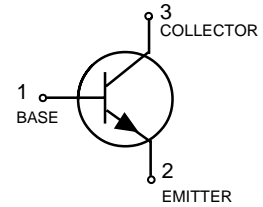
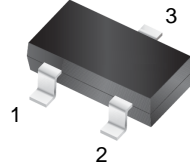


## High Voltage Transistors in SOT-23

### Features

- Ideal for Medium Power Amplification and Switching
- Complementary to MMBT5401



### Mechanical Data

- **Case:** SOT-23 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	180	V
$V_{CEO}$	Collector-Emitter Voltage	160	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	600	mA
$P_C$	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	416	°C/W
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55~+150	°C

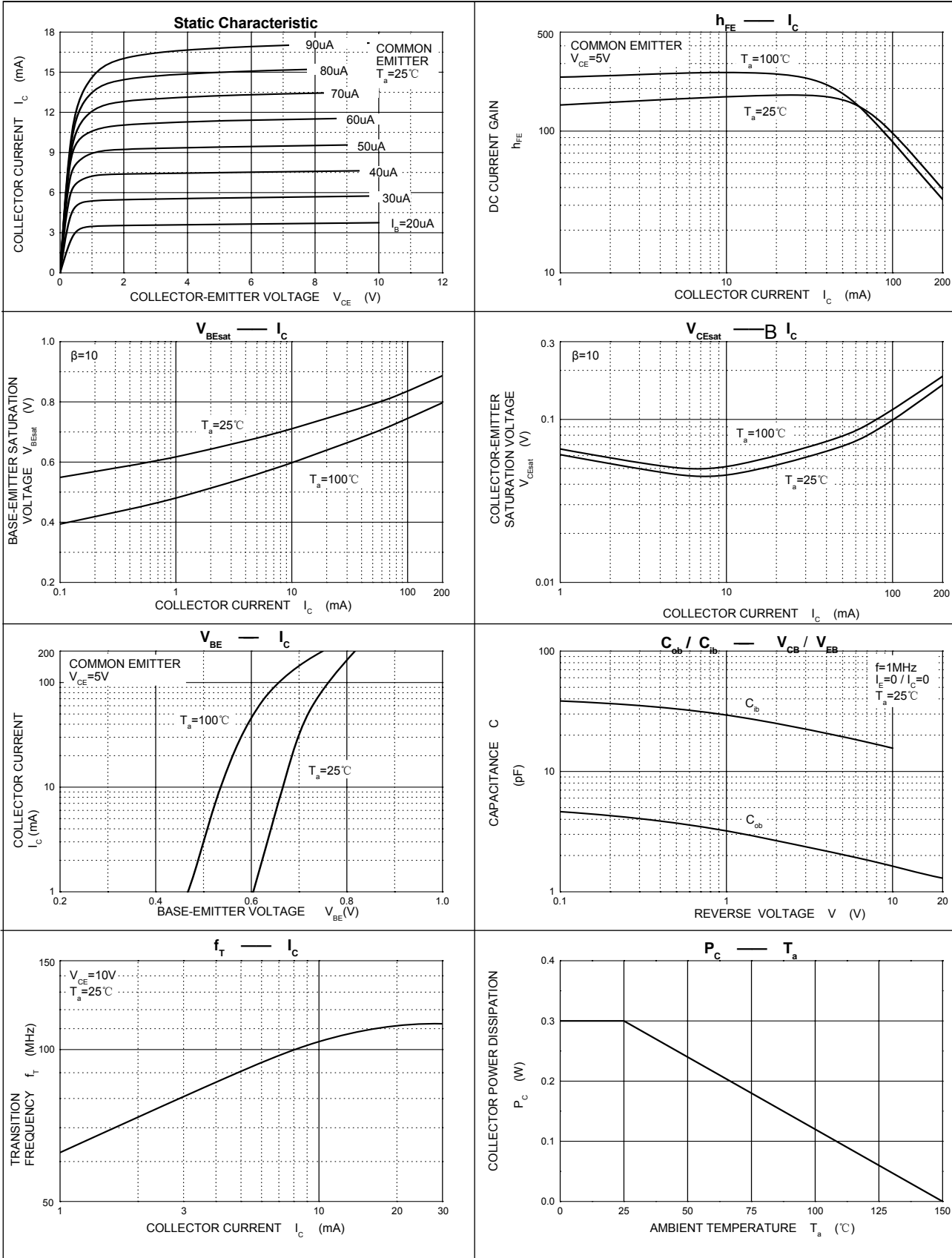
### Electrical Characteristics

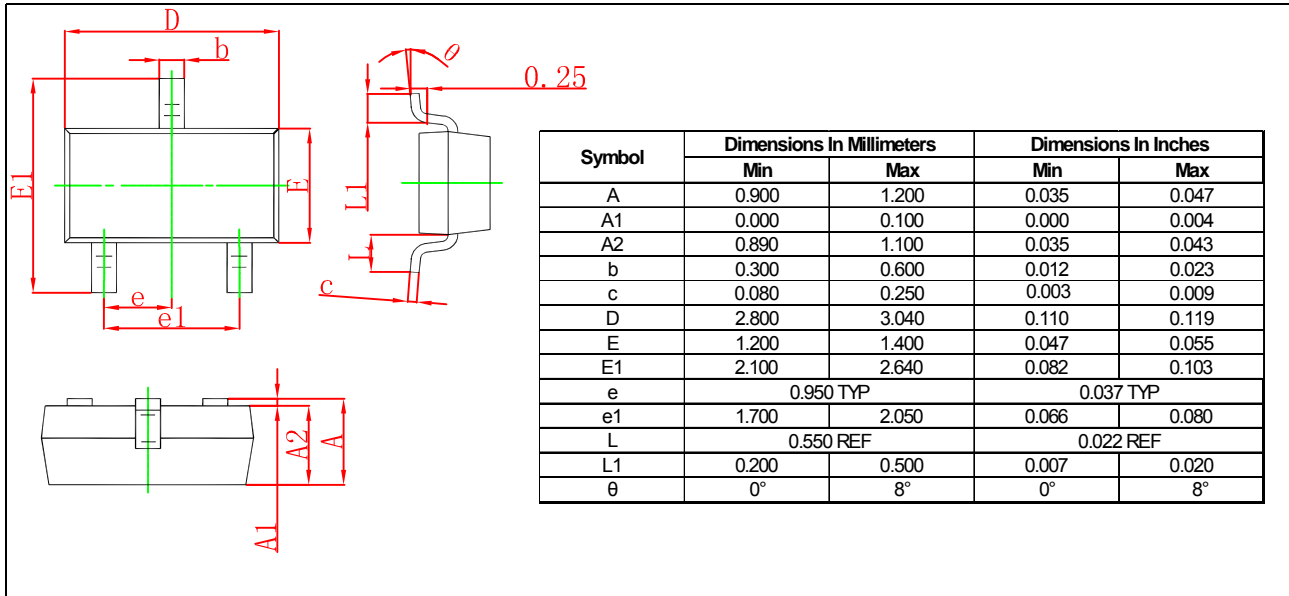
( $T_A = 25\text{ °C}$  unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=1mA, I_B=0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=120V, I_E=0$			50	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			50	nA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=5V, I_C=1mA$				
	$h_{FE(2)}^*$	$V_{CE}=5V, I_C=10mA$	100		300	
	$h_{FE(3)}^*$	$V_{CE}=5V, I_C=50mA$				
Collector-emitter saturation voltage	$V_{CE(sat)1}^*$	$I_C=10mA, I_B=1mA$			0.15	V
	$V_{CE(sat)2}^*$	$I_C=50mA, I_B=5mA$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)1}^*$	$I_C=10mA, I_B=1mA$			1	V
	$V_{BE(sat)2}^*$	$I_C=50mA, I_B=5mA$			1	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=10mA, f=100MHz$	100		300	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$			6	pF

\*Pulse test: pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2.0\%$ .

**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)



**Package Dimensions**

**Ordering information**

Order code	Package	Marking	Packaging option	Base quantity	Packaging specification
MMBT5551	SOT-23	G1	Tape and reel	3000pcs / reel	EIA STD RS-481

**Revision history**

Date	Revision	Changes
10-May-2024	4.0	Update

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