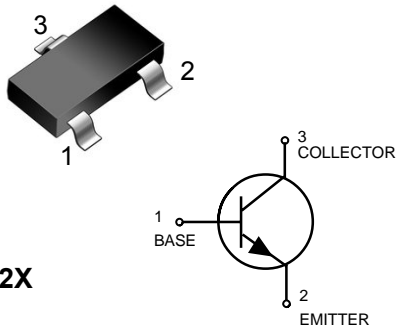


SOT-23



MARKING: 2X

Features

- As complementary type the PNP transistor MMBT4403 is recommended
- Epitaxial planar die construction
- Halogen free and RoHS compliant

Mechanical Data

SOT-23 Small Outline Plastic Package
EpoxyUL: 94V-0

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel,7" reel	3000	EIA-481-1

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

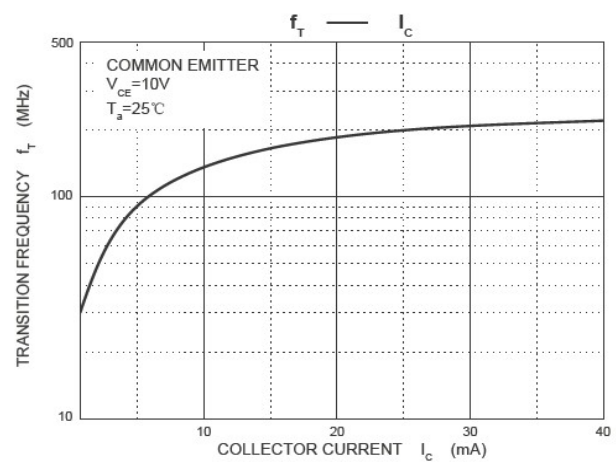
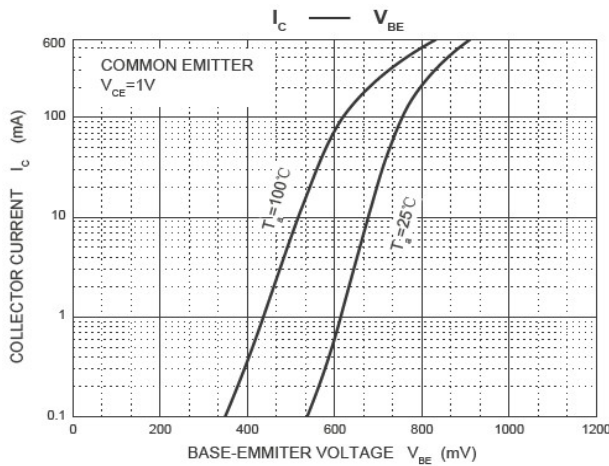
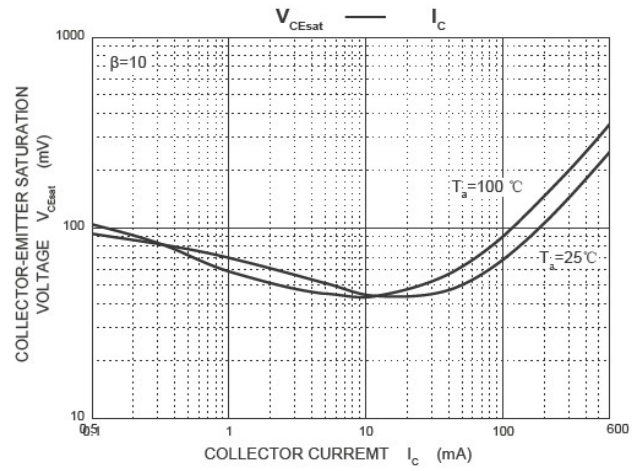
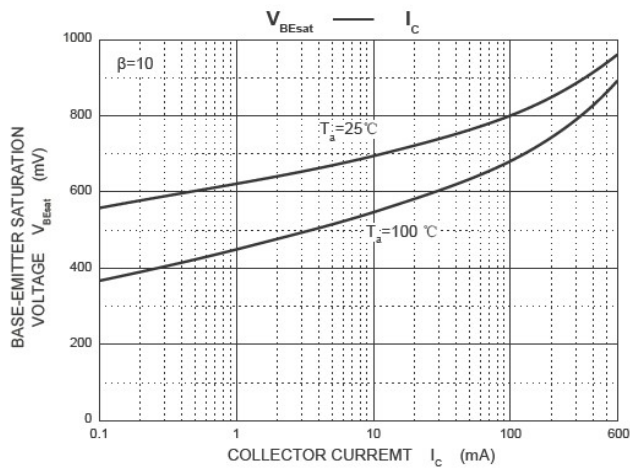
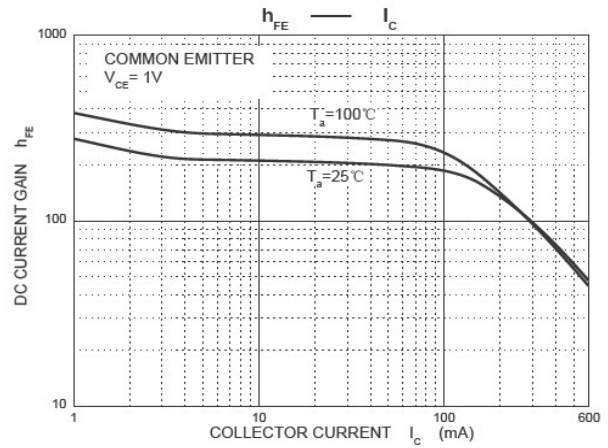
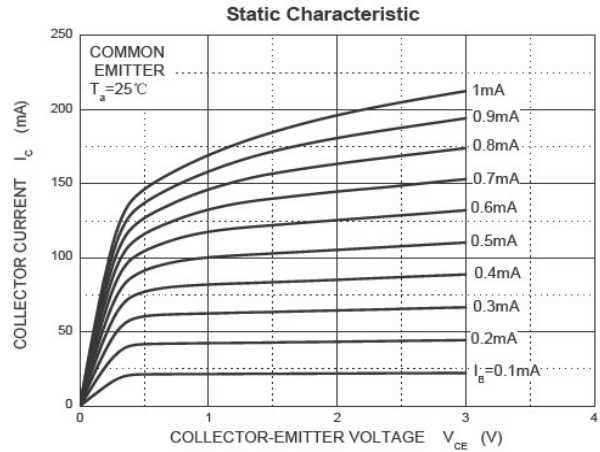
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	60	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter -Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _c	600	mA
Collector Power Dissipation	P _c	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	417	°C/W

Electrical Characteristics

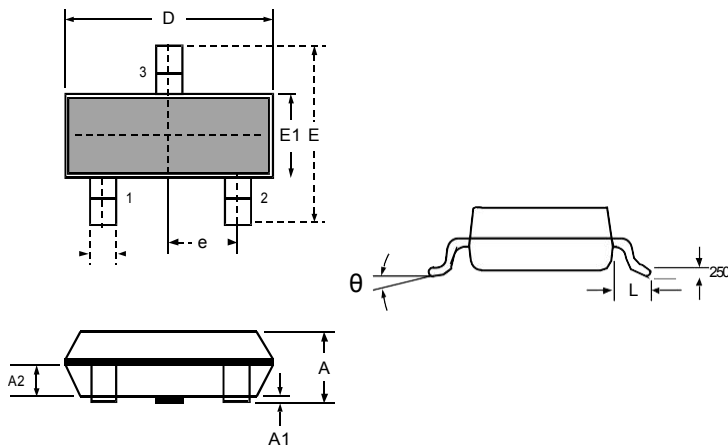
(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	IC=100uA, IE=0	60		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=1mA, IB=0	40		V
Emitter-base breakdown voltage	V(BR)EBO	IE=100uA, IC=0	6		V
Collector cut-off current	ICBO	VCE=50V, IE=0		100	nA
Collector cut-off current	ICEX	VCE=35V, VEB(off)=0.4V		100	nA
Emitter cut-off current	IEBO	VEB=5V, IC=0		100	nA
DC current gain	hFE(1)	VCE=1V, IC=0.1mA	20		
	hFE(2)	VCE=1V, IC=1mA	40		
	hFE(3)	VCE=1V, IC=10mA	80		
	hFE(4)	VCE=1V, IC=150mA	100	300	
	hFE(5)	VCE=1V, IC=500mA	40		
Collector-emitter saturation voltage	VCE(sat)	IC=150mA, IB=15mA		0.40	V
		IC=500mA, IB=50mA		0.75	V
Base -emitter saturation voltage	VBE(sat)	IC=150mA, IB=15mA		0.95	V
		IC=500mA, IB=50mA		1.20	V
Transition frequency	fT	VCE=10V, IC=20mA, f=100MHz	250		MHz
Delay time	td	VCC=30V, VBE(off)=-2V, IC=150mA, IB1=15mA		15	nS
Rise time	tr			20	nS
Storage time	ts			225	nS
Fall time	tf			60	nS

Ratings and Characteristic Curves



Package Outline Dimensions: SOT-23



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°