



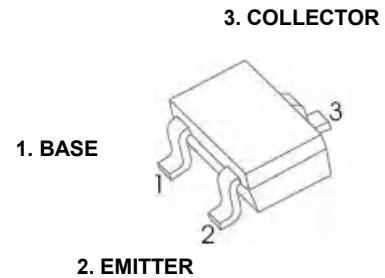
MMBT5401T Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

FEATURES

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

MARKING: 2L



SOT-523

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

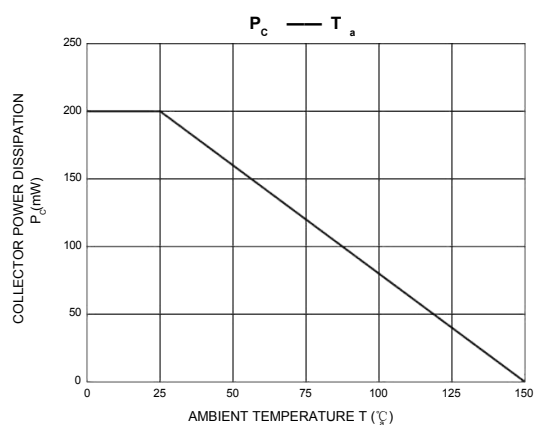
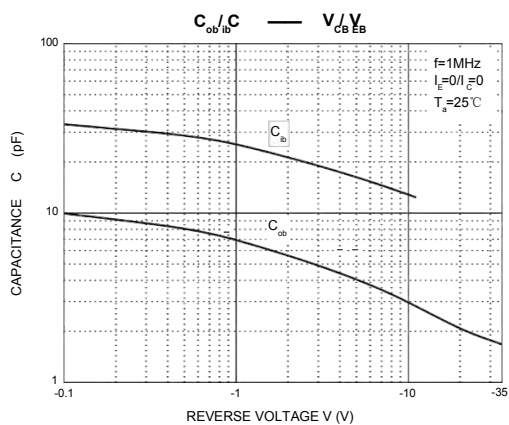
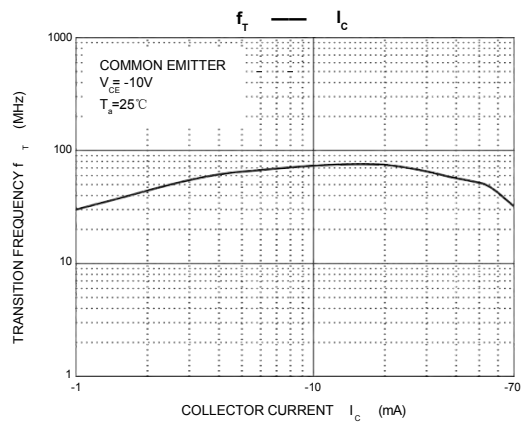
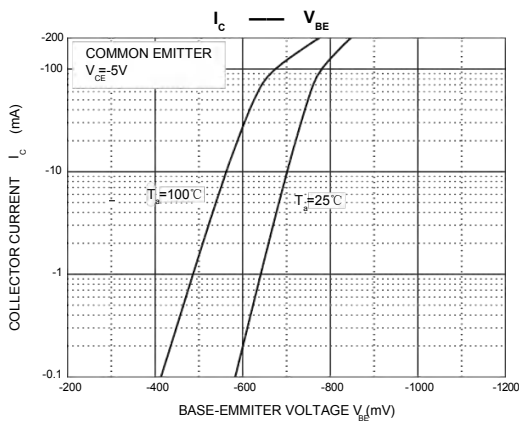
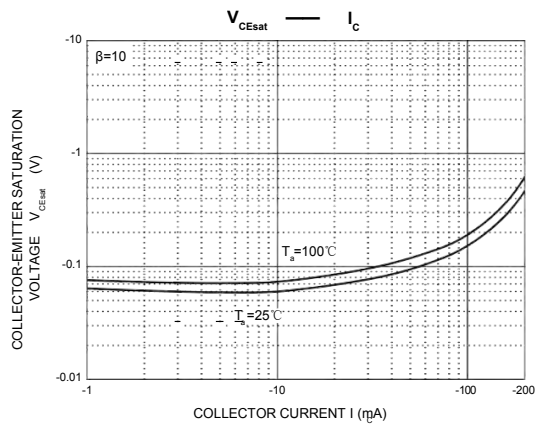
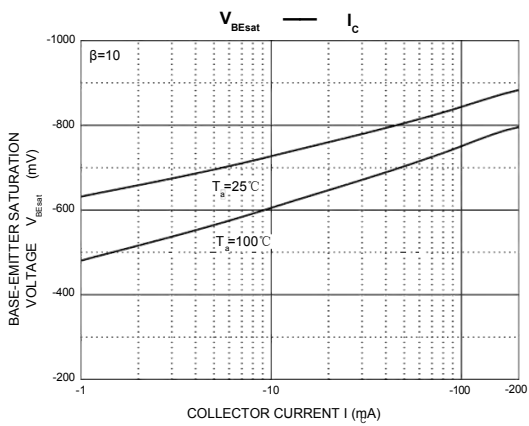
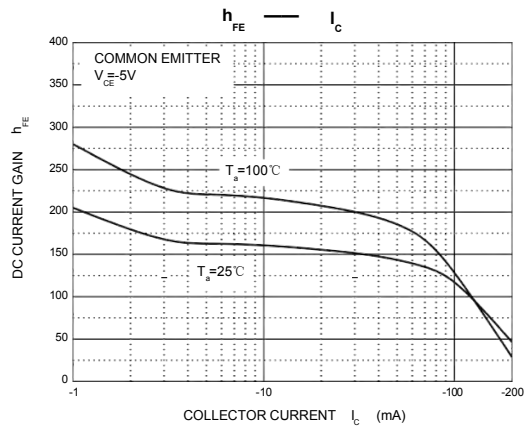
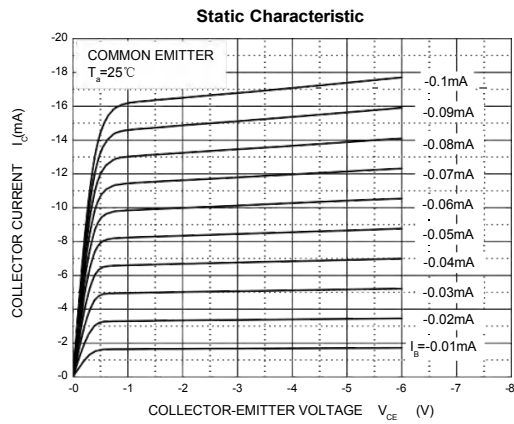
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-160	V
V _{CEO}	Collector-Emitter Voltage	-150	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-600	mA
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, 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 =-10μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-120V, I _E =0			-50	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-3V, I _C =0			-50	nA
DC current gain	h _{FE}	V _{CE} =-5V, I _C =-1mA	50			
		V _{CE} =-5V, I _C =-10mA	60		300	
		V _{CE} =-5V, I _C =-50mA	50			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-50mA, I _B =-5mA			-0.5	V
		I _C =-10mA, I _B =-1mA			-0.2	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-50mA, I _B =-5mA			-1	V
		I _C =-10mA, I _B =-1mA			-1	V
Transition frequency	f _T	V _{CE} =-10V, I _C =-10mA, f=100MHz	100			MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz			6	pF

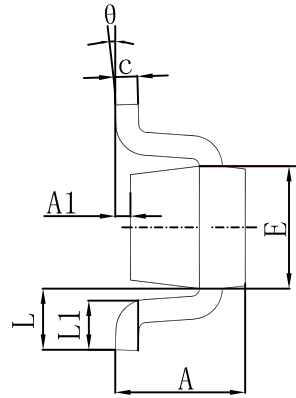
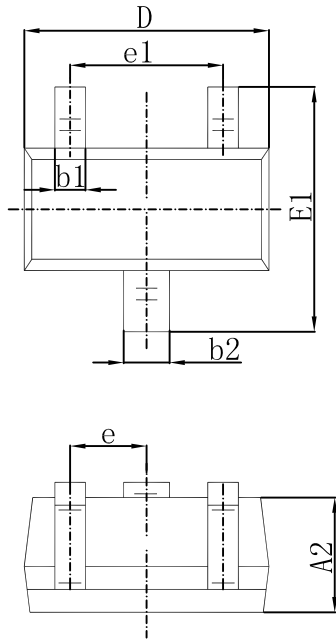


Typical Characteristics



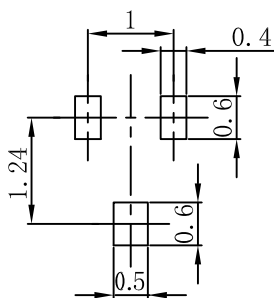


SOT-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

SOT-523 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.