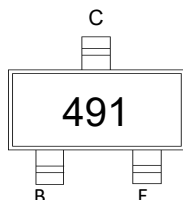
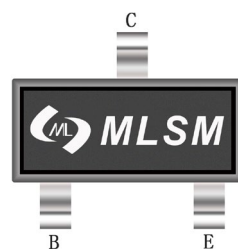


Features

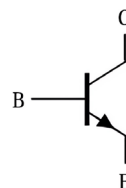
- Low equivalent on-resistance



Marking and pin assignment



SOT-23 top view



Schematic diagram



Pb-Free



Halogen-Free

Maximum Ratings($T_a=25^{\circ}\text{C}$ unless otherwise noted)

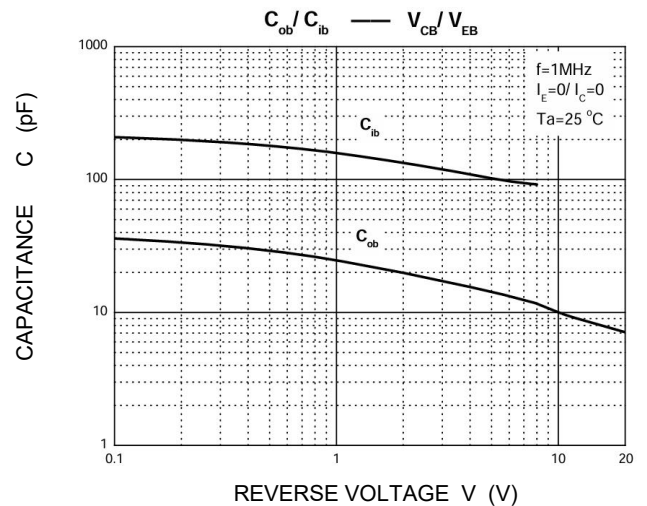
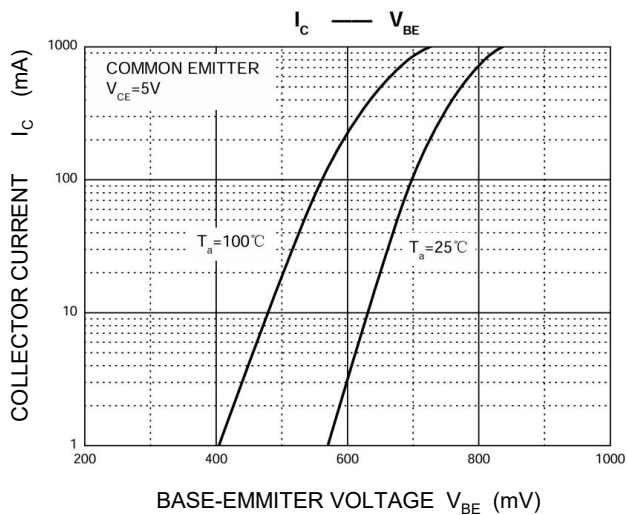
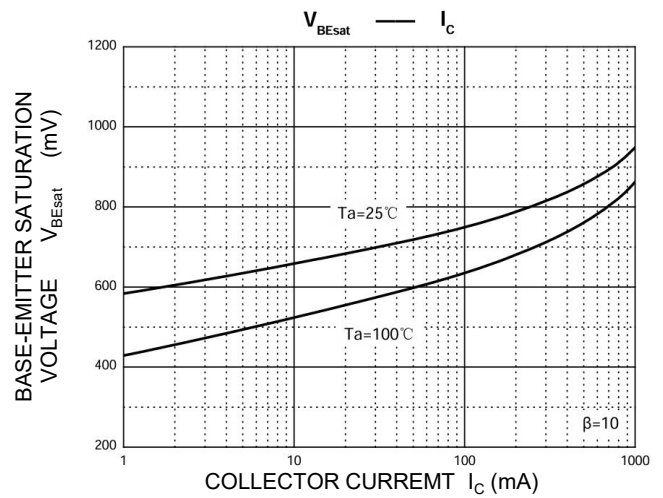
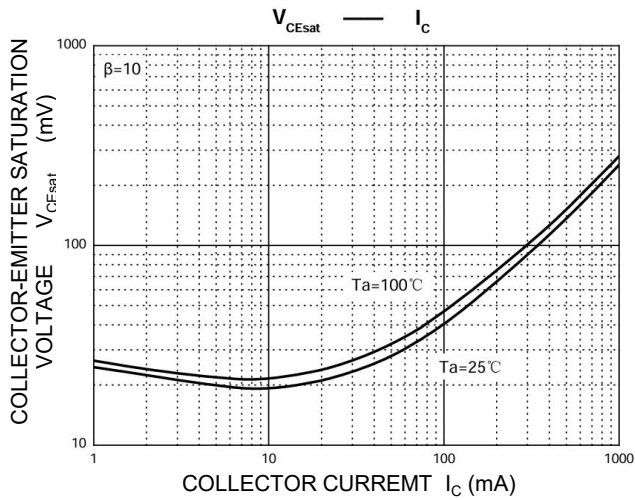
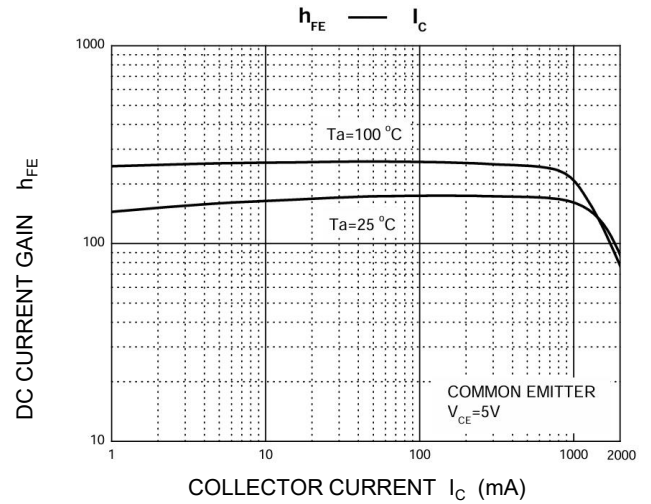
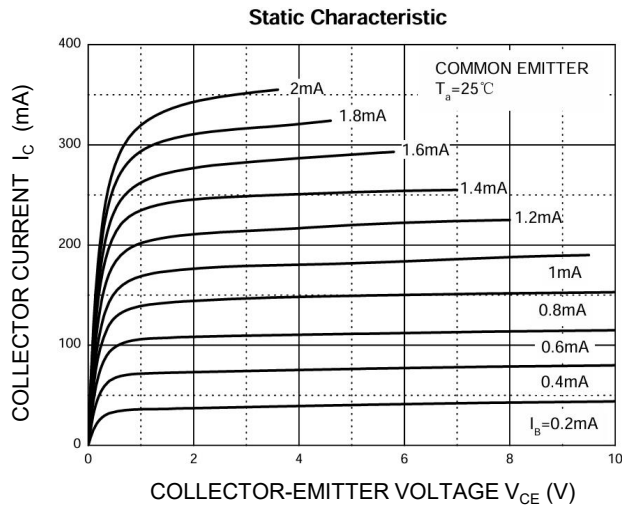
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_{C}	Collector Current	1	A
I_{CM}	Peak Pulse Current	2	A
P_{C}	Collector Power Dissipation	250	mW
$R_{\theta\text{JA}}$	Thermal Resistance Junction to Ambient	500	$^{\circ}\text{C}/\text{W}$
$T_{\text{J}}, T_{\text{STG}}$	Operating and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

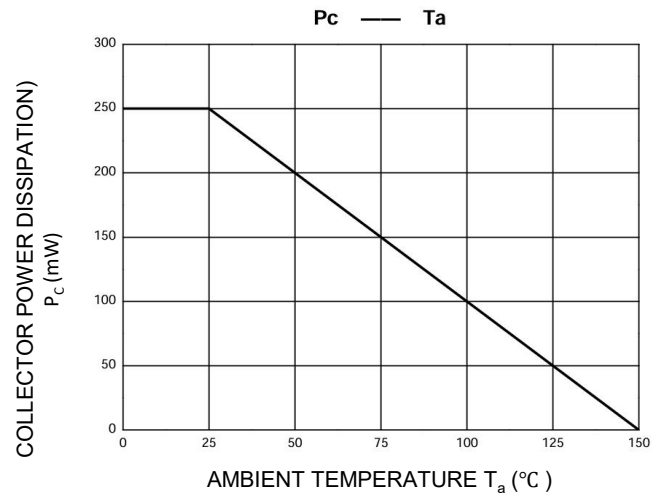
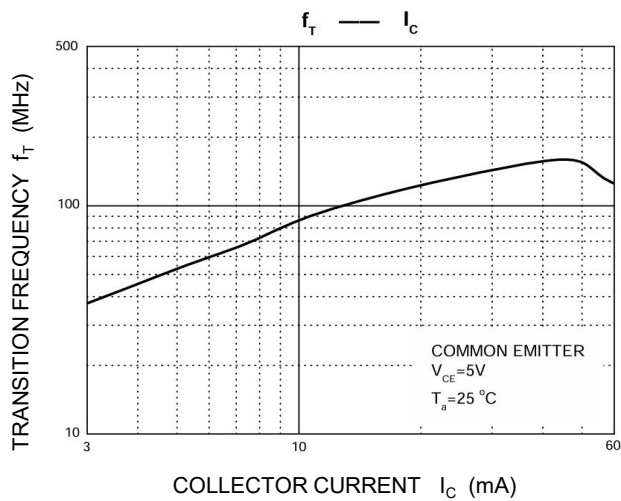
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(\text{BR})\text{CBO}}$	Collector-base breakdown voltage	$I_{\text{C}}=100\mu\text{A}, I_{\text{E}}=0$	80	--	--	V
$V_{(\text{BR})\text{CEO}}^1$	Collector-emitter breakdown voltage	$I_{\text{C}}=10\text{mA}, I_{\text{B}}=0$	60	--	--	V
$V_{(\text{BR})\text{EBO}}$	Emitter-base breakdown voltage	$I_{\text{E}}=100\mu\text{A}, I_{\text{C}}=0$	5	--	--	V
I_{CBO}	Collector cut-off current	$V_{\text{CB}}=60\text{V}, I_{\text{E}}=0$	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	$V_{\text{EB}}=4\text{V}, I_{\text{C}}=0$	--	--	0.1	μA
$h_{\text{FE}1}$	DC current gain	$V_{\text{CE}}=5\text{V}, I_{\text{C}}=1\text{mA}$	100	--	--	
$h_{\text{FE}2}^1$		$V_{\text{CE}}=5\text{V}, I_{\text{C}}=500\text{mA}$	100	--	300	
$h_{\text{FE}3}^1$		$V_{\text{CE}}=5\text{V}, I_{\text{C}}=1\text{A}$	80	--	--	
$h_{\text{FE}4}^1$		$V_{\text{CE}}=5\text{V}, I_{\text{C}}=2\text{A}$	30	--	--	
$V_{\text{CE(sat)1}}^1$	Collector-emitter saturation voltage	$I_{\text{C}}=500\text{mA}, I_{\text{B}}=50\text{mA}$	--	--	0.25	V
$V_{\text{CE(sat)2}}^1$		$I_{\text{C}}=1\text{A}, I_{\text{B}}=100\text{mA}$	--	--	0.5	V
$V_{\text{BE(sat)}}^1$	Base-emitter saturation voltage	$I_{\text{C}}=1\text{A}, I_{\text{B}}=100\text{mA}$	--	--	1.1	V
V_{BE}^1	Base-emitter saturation voltage	$V_{\text{CE}}=5\text{V}, I_{\text{C}}=1\text{A}$	--	--	1	V
f_{T}	Transition frequency	$V_{\text{CE}}=10\text{V}, I_{\text{C}}=50\text{mA}, f=100\text{MHz}$	150	--	--	MHz
C_{ob}	Collector output capacitance	$V_{\text{CB}}=10\text{V}, I_{\text{E}}=0, f=1\text{MHz}$	--	--	10	pF

¹Measured under pulsed conditions, Pulse width=300 μs , Duty cycle $\leq 2\%$.

Typical Operating Characteristics

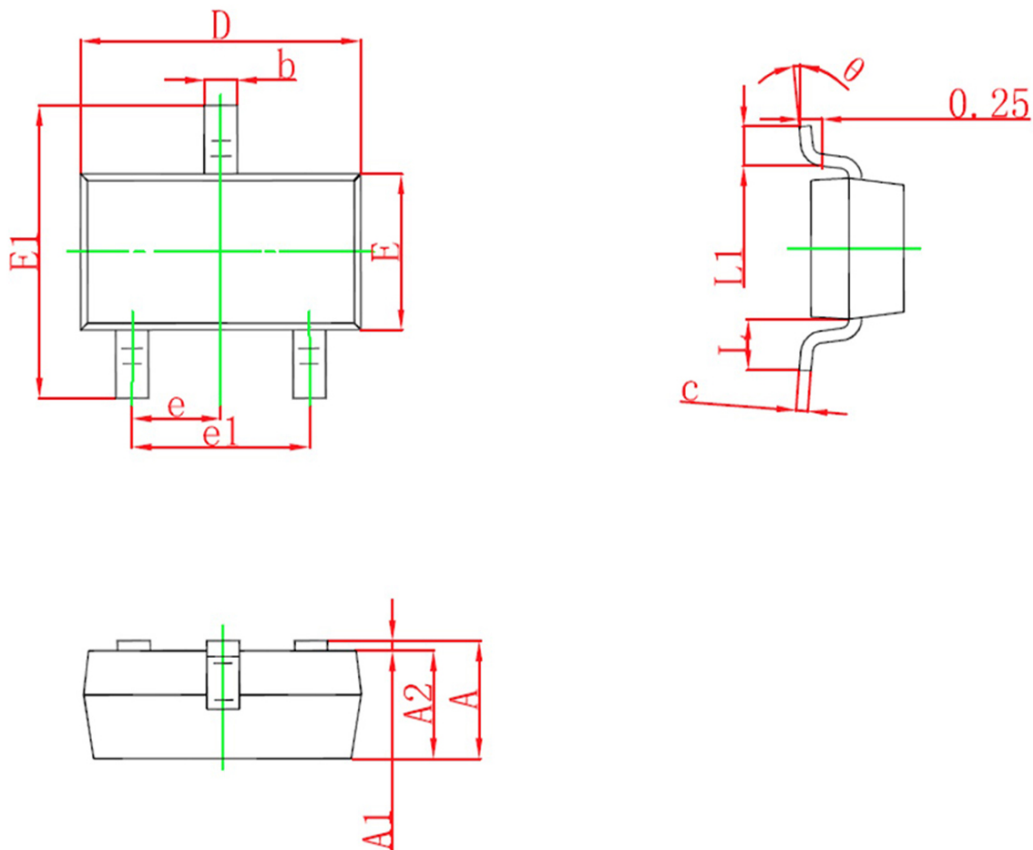




Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
FMMT491	SOT-23	491	3,000	45,000	180,000	7"reel

SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		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
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
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°