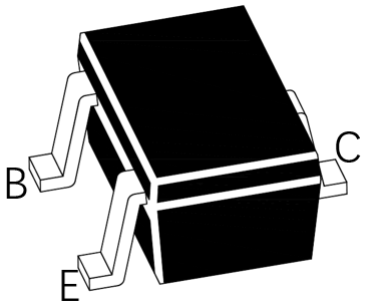
MMBTA5401

SOT-523



MMBTA5401 Transistor(PNP)

Feature

- Switching Transistor
- Collector-Emitter Voltage V_{CEO}=-150V
- Collector Current I_C=-0.6A

Marking:

".2L" = Part No.

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial

MAXIMUM RATINGS (T_a=25℃ 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}	-6	V
Collector Current -Continuous	I_C	-0.6	A
Power Dissipation	P_d	0.15	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃
Thermal Resistance Junction to Ambient[1]	$R_{\theta JA}$	833	℃/W

1：Device mounted on FR-4 substrate PC board,2oz copper, with minimum recommended pad layout.

ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base Breakdown Voltage	$V_{(BR)CBO}$	I_C=-100μA	-160		V
Collector-emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-1mA	-150		V
Emitter-base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10μA	-6		V
Collector Cut-off Current	I_{CBO}	V_{CB}=-120V		-50	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=-3V		-50	nA
DC Current Gain	h_{FE}	V_{CE}=-5V, I_C=-10mA	60	240	
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-10mA, I_B=-1mA		-0.2	V
		I_C=-50mA, I_B=-5mA		-0.5	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	I_C=-10mA, I_B=-1mA		-1	V
		I_C=-50mA, I_B=-5mA		-1	V
Transition Frequency	f_T	V_{CE}= -10V, I_C=-10mA,f=100MHz	100	300	MHZ
Collector Base Capacitance	C_{ob}	V_{CB}= -10V, f=1MHz		6	pF

Typical Characteristics

Fig. 1 V_{CESAT} vs. Collector Current

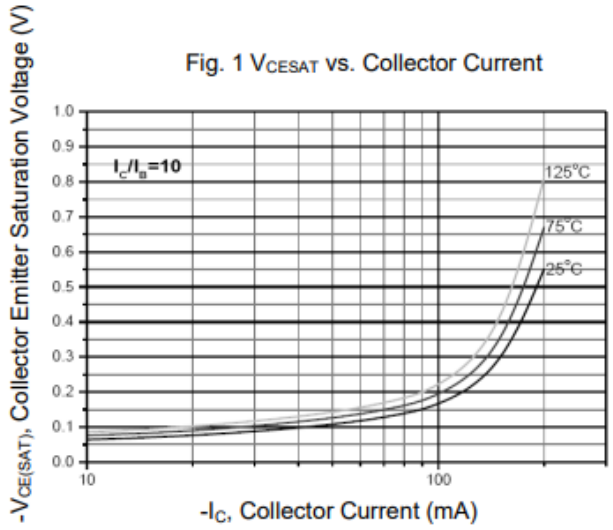


Fig. 2 V_{BESAT} vs. Collector Current

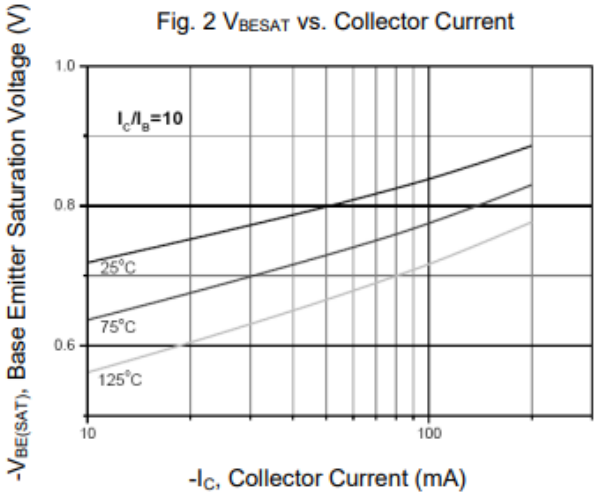


Fig. 3 h_{FE},DC Current Gain vs. Collector Current

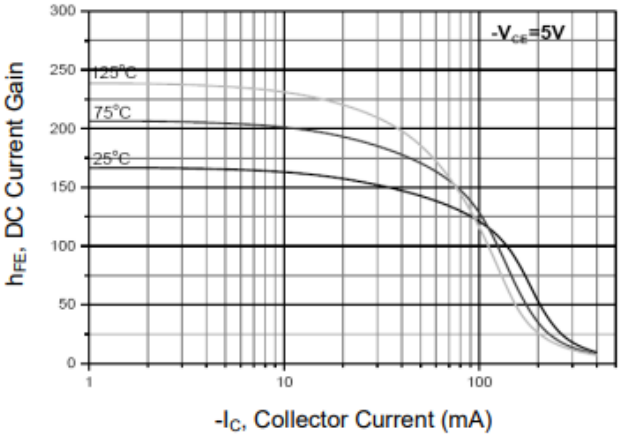
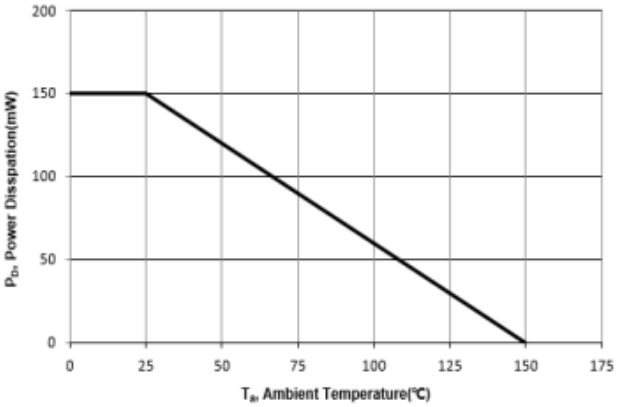
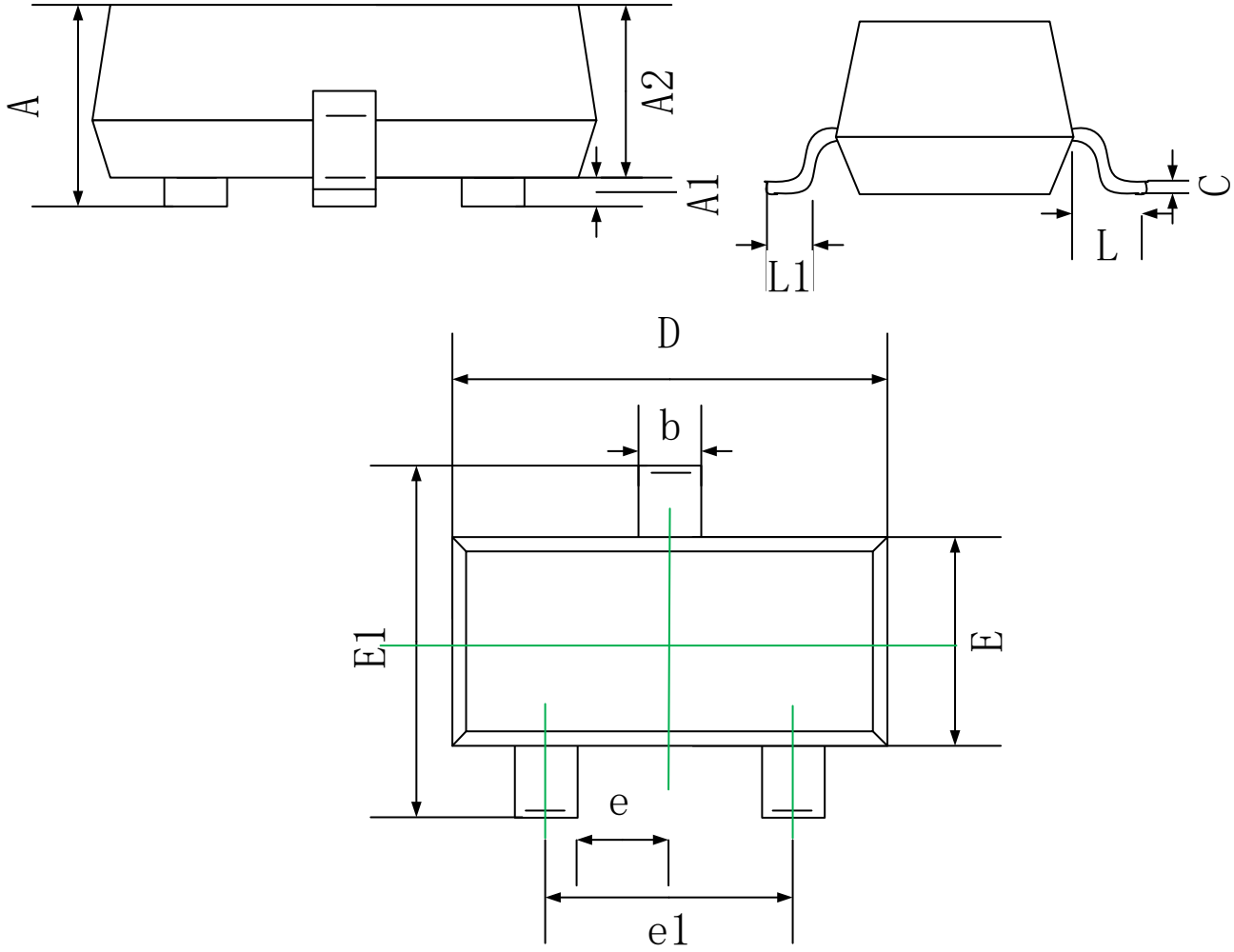


Fig. 4 Power Derating Curve



SOT-523 Package Information



Symbol	Dimensions In Millimeters	
	Min	Max
A	0.700	0.900
A1	0.000	0.100
A2	0.650	0.850
b	0.250	0.350
c	0.095	0.100
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500 TYP	
e1	0.900	1.100
L	0.55 REF	
θ	0°	8°