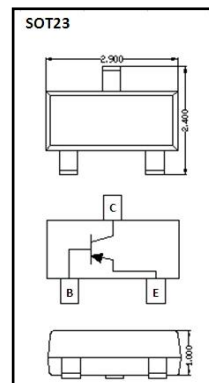


FMMT591

- ◇ Capable of 500mWatts of Power Dissipation
- ◇ Operating and Storage Junction Temperatures: -55°C to 150°C
- ◇ Surface Mount SOT-23 Package
- ◇ RoHS compliant / Green EMC
- ◇ Collector current: $I_C = -1.0\text{A}$

Device Marking Code	
FMMT591	591



MAXIMUM RATINGS (Ta=25°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	-1.0	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	500	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS @ 25° C Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min	Max	Units
V_{CEO}	Collector-emitter breakdown voltage	$I_C = -10\text{mA}$, $I_B = 0^*$	-60		V
V_{CBO}	Collector-base breakdown voltage	$I_C = -100\mu\text{A}$, $I_E = 0$	-80		V
V_{EBO}	Emitter-base breakdown voltage	$I_E = -100\mu\text{A}$, $I_C = 0$	-5.0		V
I_{CBO}	Collector cutoff current	$V_{CB} = -60\text{V}$, $I_E = 0\text{V}$		-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4\text{V}$, $I_C = 0$		-100	nA

h_{FE}	DC current gain	$h_{FE(1)} I_C=-1mA, V_{CE}=-5V$	100	400	
		$h_{FE(2)} I_C=-500mA, V_{CE}=-5V^*$	100		
		$h_{FE(3)} I_C=-1A, V_{CE}=-5V^*$	80		
		$h_{FE(4)} I_C=-2A, V_{CE}=-5V^*$	15		
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=-500mA, I_B=-50mA^*$		-0.3	V
		$I_C=-1A, I_B=-100mA^*$		-0.6	
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=-1A, I_B=-100mA^*$		-1.2	V
V_{BE}	Base-emitter voltage	$V_{CE}=-1V, I_C=-10mA$		-1	V
f_T	Transition frequency	$I_C=-50mA, V_{CE}=-10V, f=100MHz$	150		MHZ
C_{ob}	Collector output capacitance	$V_{CB}=-10V, f=1MHz$		10	pF

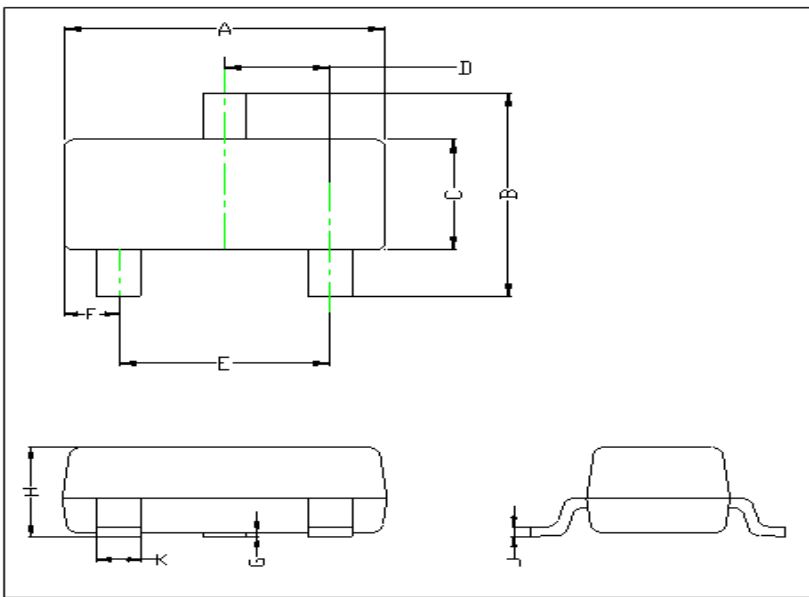
* Measured under pulsed conditions, Pulse width=300 μ s, Duty cycle \leq 2%.

ORDERING INFORMATION

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
FMMT591	SOT23	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

PACKAGE DIMENSIONS

Package Outline :SOT23



Symbol	Dimensions in mm	
	Min.	Max.
A	2.800	3.040
B	2.100	2.640
C	1.200	1.400
D	0.890	1.030
E	1.780	2.050
F	0.450	0.600
G	0.013	0.100
H	0.900	1.110
J	0.090	0.180
K	0.370	0.510

SOT23 Package Outline

Note:
 1.Habgen free .EMC
 2.Pb free solder
 3: Lead thickness solder plating
 4.Lead frame CAC-5
 5.Other Tolerance ± 0.05
 6.Dimensions are exclusive of Burrs Mold Flash and Tie Bar extrusions
 7.Unit :mm