

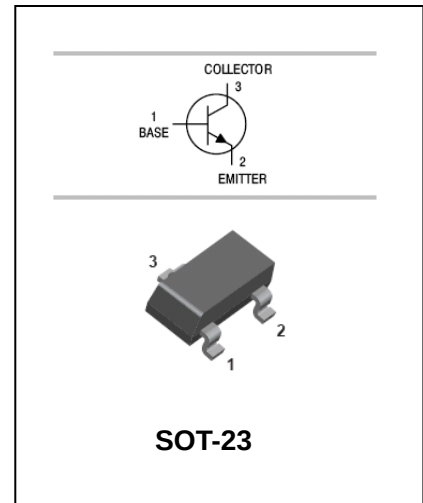
NPN Silicon Epitaxial Planar Transistor

FMMT458

FEATURES

- High voltage.
- Complementary To FMMT558.

HF



ORDERING INFORMATION

Type No.	Marking	Package Code
FMMT458	458	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	225	mA
I_{CM}	Peak Pulse Current	1	A
I_B	Base Current	200	mA
P_D	Power Dissipation	500	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	°C

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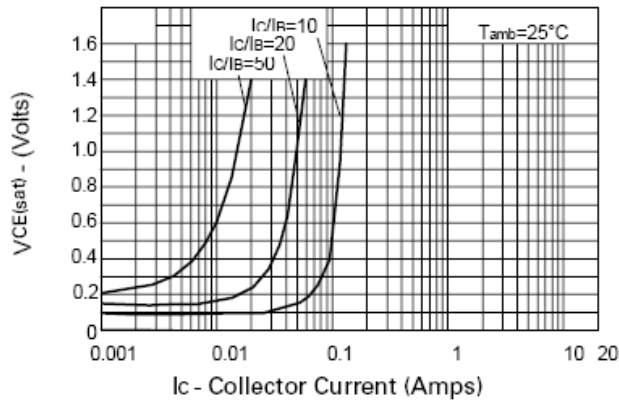
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=320V, I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=320V, I_B=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=1mA$	100			
		$V_{CE}=10V, I_C=50mA$	100		300	
		$V_{CE}=10V, I_C=100mA$	15			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=20mA, I_B=2mA$ $I_C=50mA, I_B=6mA$			0.2 0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA$			0.9	V
Base-emitter turn on voltage	$V_{BE(on)}$	$I_C=50mA, V_{CE}=10V$			0.9	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA$ $f=20MHz$	50			MHz
Collector output capacitance	C_{ob}	$V_{CB}=20V, f=1MHz$			5	pF
Switching times	t_{on}	$I_C=50mA, V_{CC}=100V$		135		nS
	t_{off}	$I_{B1}=5mA, I_{B2}=10mA$		2260		

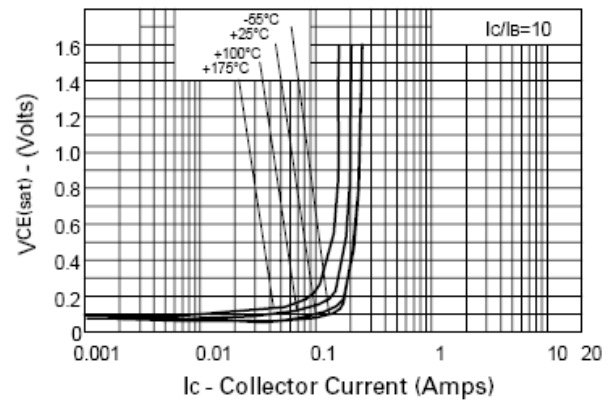
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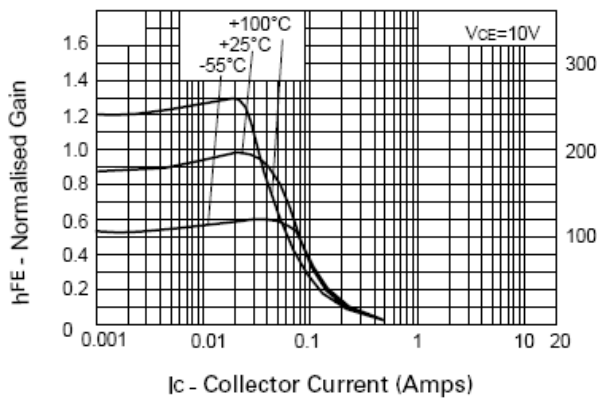
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



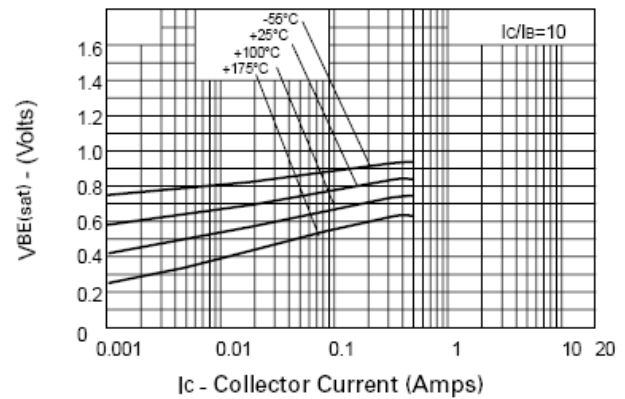
$V_{CE(sat)}$ v I_C



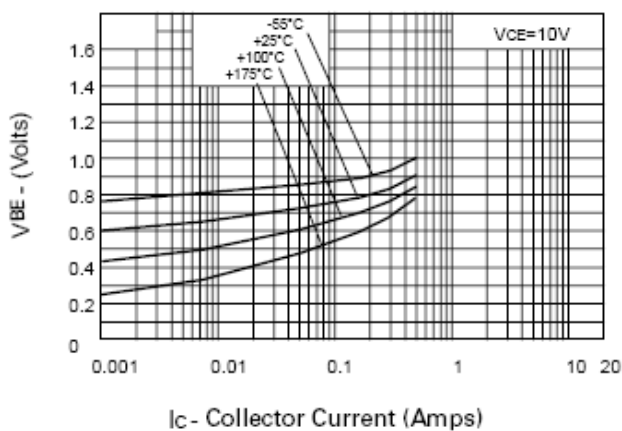
$V_{CE(sat)}$ v I_C



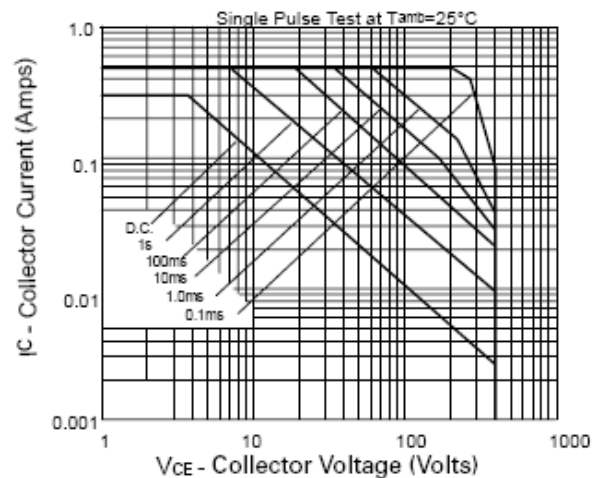
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area

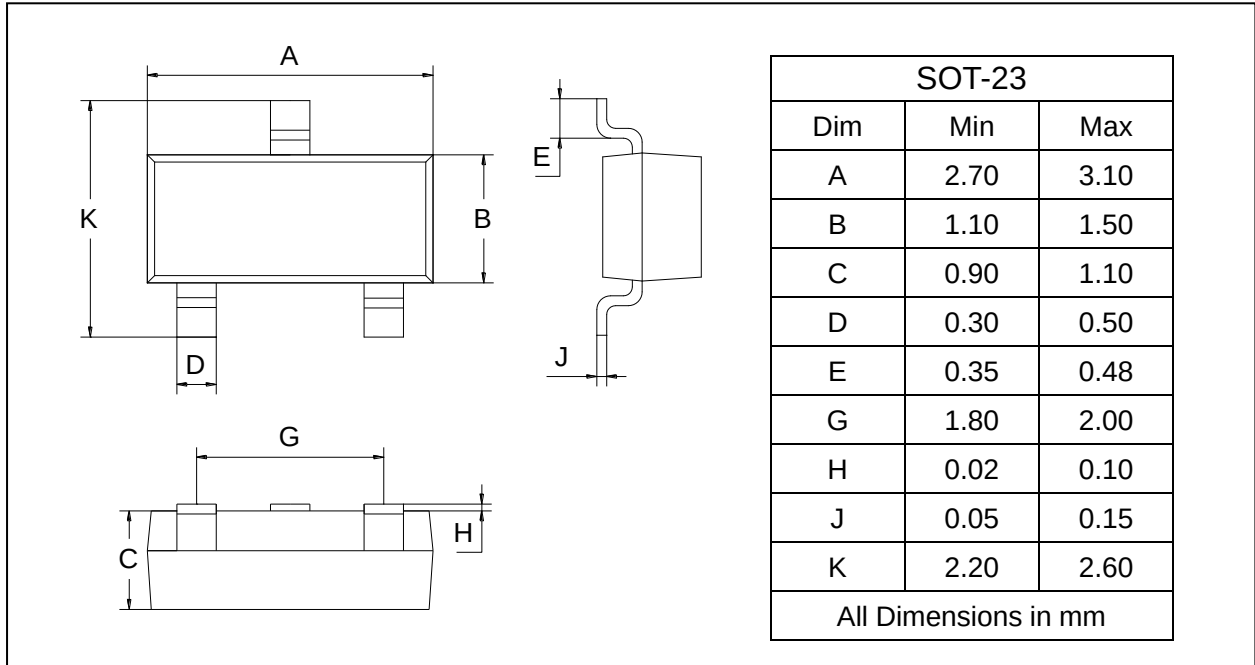
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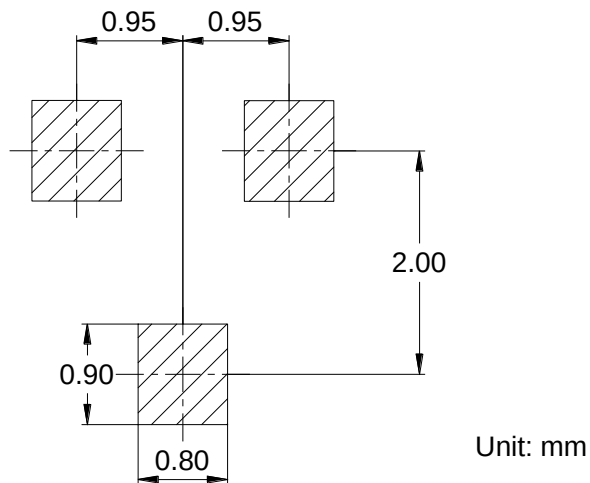
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
FMMT458	SOT-23	3000 pcs / Tape & Reel