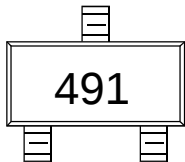
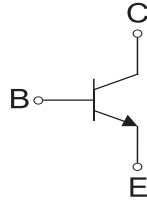


SOT-23 Plastic-Encapsulate Transistors**FMMT491**

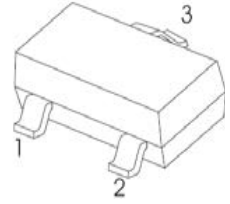
TRANSISTOR (NPN)

FEATURES

- Low equivalent on-resistance

MARKING**Equivalent Circuit**

SOT - 23



1. BASE
2. EMITTER
3. COLLECTOR

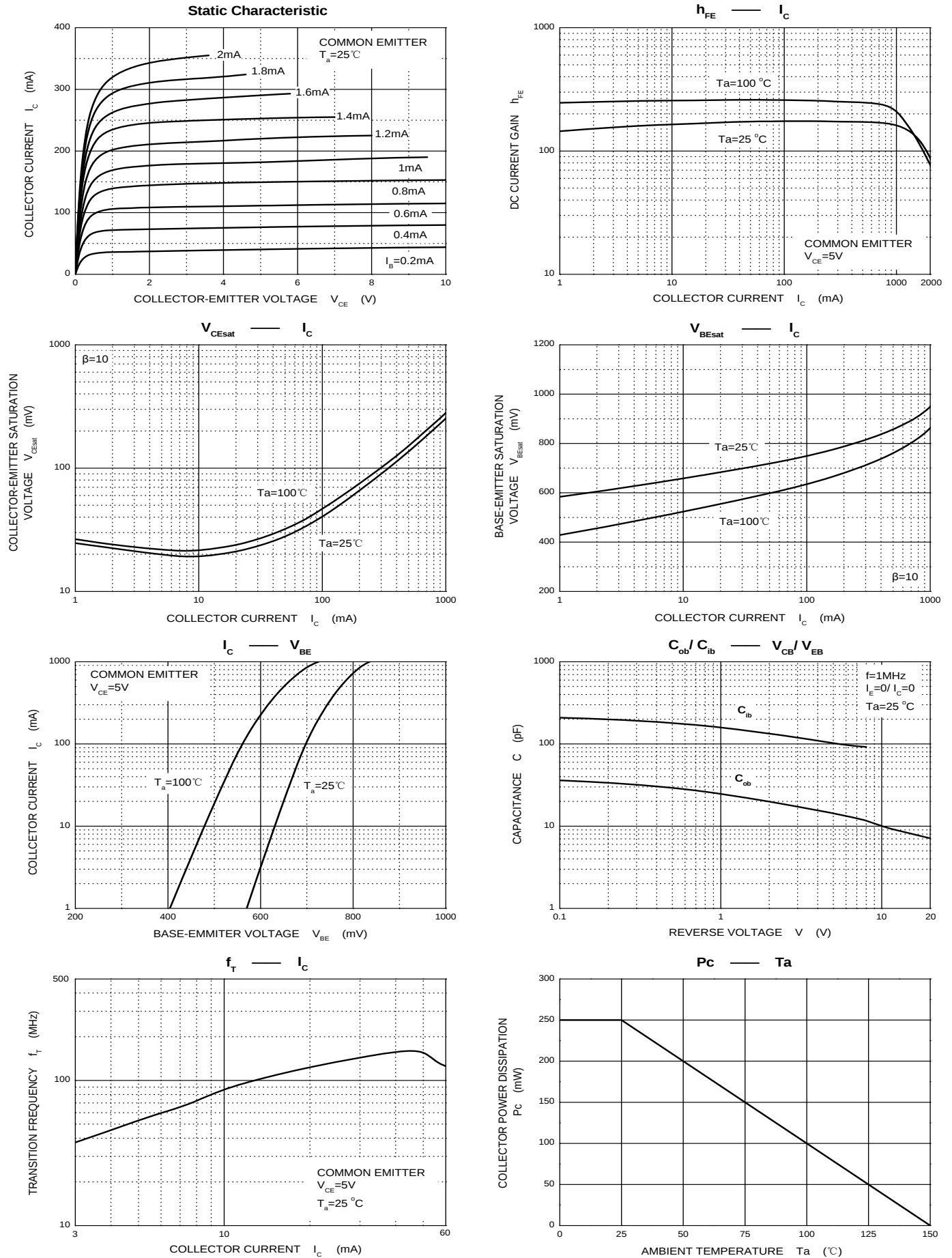
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

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
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	500	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	$-55 \sim +150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ 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	$V_{(BR)CEO}^1$	$I_C=10\text{mA}, I_B=0$	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	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1\text{mA}$	100			
	$h_{FE(2)}^1$	$V_{CE}=5\text{V}, I_C=500\text{mA}$	100		300	
	$h_{FE(3)}^1$	$V_{CE}=5\text{V}, I_C=1\text{A}$	80			
	$h_{FE(4)}^1$	$V_{CE}=5\text{V}, I_C=2\text{A}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)1}^1$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.25	V
	$V_{CE(sat)2}^1$	$I_C=1\text{A}, I_B=100\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}^1$	$I_C=1\text{A}, I_B=100\text{mA}$			1.1	V
Base-emitter voltage	V_{BE}^1	$V_{CE}=5\text{V}, I_C=1\text{A}$			1	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$			10	pF

Typical Characteristics

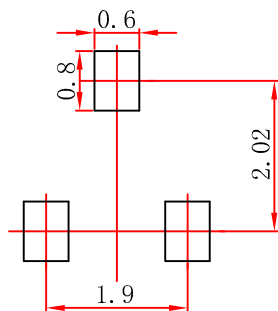


Package Outline Dimensions (SOT-23)



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°

Suggested Pad Layout (SOT-23)



- Note:
- 1.Controlling dimension:in millimeters.
 - 2.General tolerance:± 0.05mm.
 - 3.The pad layout is for reference purposes only.