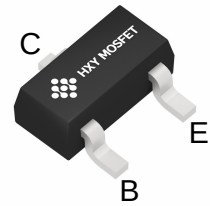




Features

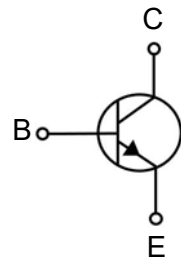
- Low $V_{CE(sat)}$
- h_{FE} characterised up to 1A for high current hold up
- For general amplification



SOT-23

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
FMMT494TA	SOT-23	495	3000



Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	170	V
Collector-Emitter Voltage	V_{CEO}	150	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
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

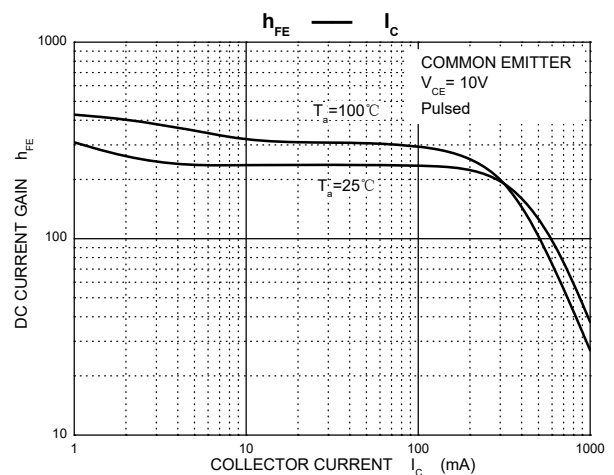
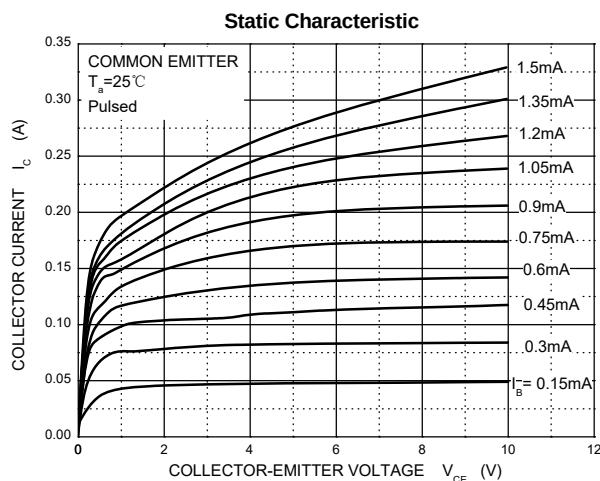


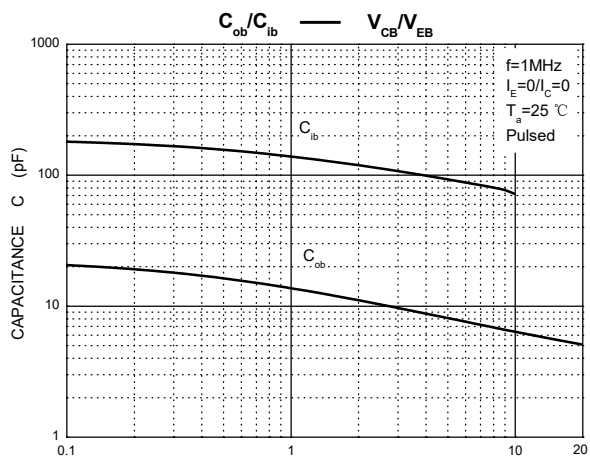
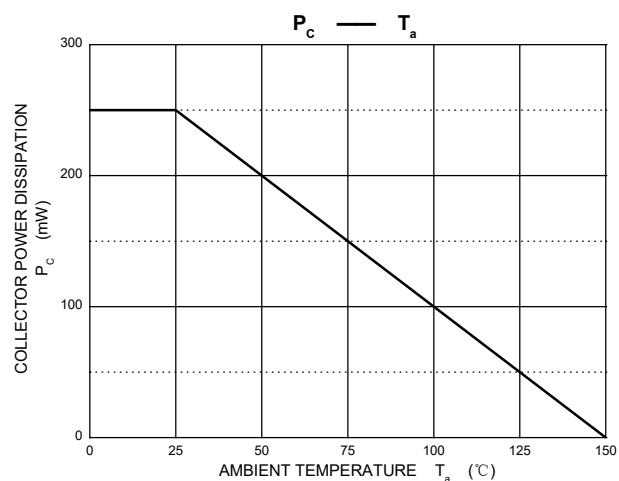
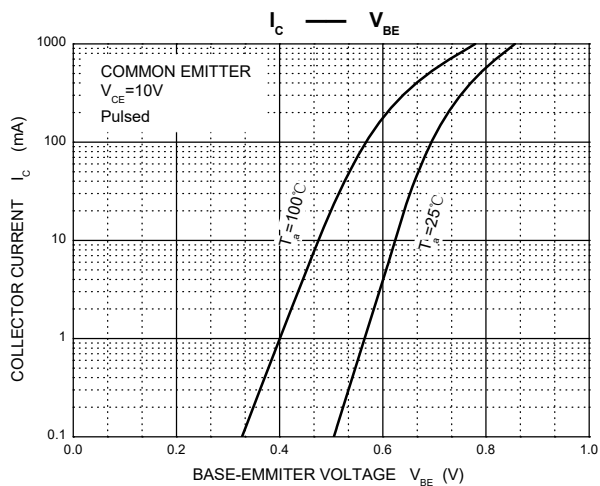
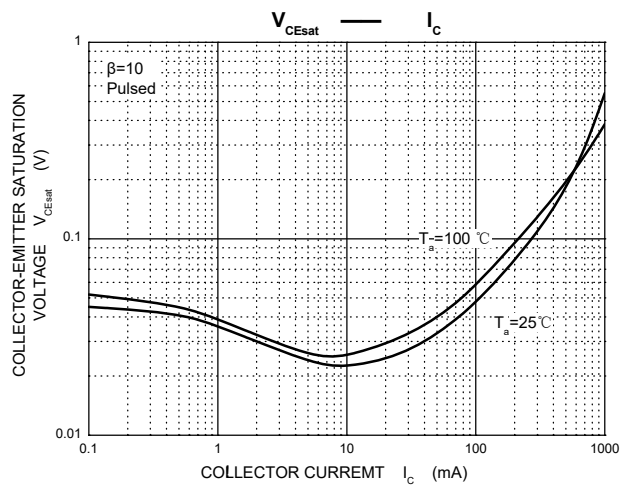
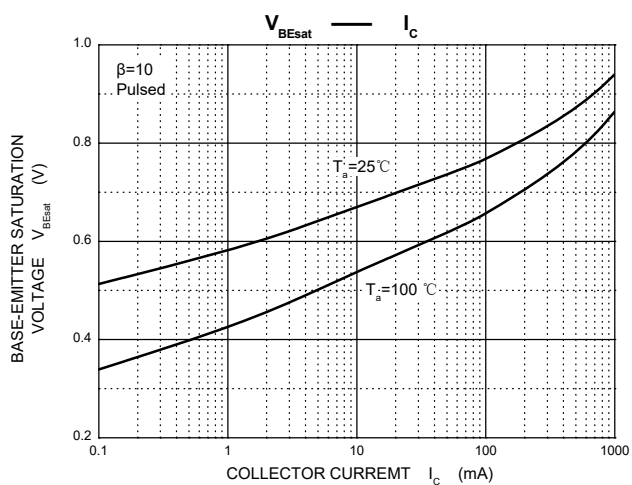
Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	170		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=10mA, I_B=0$	150		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=150V, I_E=0$		0.1	μA
Collector cut-off current	I_{CES}	$V_{CE}=150V, V_{BE}=0$		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	
	$h_{FE(3)}^*$	$V_{CE}=10V, I_C=500mA$	50		
	$h_{FE(4)}^*$	$V_{CE}=10V, I_C=1A$	10		
Collector-emitter saturation voltage	$V_{CE(sat)(1)}^*$	$I_C=250mA, I_B=25mA$		0.2	V
	$V_{CE(sat)(2)}^*$	$I_C=500mA, I_B=50mA$		0.3	V
Base-emitter turn-on voltage	$V_{BE(on)}^*$	$V_{CE}=10V, I_C=500mA$		1	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C=500mA, I_B=50mA$		1	V
Transition frequency	f_T	$V_{CE}=10V, I_C=50mA, f=100MHz$	100		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 $\leq 2.0\%$.

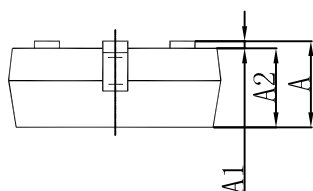
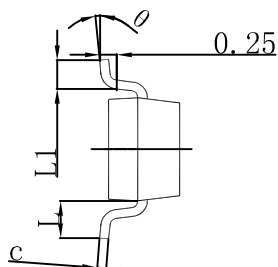
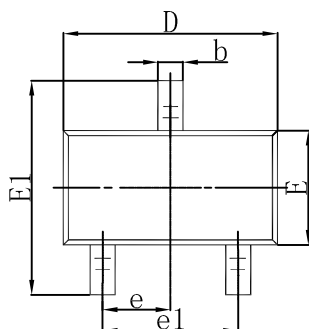
Typical Characteristics





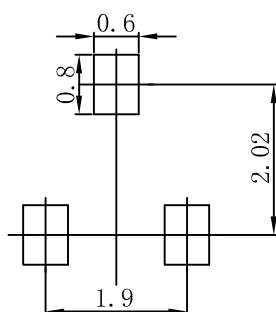


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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