



## FMMT491

### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Power dissipation:  $P_{CM}=0.5W(T_{amb}=25^{\circ}C)$
- Collector current:  $I_C=1A$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 491

### Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current	1.0	A
$P_{tot}$	Power Dissipation at $T_{amb}=25^{\circ}C$	500	mW
$T_J$	Operating Junction Temperature	-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55 to +150	$^{\circ}C$

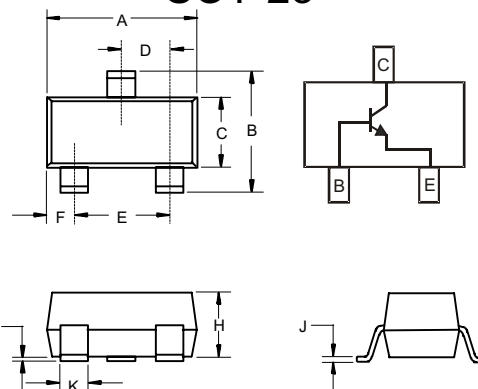
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ( $I_C=10mA$ , $I_E=0$ )	60	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu A$ , $I_E=0$ )	80	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A$ , $I_C=0$ )	5.0	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=60Vdc$ , $I_E=0Vdc$ )	---	0.1	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=4.0Vdc$ , $I_C=0$ )	---	0.1	$\mu A$
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage* ( $I_C=500mA$ , $I_B=50mA$ ) ( $I_C=1A$ , $I_B=100mA$ )	---	0.25 0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage* ( $I_C=1A$ , $I_B=100mA$ )	---	1.1	Vdc
$V_{BE}$	Base-Emitter Voltage* ( $V_{CE}=5Vdc$ , $I_C=1A$ )	---	1	Vdc
$h_{FE}$	DC Current Gain ( $V_{CE}=5Vdc$ , $I_C=1mA$ ) ( $V_{CE}=5Vdc$ , $I_C=500mA$ )* ( $V_{CE}=5Vdc$ , $I_C=1A$ )* ( $V_{CE}=5Vdc$ , $I_C=2A$ )*	100 100 80 30	---	---
$f_T$	Transition Frequency ( $I_C=50mA$ , $V_{CE}=10Vdc$ , $f=100MHz$ )	150	---	MHz
$C_{ob}$	Output Capacitance ( $V_{CB}=10Vdc$ , $f=1.0MHz$ )	---	10	pF

\* Measured under pulsed conditions. Pulse width=300us. Duty cycle  $\leq 2\%$

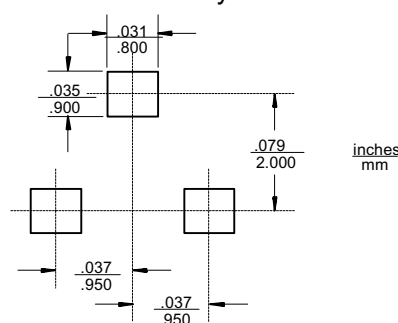
## NPN Silicon Planar High Performance Transistor

### SOT-23

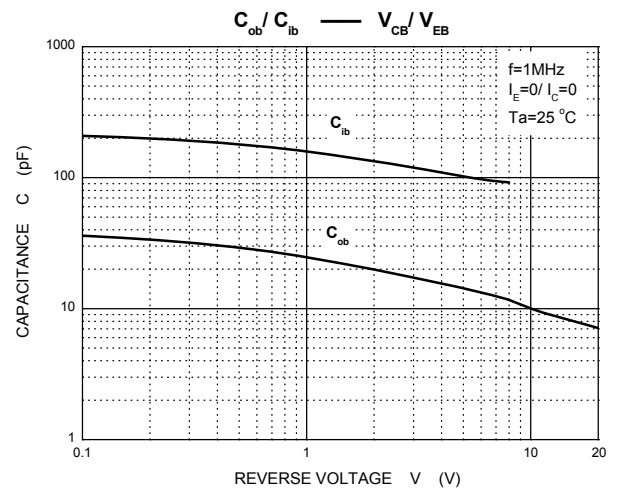
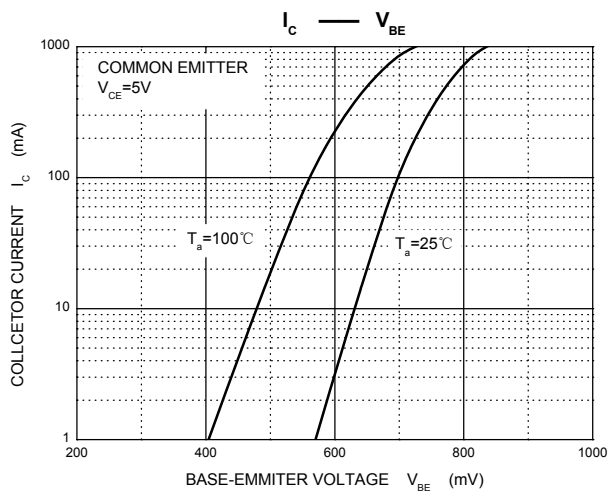
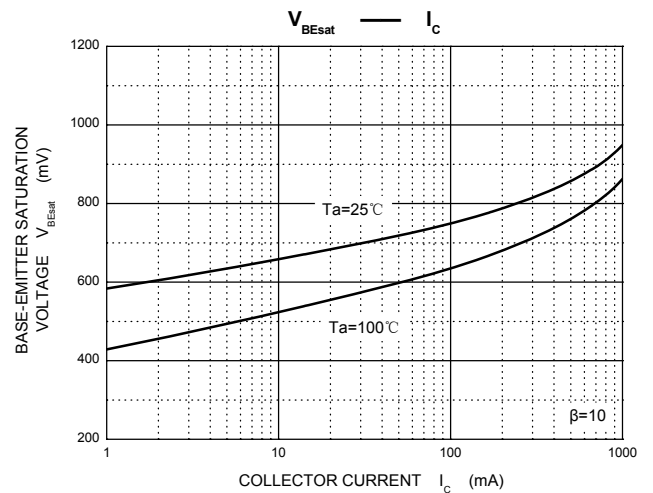
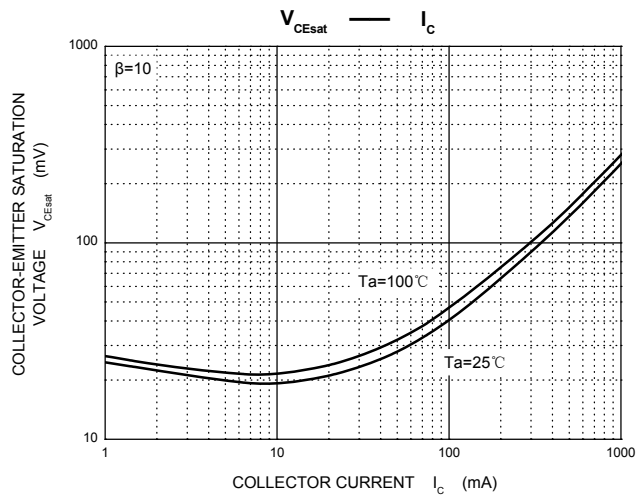
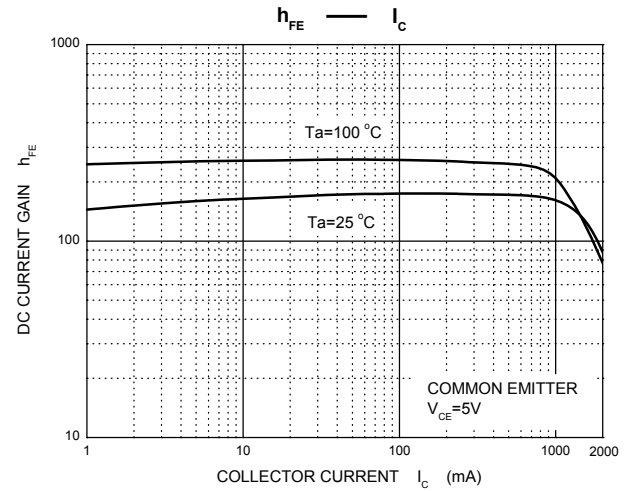
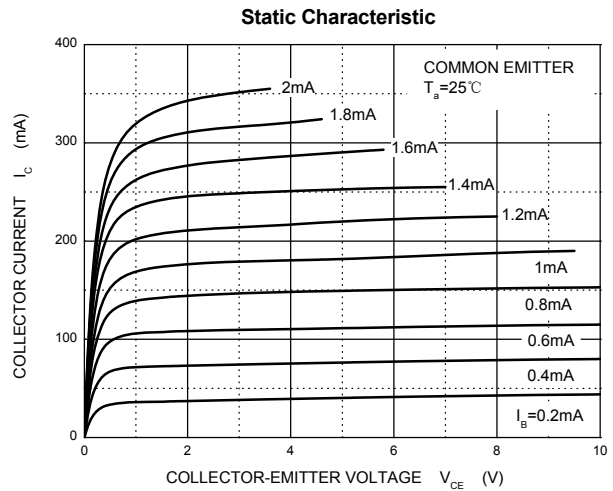


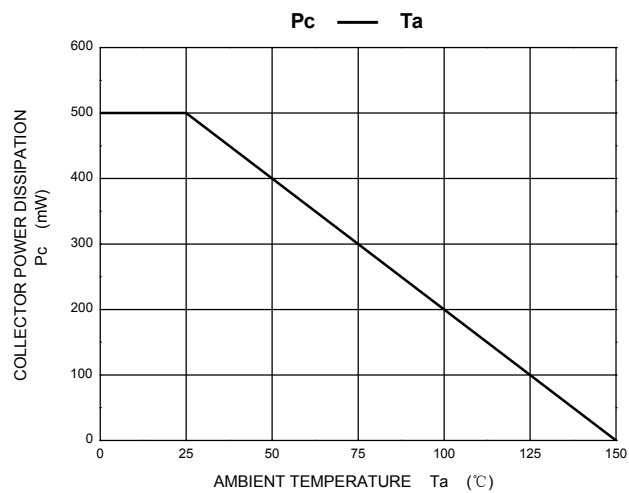
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout



## Typical Characteristics





## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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