

SOT-23 Plastic-Encapsulate Transistors



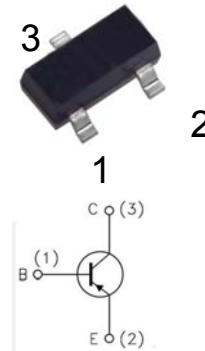
MMBT5401

Features:

- ☐ PNP Transistor
- ☐ Complementary to MMBT5551
- ☐ Ideal for Medium Power Amplification and Switching

Marking:2L

SOT-23



- 1.Base (B)
- 2. Emitter (E)
- 3.Collector (C)

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-160	V
Collector-Emitter Voltage	V_{CEO}	-150	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	0.6	A
Collector Power Dissipation	PD	0.3	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	416	°C/W
Junction Temperature(MAX.)	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-160	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-150	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -120V, I_E = 0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_C = 0$	-	-	-0.1	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE} = -5V, I_C = -1mA$	80	-	-	-
	$h_{FE(2)}^*$	$V_{CE} = -5V, I_C = -10mA$	100	-	300	-
	$h_{FE(3)}^*$	$V_{CE} = -5V, I_C = -50mA$	50	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)1}^*$	$I_C = -10mA, I_B = -1mA$	-	-	-0.2	V
	$V_{CE(sat)2}^*$	$I_C = -50mA, I_B = -5mA$	-	-	-0.5	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	FT	$V_{CE} = -5V, I_C = -10mA, f = 30MHz$	100	-	-	MHz

CLASSIFICATION OF h_{FE} (2)

RANK	L	H
RANGE	100-200	200-300

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

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Typical Characteristics

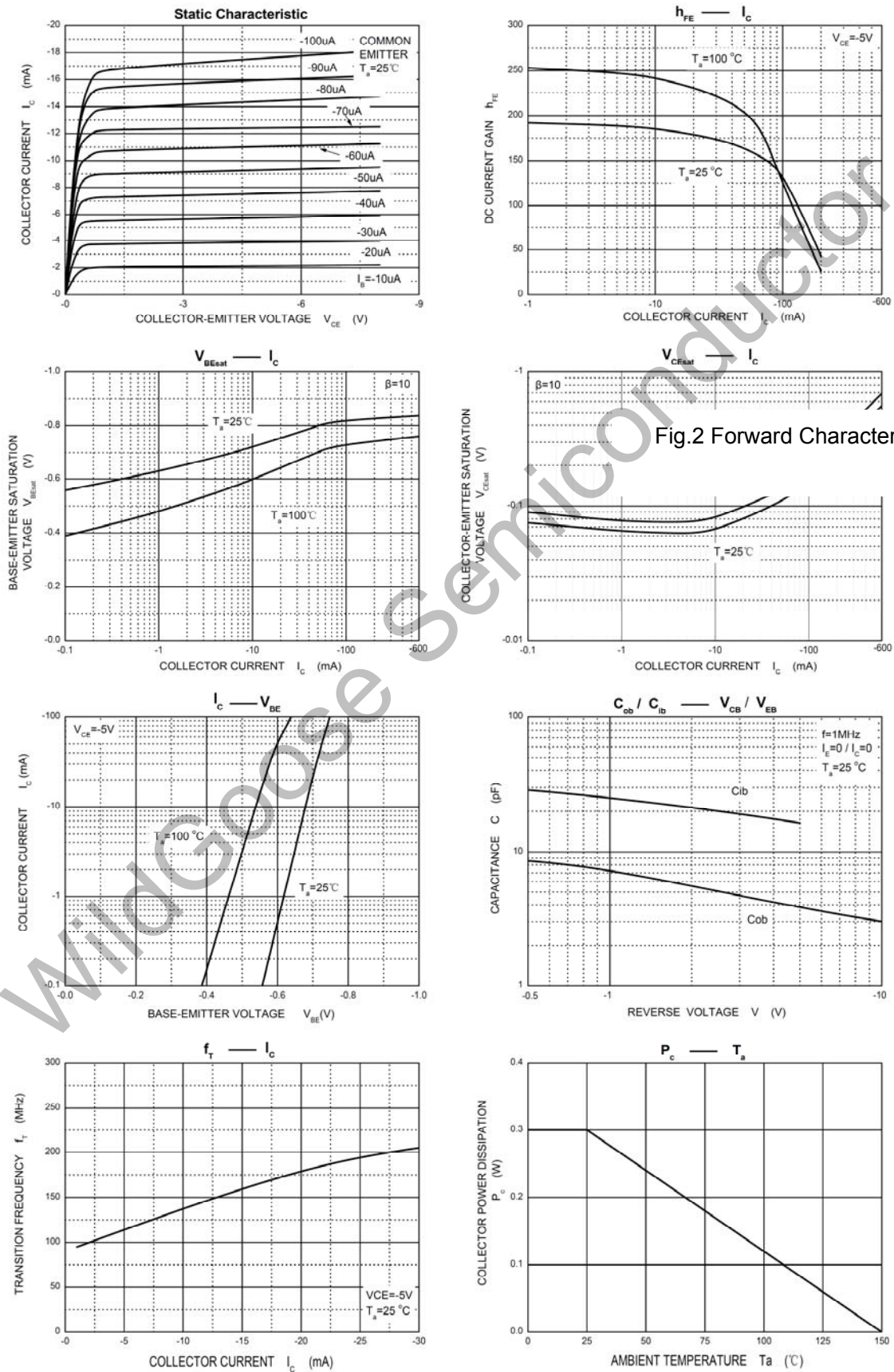


Fig.2 Forward Characteristics

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Package Dimension

SOT-23

Unit: mm

