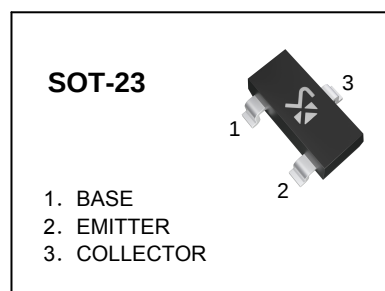


TRANSISTOR (NPN)

- Low saturation
- Complement to FMMT591



MARKING: 491

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

Symbol	Parameter	Value	Units
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 -Continuous	1	A
P_C	Collector Power Dissipation	0.5	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-+150	$^{\circ}\text{C}$

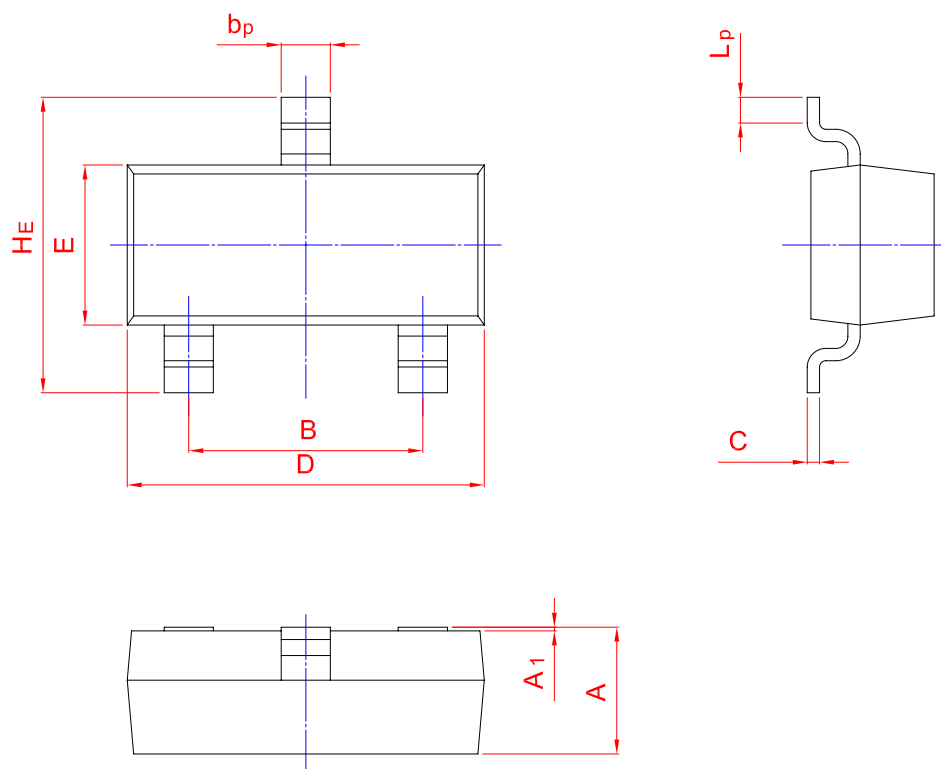
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	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
Collector cut-off current	I_{CEO}	$V_{CE} = 5\text{V}$, $I_E = 0$			5	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5.6\text{V}$, $I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 5\text{V}$, $I_C = 1\text{mA}$	100			
	$h_{FE(2)}$	$V_{CE} = 5\text{V}$, $I_C = 500\text{mA}$	100		300	
	$h_{FE(3)}$	$V_{CE} = 5\text{V}$, $I_C = 1\text{A}$	80			
	$h_{FE(4)}$	$V_{CE} = 5\text{V}$, $I_C = 2\text{A}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$			0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1\text{A}$, $I_B = 100\text{mA}$			1.1	V
Base-emitter On Voltage	$V_{BE(on)}$	$I_C = 1\text{A}$, $V_{CE} = 5\text{V}$			1.0	V
Transition frequency	f_T	$V_{CE} = 10\text{V}$, $I_C = 50\text{mA}$ $f = 100\text{MHz}$	150			MHz

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20