

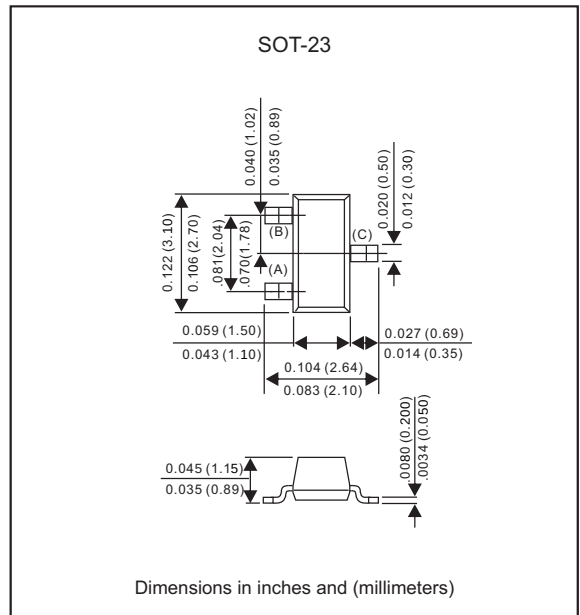
Features

- High voltage
- NPN
- Compliant to Halogen-free

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : SOT-23

Package outline



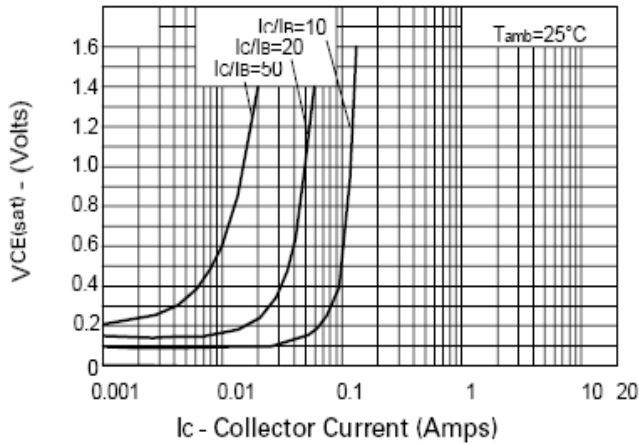
Maximum Ratings (@ T_A = 25°C unless otherwise specified)

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

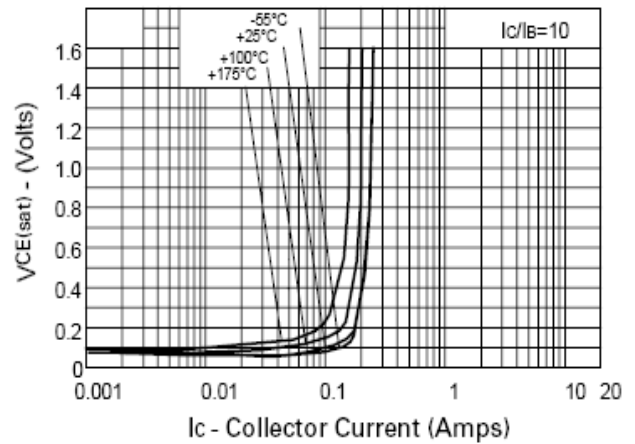
Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, 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 =100μA, 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		

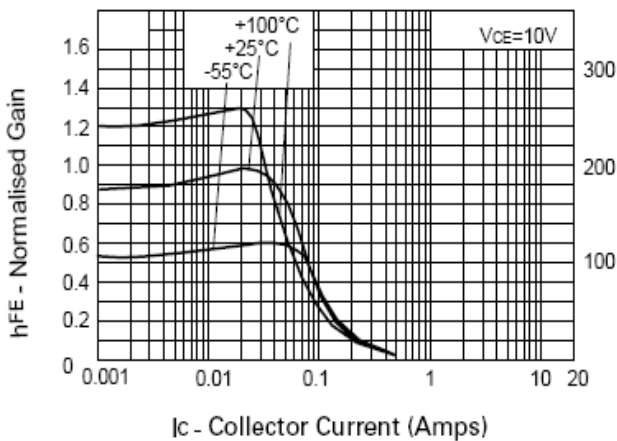
Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



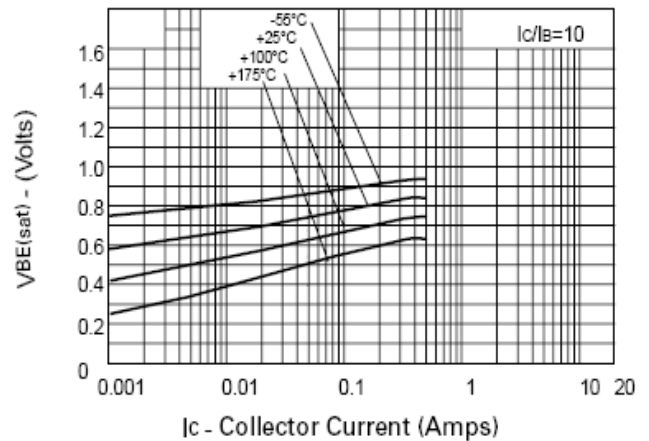
$V_{CE(sat)}$ v I_C



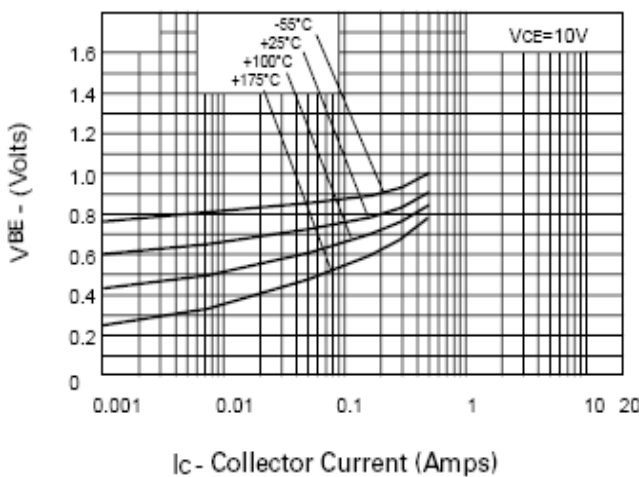
$V_{CE(sat)}$ v I_C



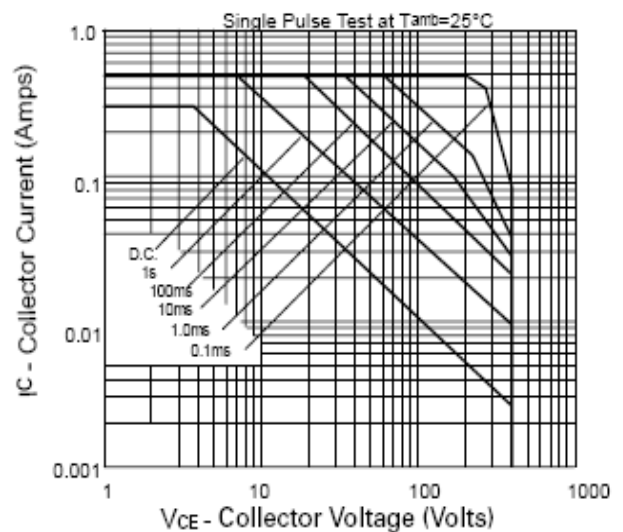
h_{FE} v I_C



$V_{BE(sat)}$ v I_C

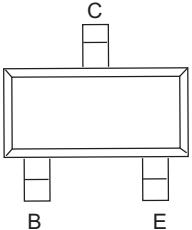
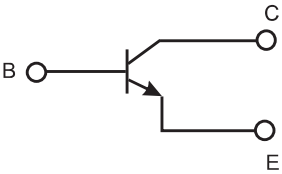


$V_{BE(on)}$ v I_C



Safe Operating Area

Pinning information

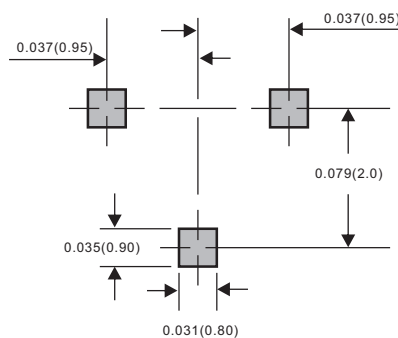
Pin	Simplified outline	Symbol
PinB Base PinC Collector PinE Emitter		

Marking

Type number	Marking code
FMMT458	458

Suggested solder pad layout

SOT-23



Dimensions in inches and (millimeters)