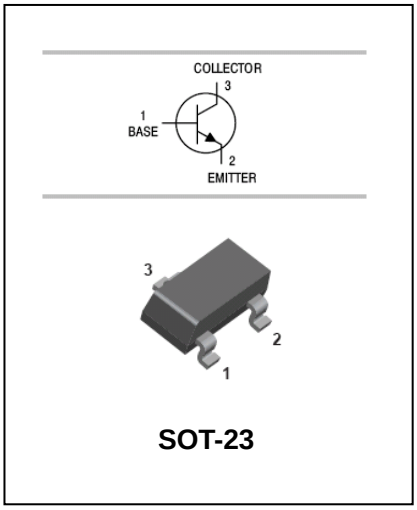
NPN Silicon Planar Medium Power Transistor **FMMT449**

FEATURES

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

Lead-free



SOT-23

APPLICATIONS

- NPN silicon planar medium power transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
FMMT449	449	SOT-23

MAXIMUM RATING @ Ta=25℃ 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	℃

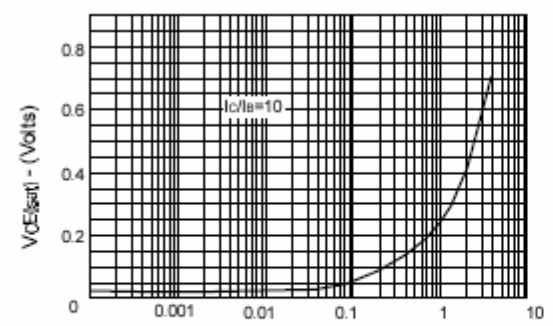
NPN Silicon Planar Medium Power Transistor **FMMT449**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

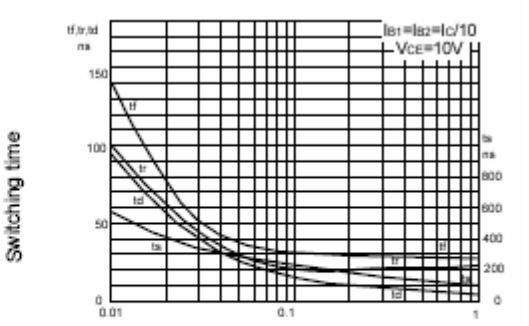
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA,I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=40V,I_E=0 V_{CB}=40V,I_E=0T_{amb}=100℃			0.1 10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			0.1	μA
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**

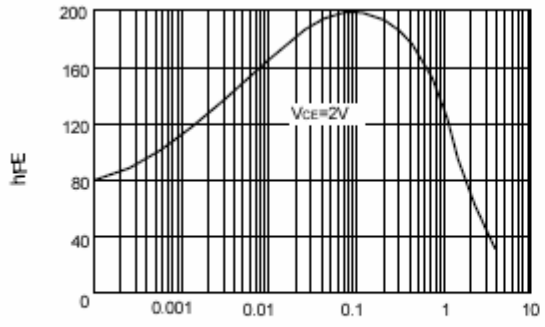
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



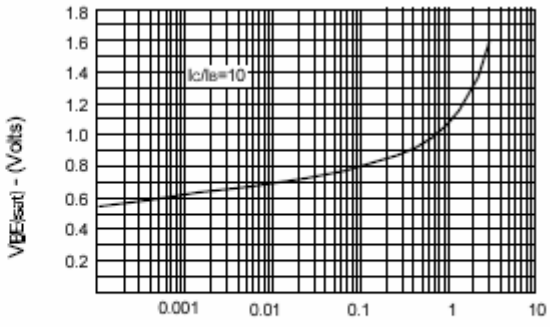
VCE(sat) v IC



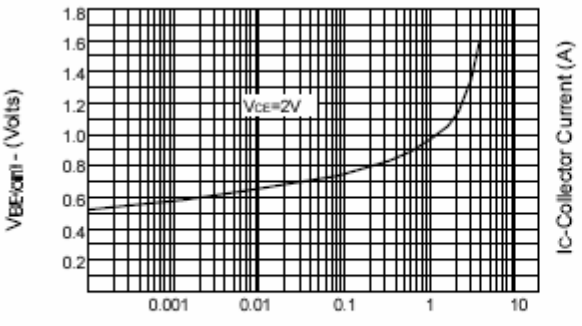
Switching Speeds



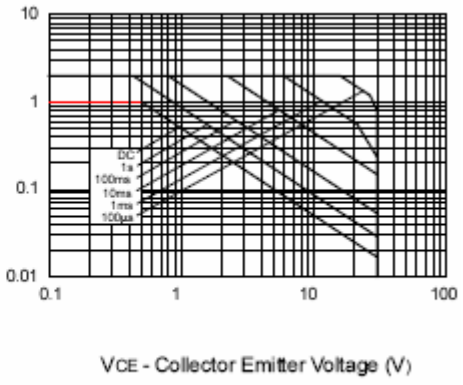
hFE v IC



VBE(sat) v IC



VBE(on) v IC

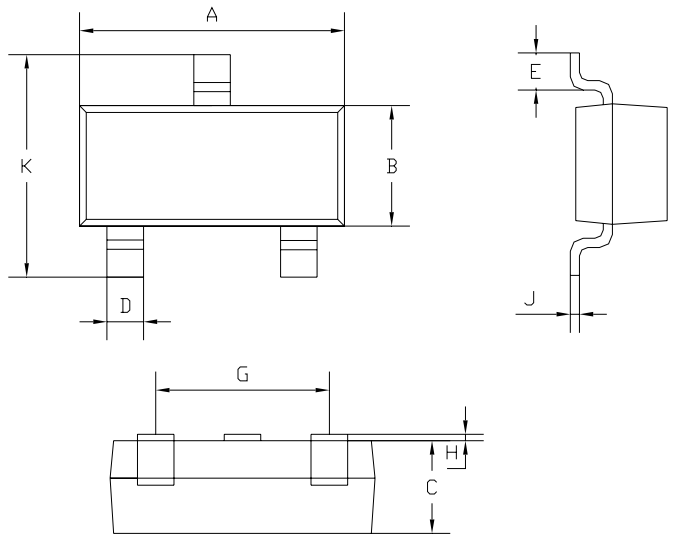


Safe Operating Area

NPN Silicon Planar Medium Power Transistor **FMMT449**

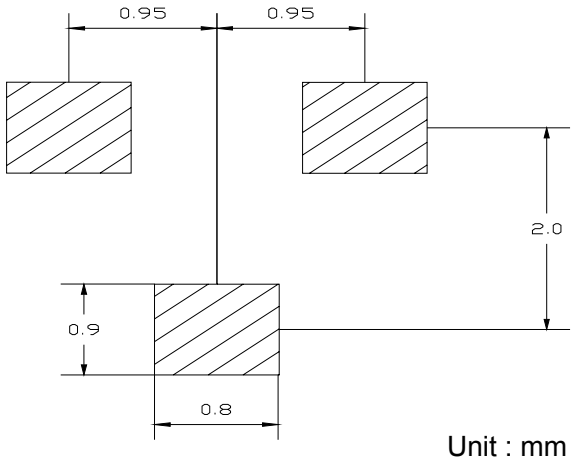
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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