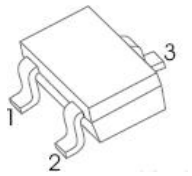
MMBT5401T

Plastic-Encapsulate Transistors

FEATURES

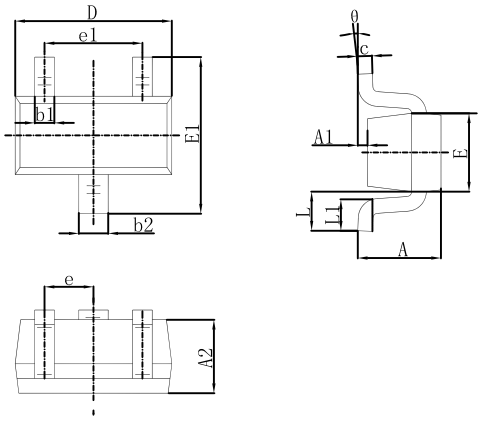
- Complementary to MMBT5551T
- Small Surface Mount Package
- Ideal for Medium Power Amplificationand Switching

SOT–523



1. BASE
2. EMITTER
3. COLLECTOR

SOT-523



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
θ	0°	8°	0°	8°

Dimensions in inches and (millimeters)

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	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	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

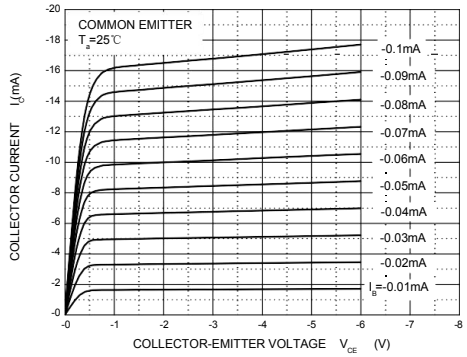
MMBT5401T

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

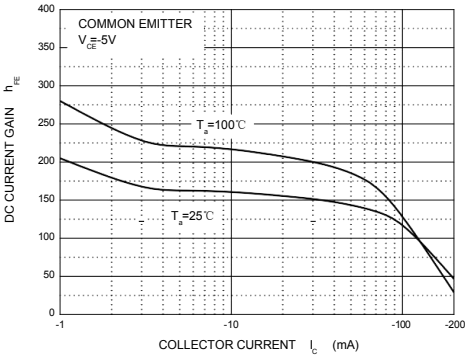
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA, I_E=0	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA, I_B=0	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	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

RATING AND CHARACTERISTIC CURVES (MMBT5401T)

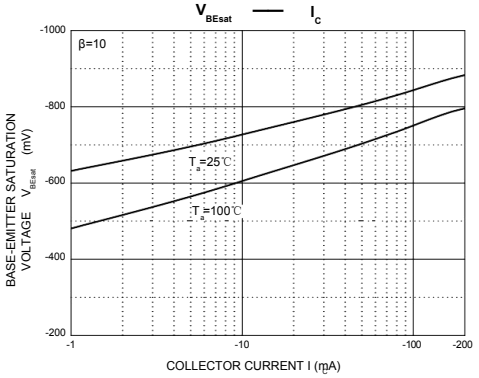
Static Characteristic



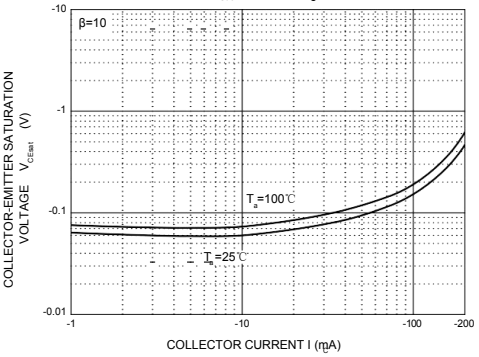
h_{FE} — I_C



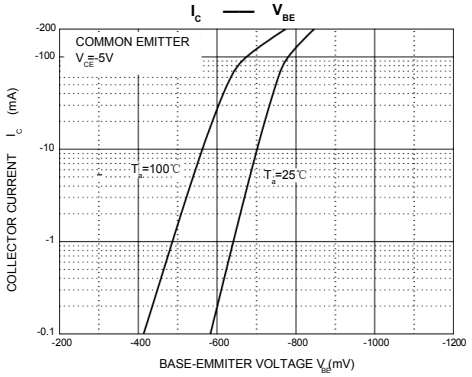
V_{BEsat} — I_C



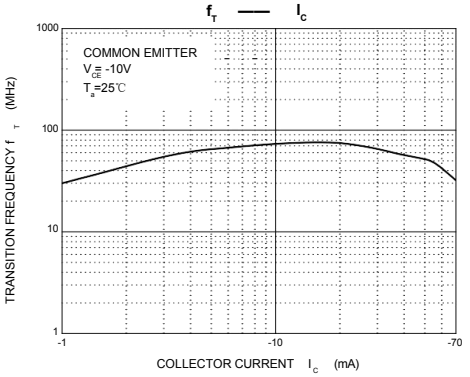
V_{CEsat} — I_C



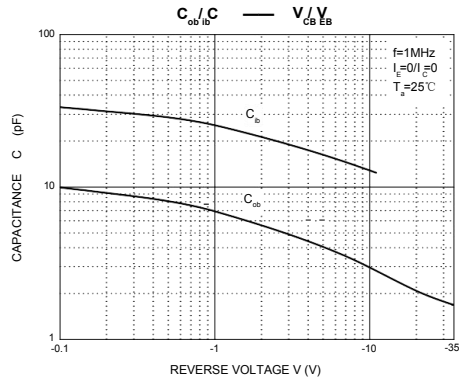
I_C — V_{BE}



f_T — I_C



C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_C — T_a

