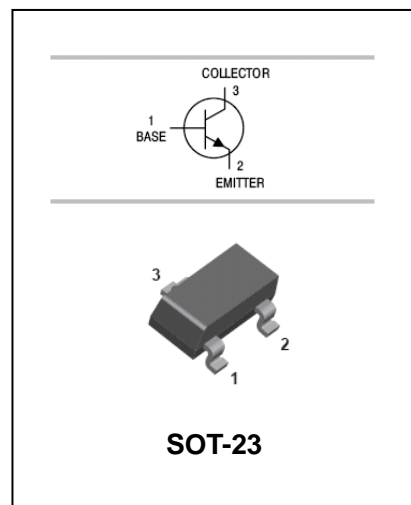


NPN Silicon Epitaxial Planar Transistor

FMMT491

FEATURES

- Low saturation.
- Complementary To FMMT591.
- Excellent H_{FE} Linearity.



APPLICATIONS

- Switching application.

ORDERING INFORMATION

Type No.	Marking	Package Code
FMMT491	491	SOT-23

MAXIMUM RATING @ $T_a=25^{\circ}\text{C}$ unless otherwise specified

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 Dissipation	500	mW
T_J, T_{stg}	Operating and Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$



NPN Silicon Epitaxial Planar Transistor

FMMT491

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

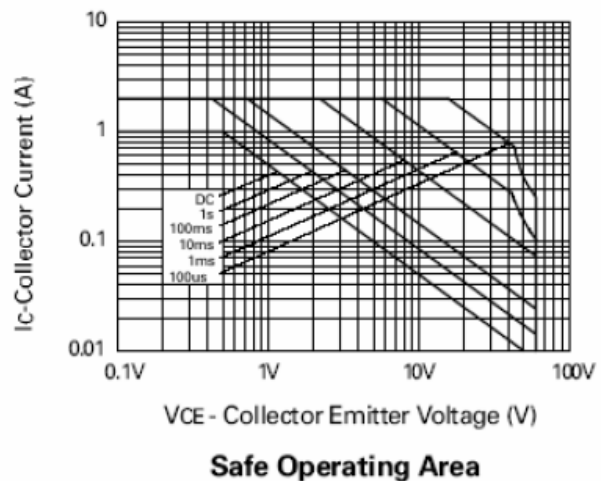
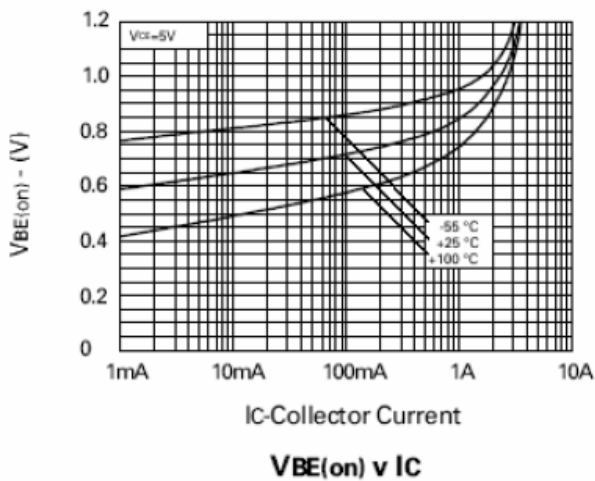
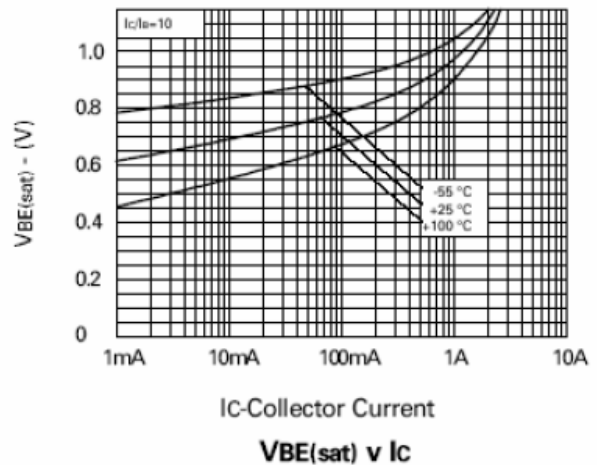
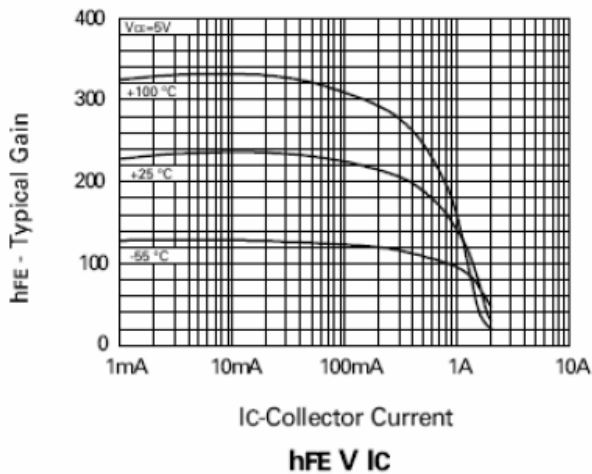
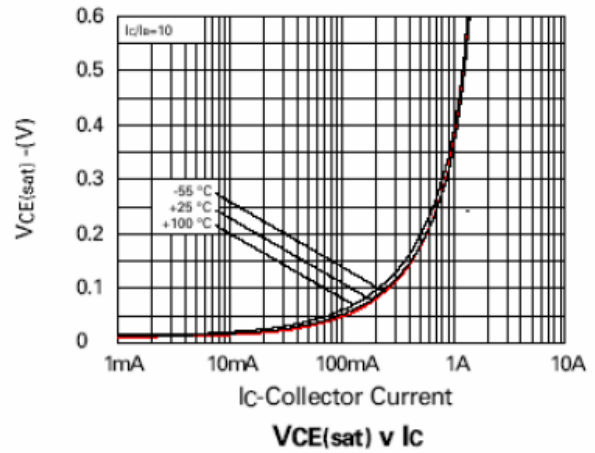
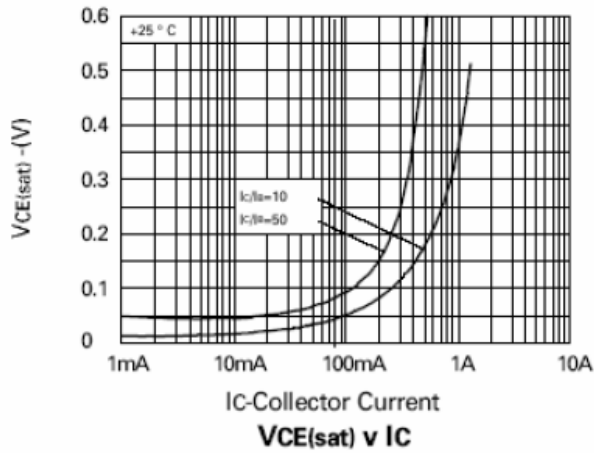
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=1mA$	100			
		$V_{CE}=5V, I_C=500mA$	100		300	
		$V_{CE}=5V, I_C=1A$	80			
		$V_{CE}=5V, I_C=2A$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$ $I_C=1A, I_B=100mA$			0.25 0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1A, I_B=100mA$			1.1	V
Base-emitter voltage	$V_{BE(on)}$	$I_C=1A, V_{CE}=5V$			1.0	V
Transition frequency	f_T	$V_{CE}=10V, I_C=50mA$ $f=100MHz$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$			10	pF



NPN Silicon Epitaxial Planar Transistor

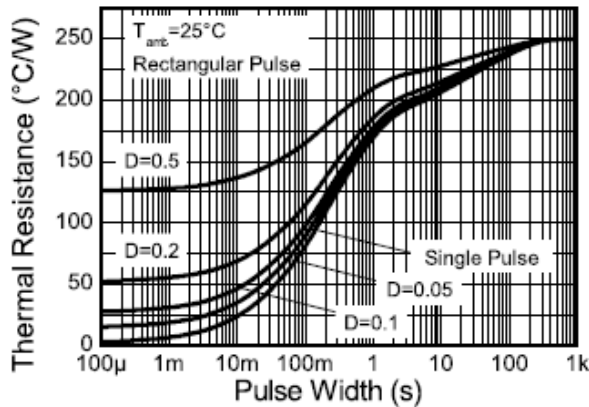
FMMT491

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

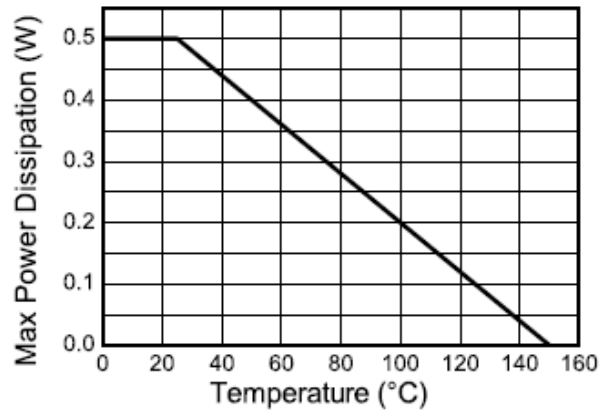


NPN Silicon Epitaxial Planar Transistor

FMMT491



Transient Thermal Impedance



Derating Curve

PACKAGE OUTLINE

Plastic surface mounted package

SOT-23

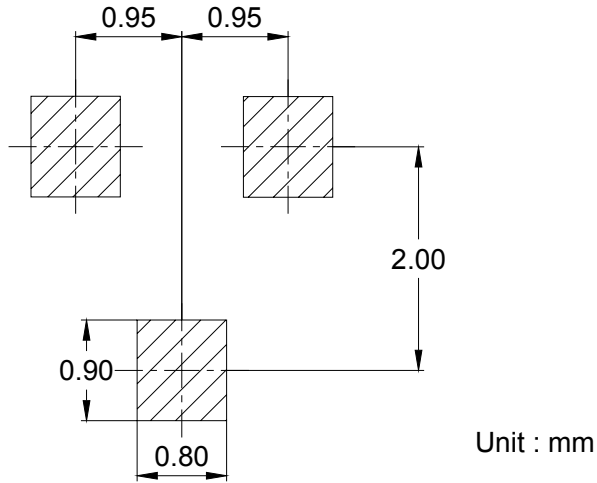
SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		



NPN Silicon Epitaxial Planar Transistor

FMMT491

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
FMMT491	SOT-23	3000/Tape&Reel