$.



Rating And Characteristic Curves





Important Notice and Disclaimer

- Reproducing and modifying information of the document is prohibited without from XINNUO.
- XINNUO reserves the right to make changes to this document and its products and specifications.
- XINNUO disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- XINNUO does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the here in document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. XINNUO makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown her are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify XINNUO for any damages resulting from such improper use or sale.
- Since XINNUO uses lot number as the tracking base, please provide the lot number for tracking when complaining.