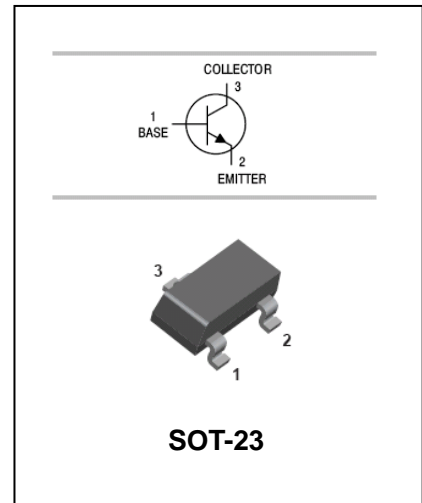


## NPN Silicon Planar Medium Power Transistor

## FMMT449

### FEATURES

- Low equivalent on-resistance,  $R_{CE(sat)}$ : 250mΩ at 1A.
- Complementary To FMMT549.



### APPLICATIONS

- NPN silicon planar medium power transistor.

### ORDERING INFORMATION

Type No.	Marking	Package Code
FMMT449	449	SOT-23

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_{CM}$	Peak Pulse Current	2	A
$I_C$	Collector Current -Continuous	1	A
$I_B$	Base Current	200	mA
$P_{tot}$	Power Dissipation	500	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55~150	°C

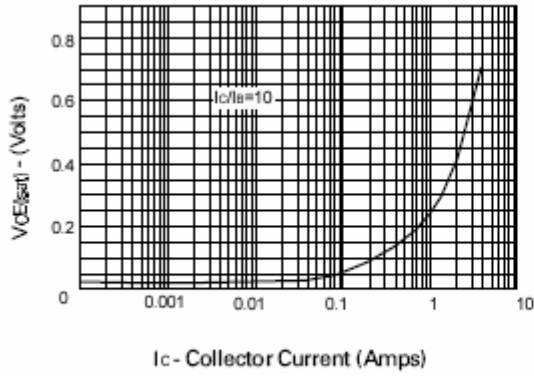
**NPN Silicon Planar Medium Power Transistor****FMMT449****ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=40V, I_E=0$ $V_{CB}=40V, I_E=0, T_{amb}=100^\circ C$			0.1 10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=2V, I_C=50mA$	70			
		$V_{CE}=2V, I_C=500mA$	100		300	
		$V_{CE}=2V, I_C=1A$	80			
		$V_{CE}=2V, I_C=2A$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1A, I_B=100mA$ $I_C=2A, I_B=200mA$			0.5 1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1A, I_B=100mA$			1.25	V
Base-emitter turn-on voltage	$V_{BE(on)}$	$I_C=1A, V_{CE}=2V$			1.0	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=50mA$ $f=100MHz$	150			MHz
Output capacitance	$C_{obo}$	$V_{CB}=10V, f=1MHz$			15	pF

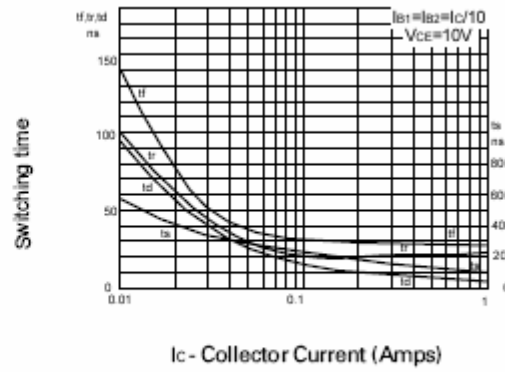
## NPN Silicon Planar Medium Power Transistor

## FMMT449

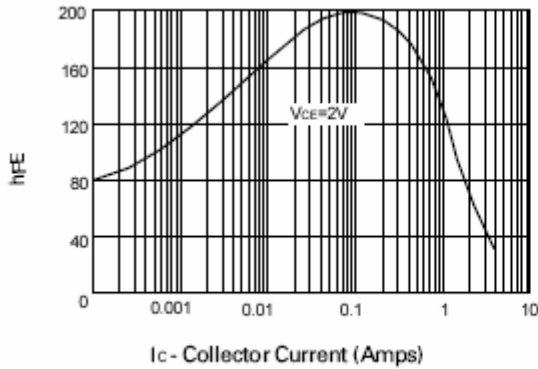
TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



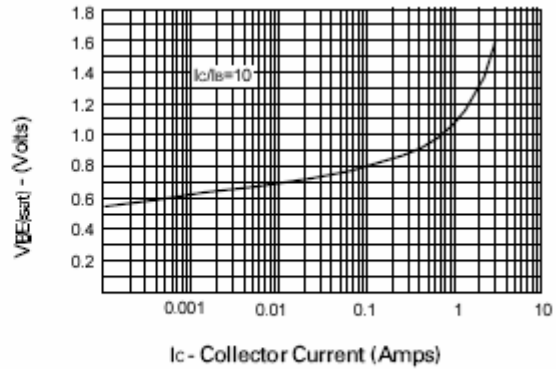
**$V_{CE(sat)}$  v  $I_C$**



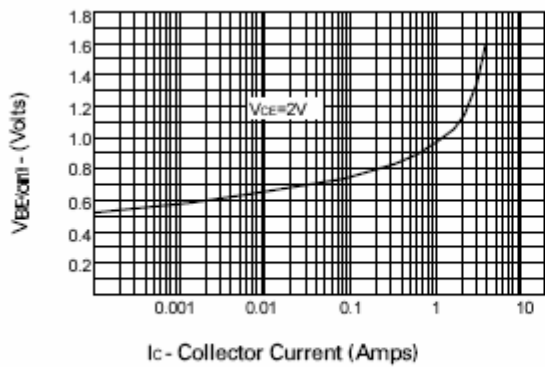
**Switching Speeds**



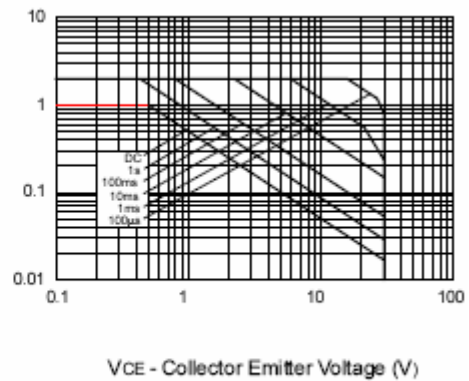
**$h_{FE}$  v  $I_C$**



**$V_{BE(sat)}$  v  $I_C$**



**$V_{BE(on)}$  v  $I_C$**



**Safe Operating Area**

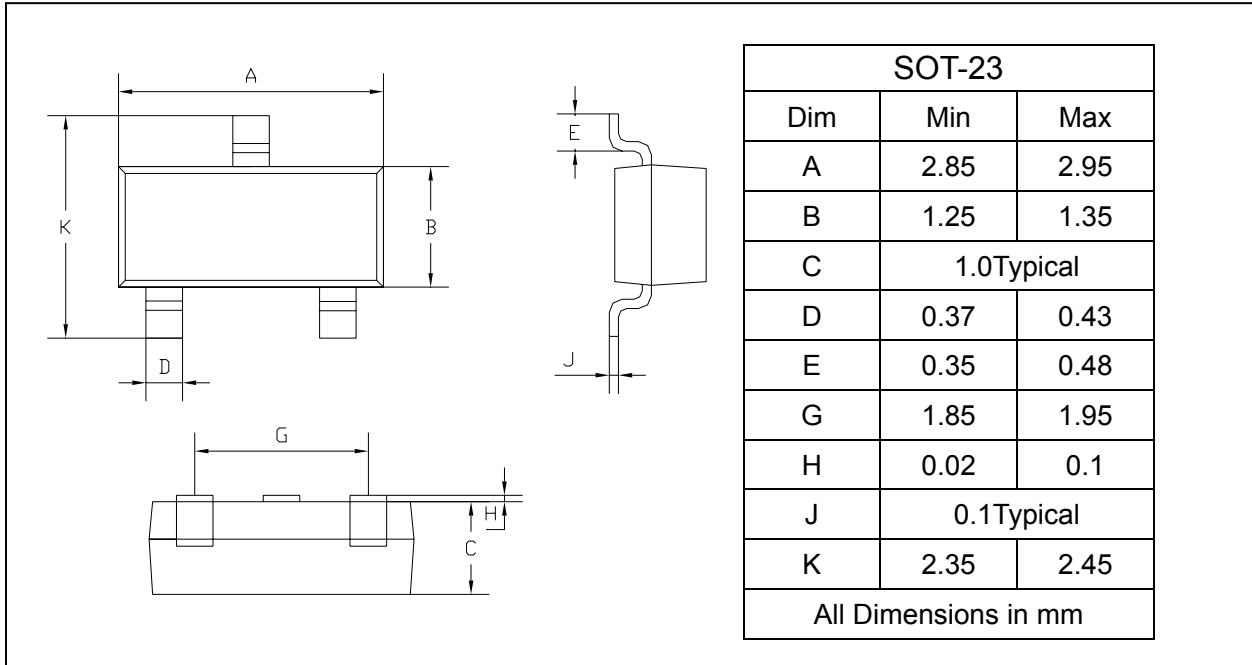
## NPN Silicon Planar Medium Power Transistor

## FMMT449

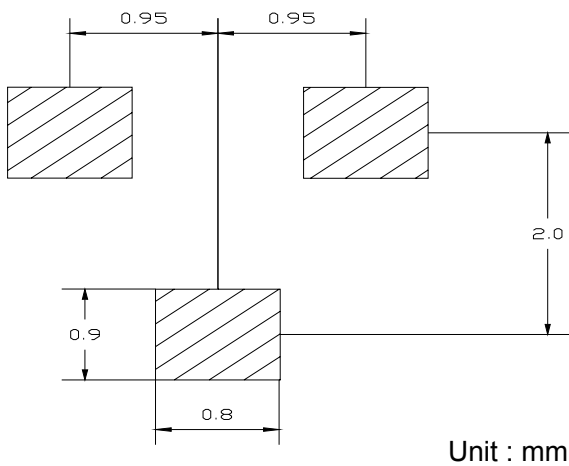
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
FMMT449	SOT-23	3000/Tape&Reel

[www.s-manuals.com](http://www.s-manuals.com)