

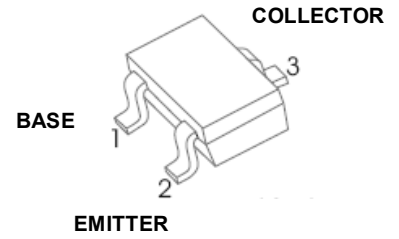


### MMBT5401W TRANSISTOR (PNP)

#### FEATURES

- Complementary to MMBT5551W
- Small Surface Mount Package
- Ideal for Medium Power Amplification and Switching

#### MARKING:K4M



SOT - 323

#### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-150	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-600	mA
$P_C$	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	$^\circ\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^\circ\text{C}$

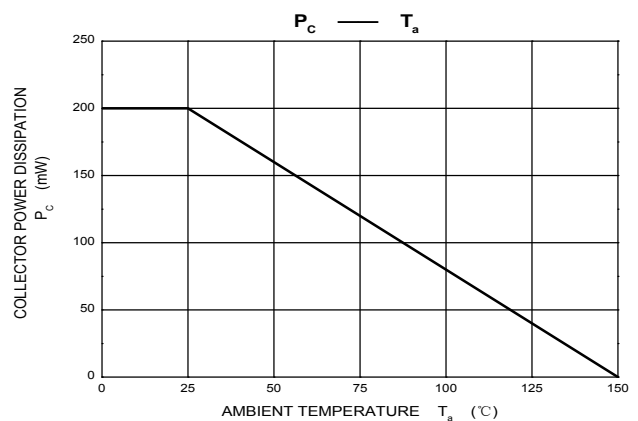
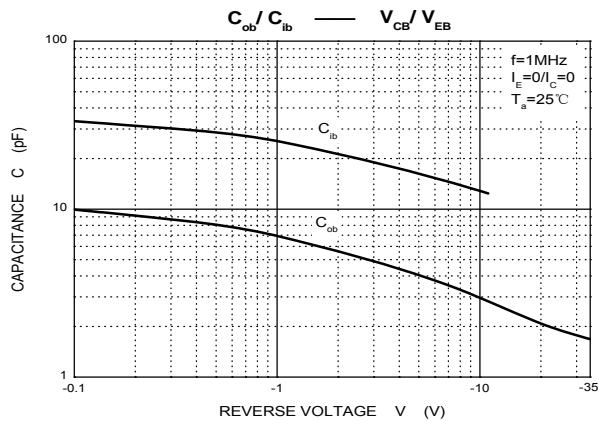
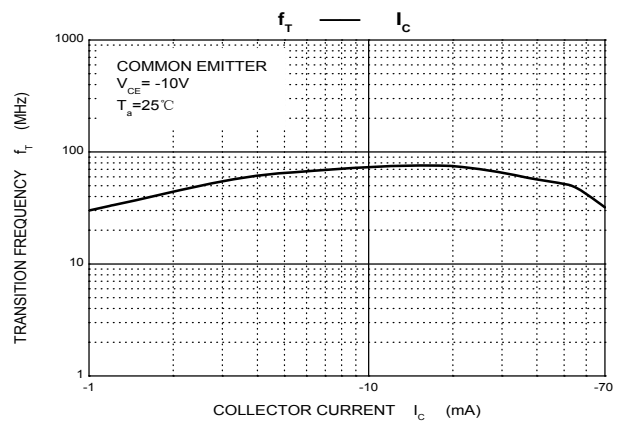
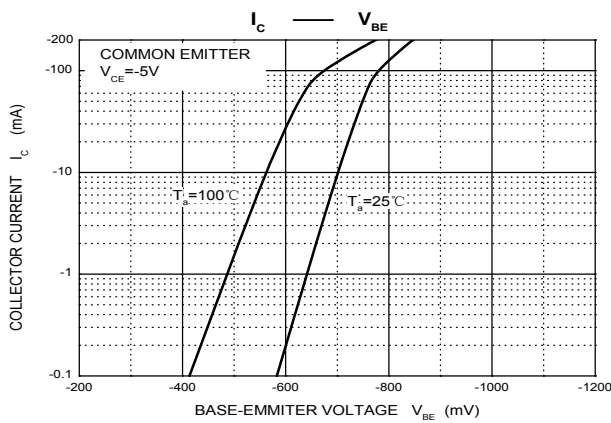
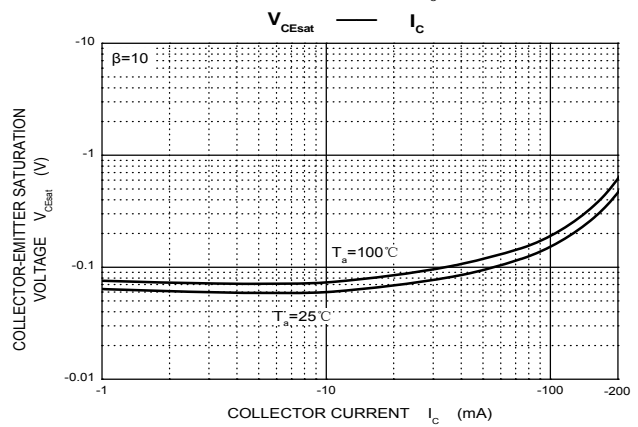
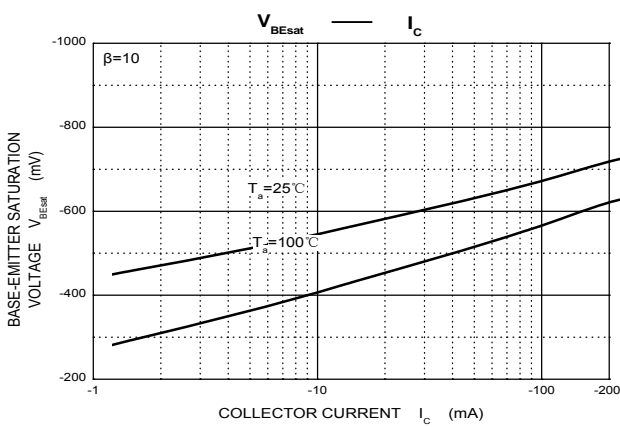
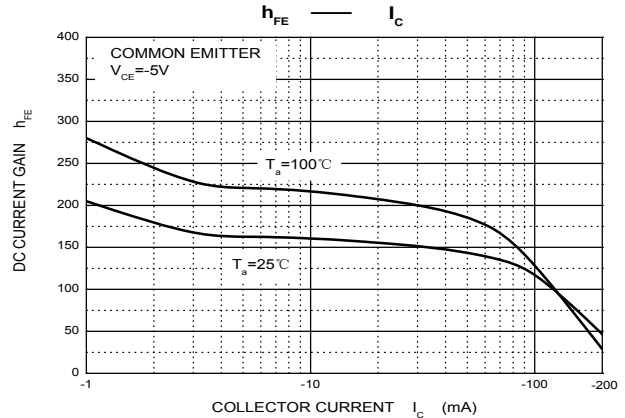
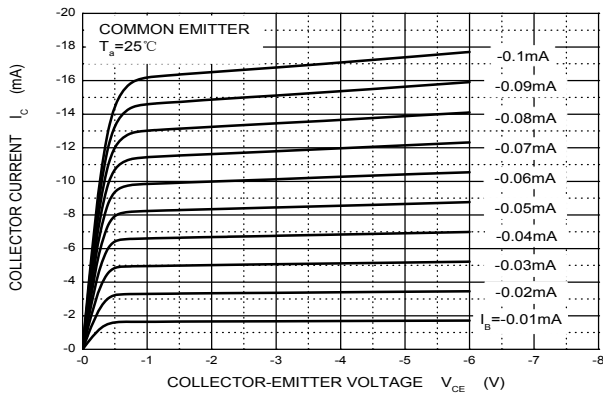
#### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-120\text{V}, I_E=0$			-50	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-3\text{V}, I_C=0$			-50	nA
DC current gain	$h_{FE}$	$V_{CE}=-5\text{V}, I_C=-1\text{mA}$	50			
		$V_{CE}=-5\text{V}, I_C=-10\text{mA}$	60		300	
		$V_{CE}=-5\text{V}, I_C=-50\text{mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.5	V
		$I_C=-10\text{mA}, I_B=-1\text{mA}$			-0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-1	V
		$I_C=-10\text{mA}, I_B=-1\text{mA}$			-1	V
Transition frequency	$f_T$	$V_{CE}=-10\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$	100			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$			6	pF



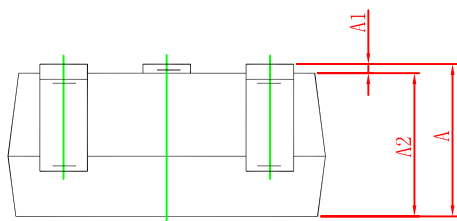
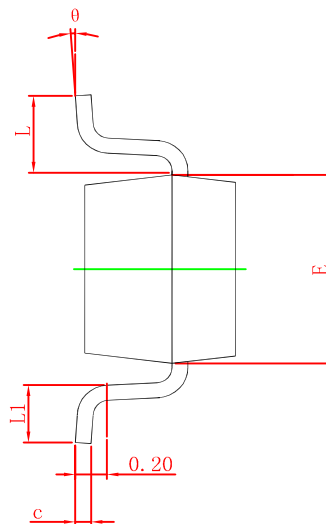
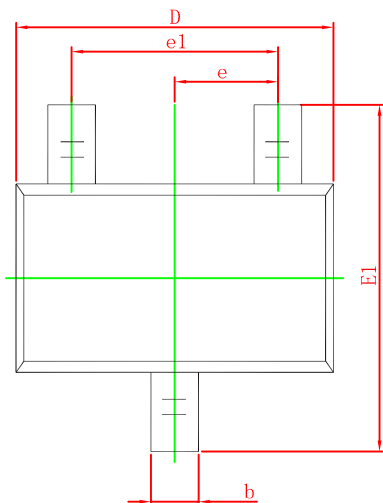
## Typical Characteristics

### Static Characteristic





## SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
$\theta$	0°	8°	0°	8°