

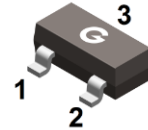
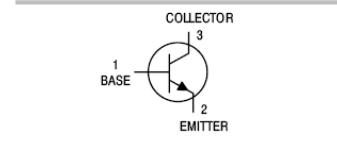
Features

- Epitaxial die construction
- Small surface mount package

HF

Mechanical Data

- Case: SOT-23
- Molding compound: UL flammability classification rating 94V-0
- Terminal s: Tin-plated; solderability per MIL-STD-202, Method 208



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MMBT560	SOT-23	3000 pcs / Tape & Reel	560

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V _{CBO}	500	V
Collector-Emitter Breakdown Voltage	V _{CEV}	500	V
Collector-Emitter Breakdown Voltage	V _{CEO}	450	V
Emitter-Base Breakdown Voltage	V _{EBO}	6	V
Collector Current (Continuous)	I _C	150	mA

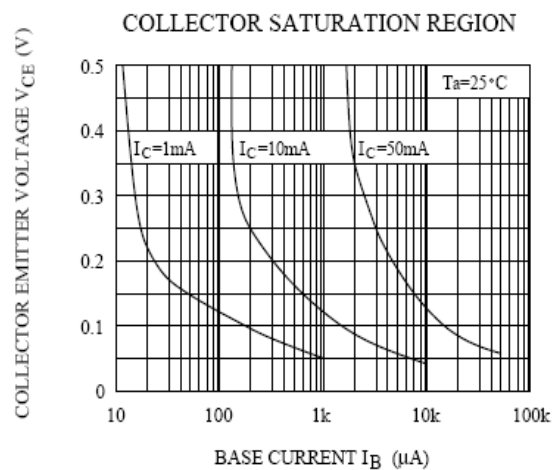
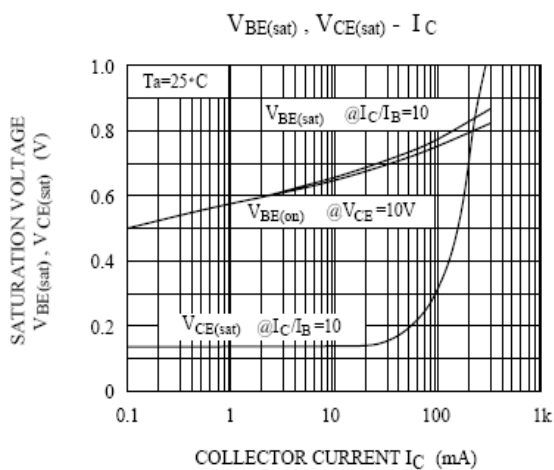
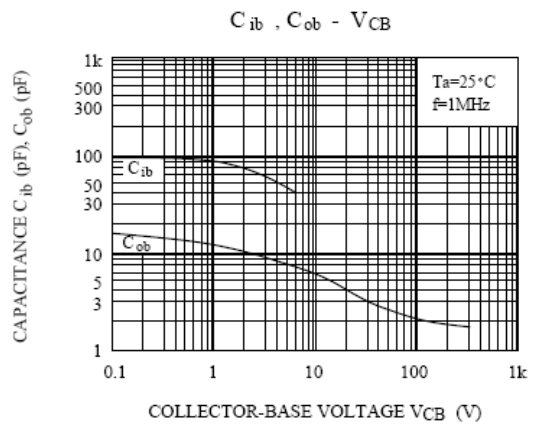
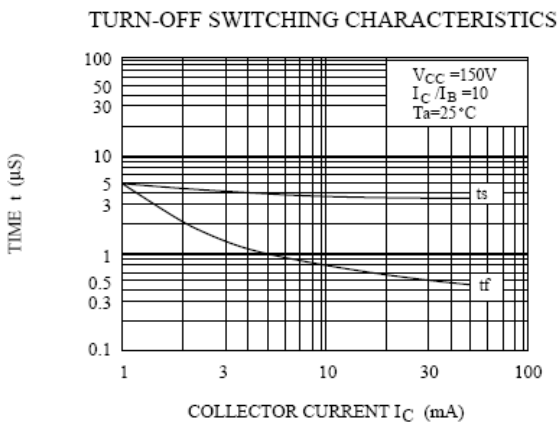
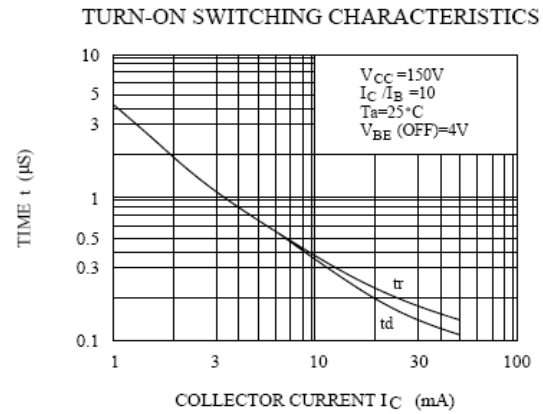
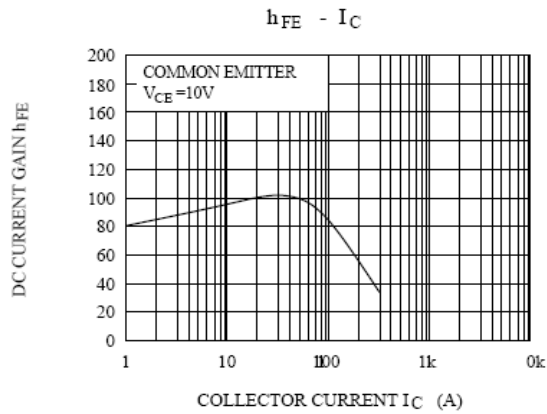
Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (Collector)	P _C	350	mW
Thermal Resistance (Junction-to-Ambient)	R _{θJA}	357	°C/W
Operating junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

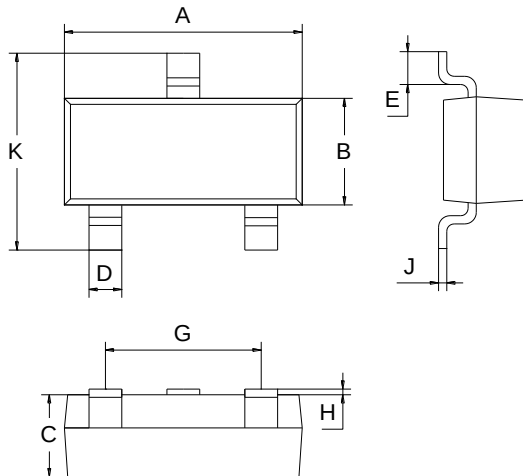
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	500	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEV}$	$I_C = 10\mu\text{A}$ $0.3V > V_{BE} > -1V$	500	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	450	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	6	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 400V, I_E = 0$	-	-	100	nA
Collector Cut-off Current	I_{CES}	$I_E = 0, V_{CE} = 400V$	-	-	0.5	μA
Emitter Cut-off Current	I_{EBO}	$I_C = 0, V_{EB} = 4V$	-	-	0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 10V, I_C = 1\text{mA}$	40	-	-	-
		$V_{CE} = 10V, I_C = 10\text{mA}$	100	-	200	-
		$V_{CE} = 10V, I_C = 50\text{mA}$	45	-	-	-
		$V_{CE} = 10V, I_C = 100\text{mA}$	40	-	-	-
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	V
		$I_C = 50\text{mA}, I_B = 5\text{mA}$	-	-	0.75	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$	-	-	0.75	V
Transition Frequency	f_T	$V_{CE} = 20V, I_C = 10\text{mA}$ $f = 100\text{MHz}$	50	-	-	MHz
Collector-BASE Capacitance	C_{CB}	$V_{CB} = 20V, I_E = 0$ $f = 1\text{MHz}$	-	-	7	pF

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



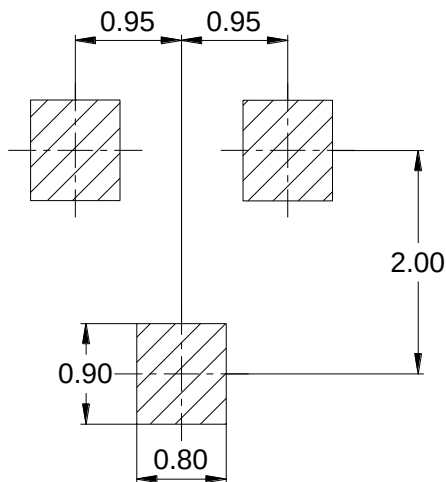
Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23



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