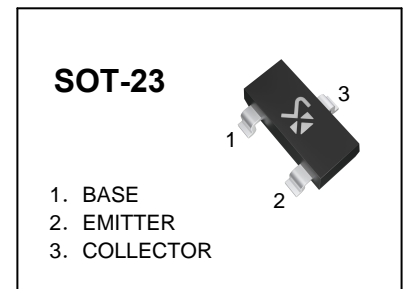


NPN Silicon Epitaxial Planar Transistor

Features

- COMPLEMENTARY TYPE FMMT558
- PARTMARKING DETAIL 458



MARKING: 3D

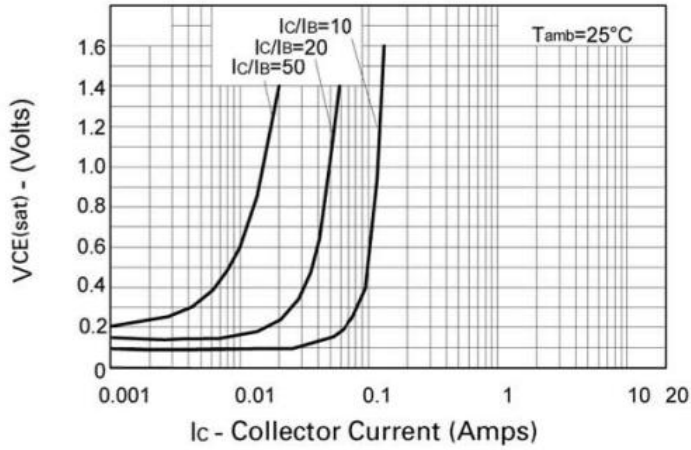
MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

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
P_C	Collector Power Dissipation	500	mW
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-+150	$^\circ\text{C}$

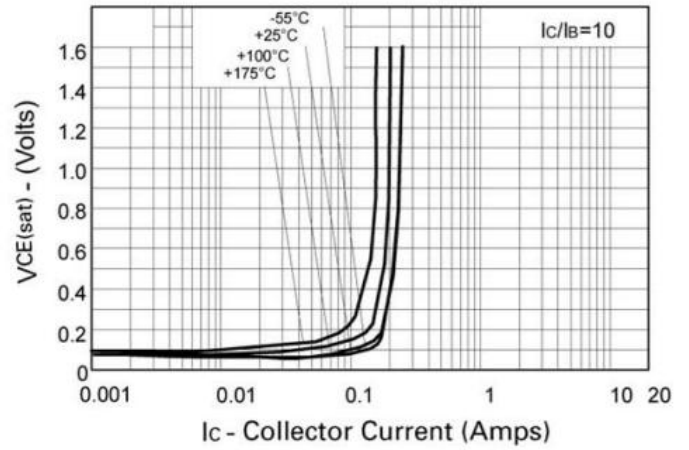
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=320\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	100			
		$V_{CE}=5\text{V}, I_C=50\text{mA}$	100		300	
		$V_{CE}=5\text{V}, I_C=100\text{mA}$	15			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{mA}, I_B=0.1\text{mA}$			0.4	V
		$I_C=10\text{mA}, I_B=1\text{mA}$			0.5	
		$I_C=50\text{mA}, I_B=5\text{mA}$			0.75	
Collector-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.75	V
Collector output capacitance	C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHZ}$			5	pF
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=20\text{MHZ}$	50			MHZ

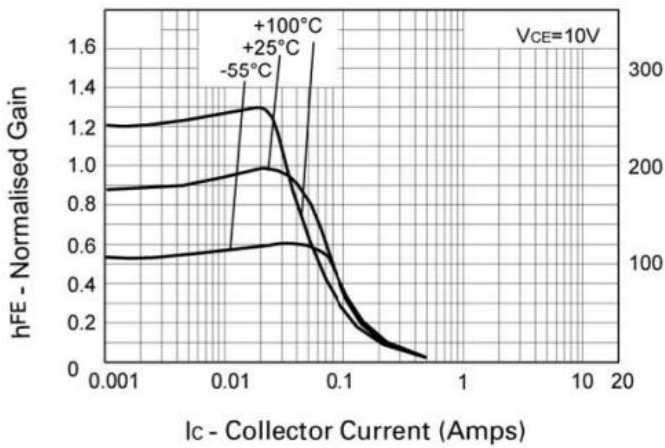
TYPICAL CHARACTERISTICS



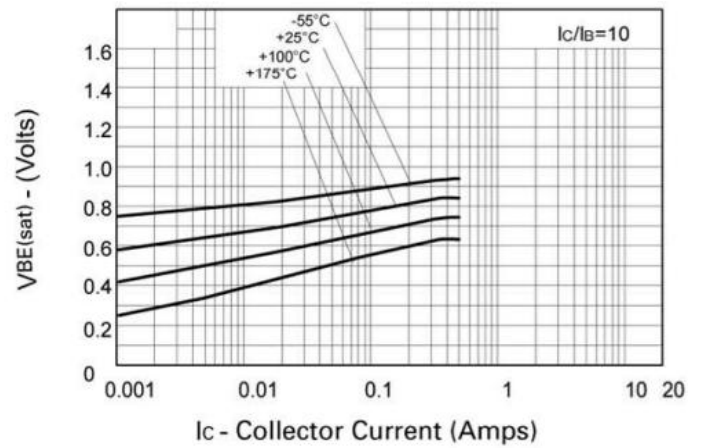
$V_{CE(sat)}$ v I_C



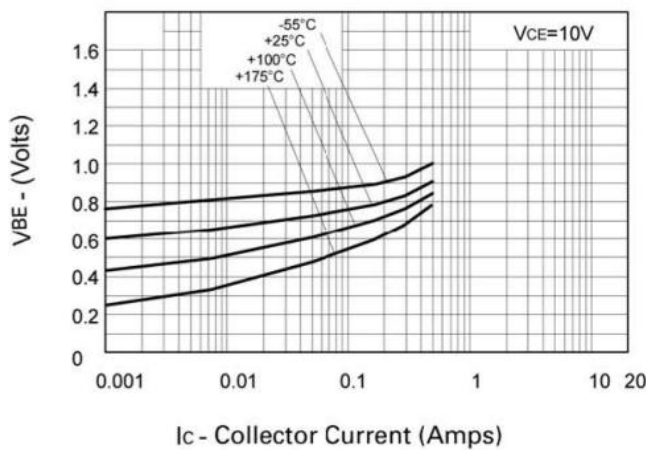
$V_{CE(sat)}$ v I_C



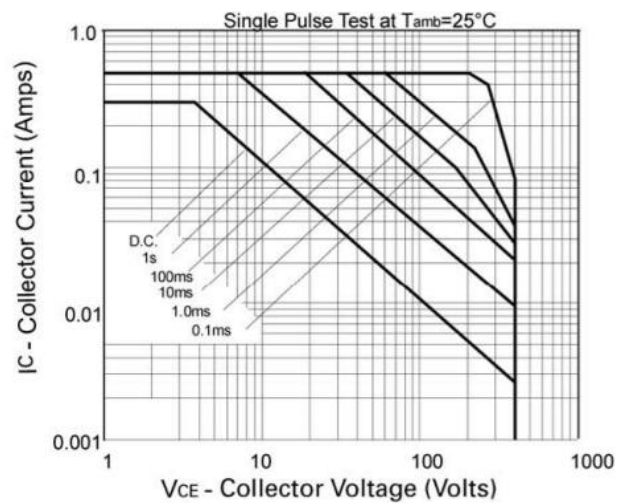
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

