

FMMT491 Transistor(NPN)

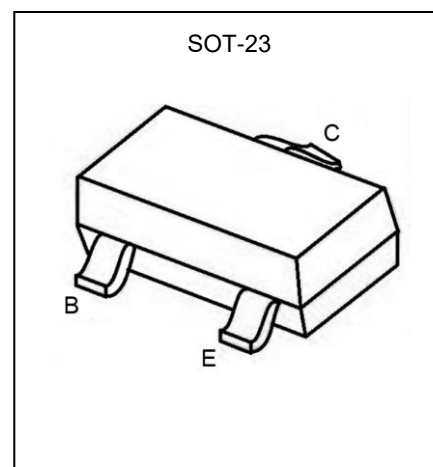
Feature

- Switching Transistor

Marking: 491

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

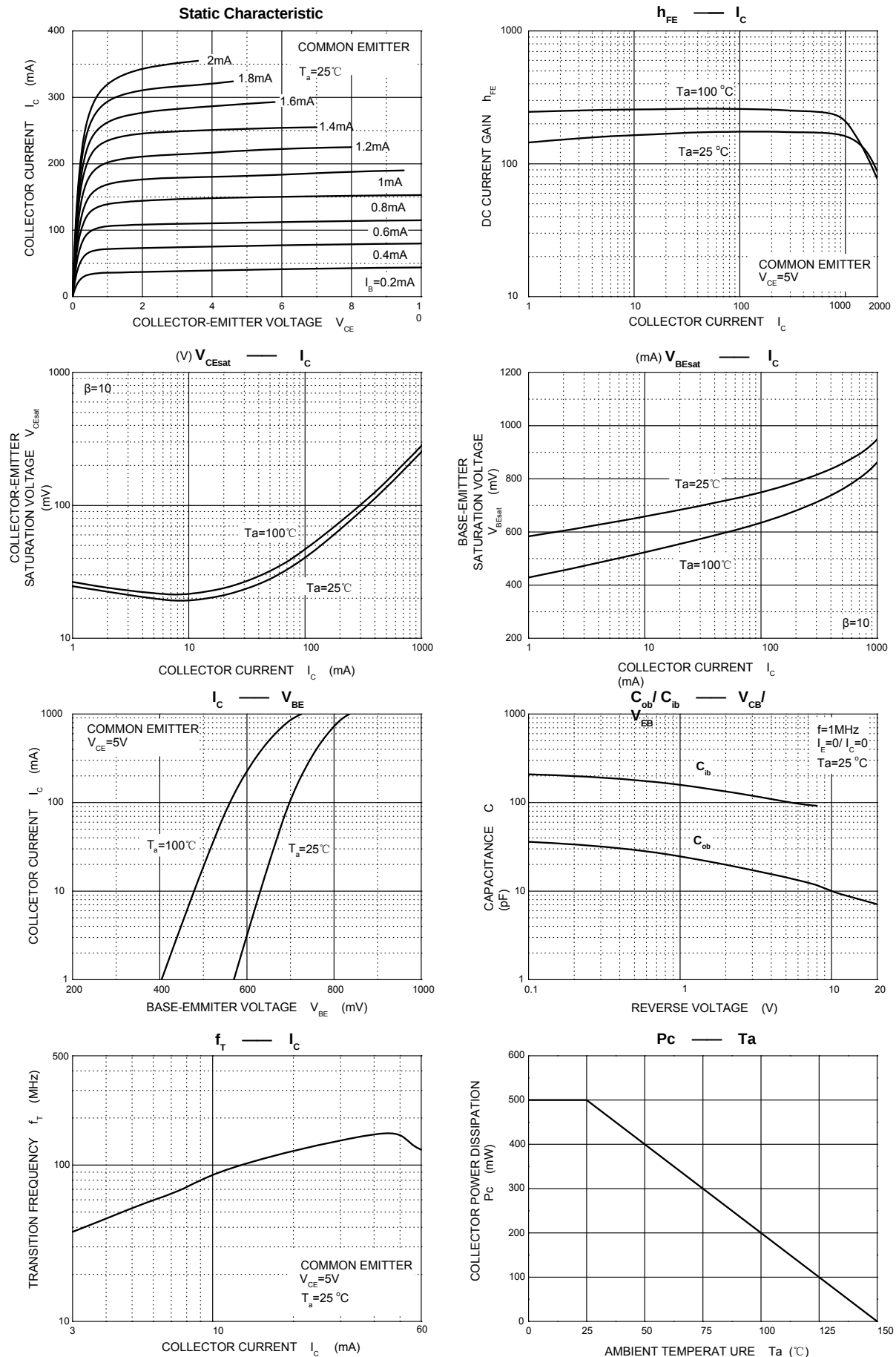
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	80	V
Collector-Emitter Voltage	V_{CE0}	60	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current -Continuous	I_C	1	A
Power Dissipation	P_d	0.5	W
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

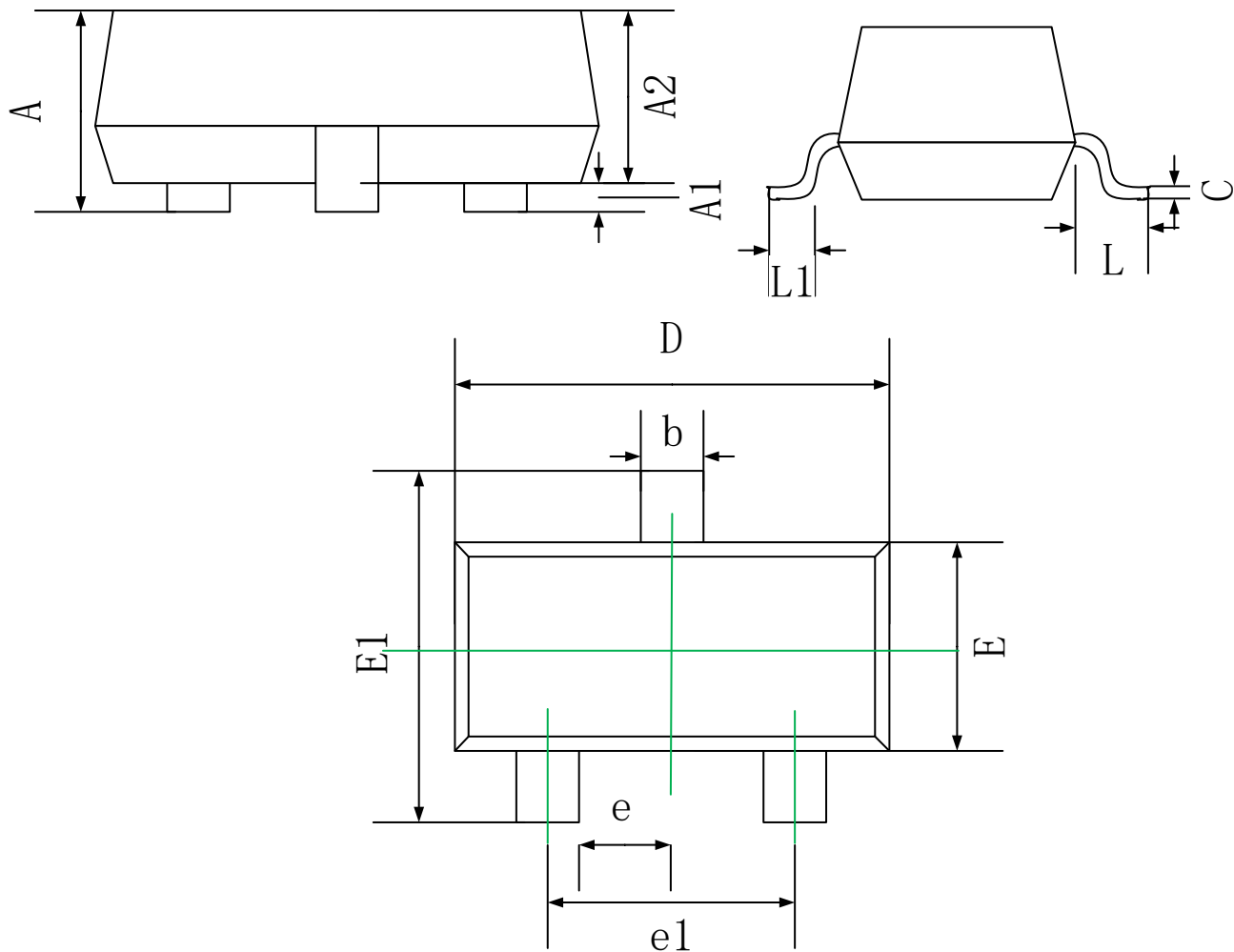


ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	80		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	60		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$		0.1	μA
DC current gain	h_{FE1}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	100		
	h_{FE3}	$V_{CE}=5\text{V}, I_C=500\text{mA}$	100	300	
	h_{FE4}	$V_{CE}=5\text{V}, I_C=1\text{A}$	80		
	h_{FE5}	$V_{CE}=5\text{V}, I_C=2\text{A}$	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.25	V
		$I_C=1\text{A}, I_B=100\text{mA}$		0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=100\text{mA}$		1.1	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	150		MHZ
Input capacitance	C_{OB}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		10.0	pF

Typical Characteristics



SOT-23 Package Information


Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50