

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	MMBT5401
▶ Overseas	Part Number	MMBT5401
▶ Equivalent	Part Number	MMBT5401

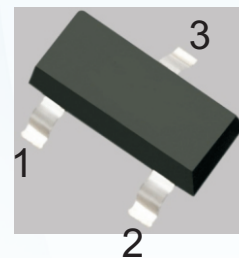
EV is the abbreviation of name EVVO

MMBT5401**PNP TRANSISTOR****FEATURES**

- Complementary to MMBT5551
- Ideal for Medium Power Amplification and Switching

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 — Continuous	I_C	-0.6	A
Collector Dissipation	P_C	0.3	W
Thermal Resistance From Junction To Ambient	R_{thJA}	416	°C/W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	°C

SOT-23

1.BASE
2.EMITTER
3.COLLECTOR

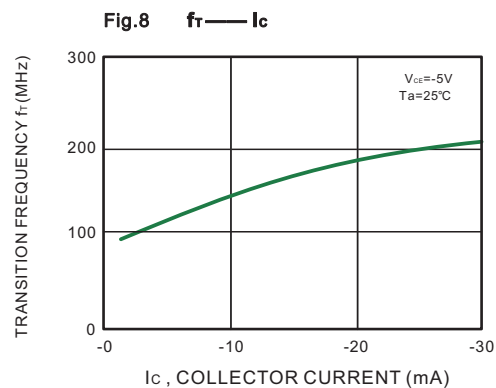
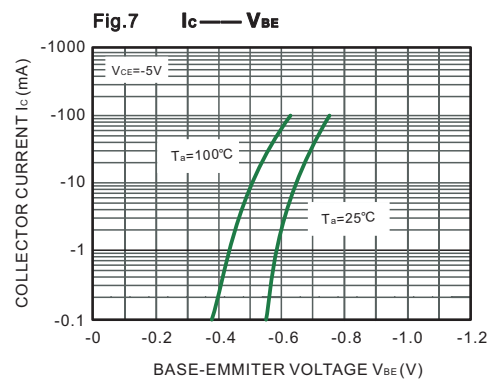
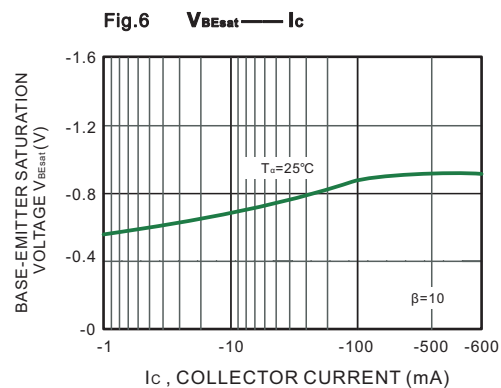
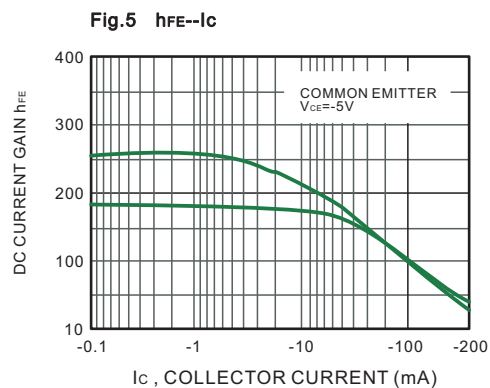
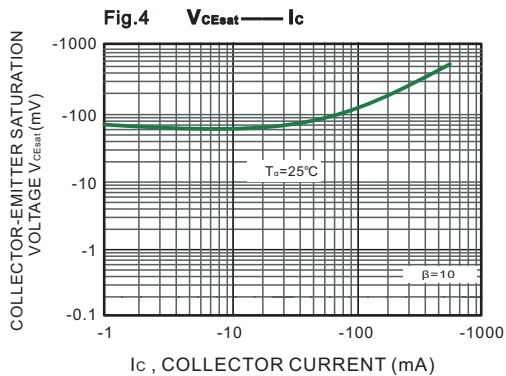
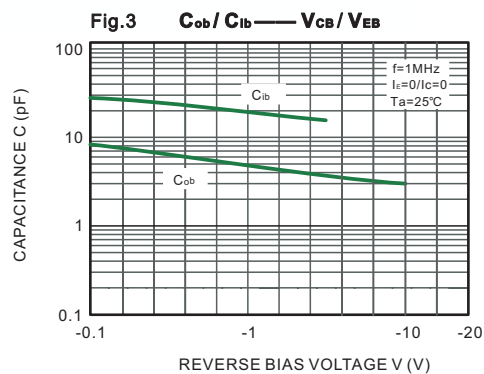
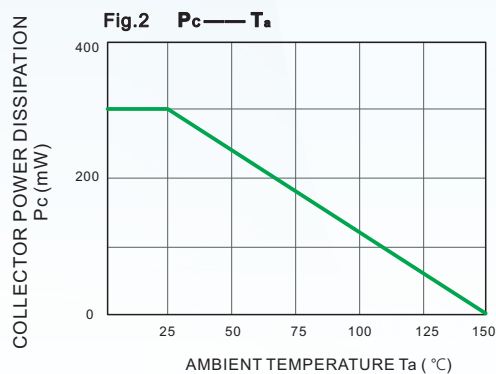
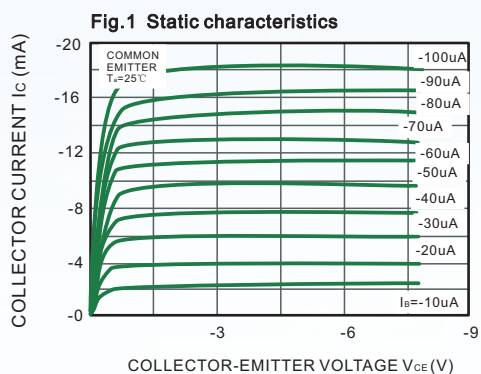
ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

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	$V_{(BR)CEO}$	$I_C = -1\text{ mA}, I_B = 0$	-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_{FE1}	$V_{CE} = -5V, I_C = -1\text{ mA}$	80			
	h_{FE2}	$V_{CE} = -5V, I_C = -10\text{ mA}$	100		300	
	h_{FE3}	$V_{CE} = -5V, I_C = -50\text{ mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -10\text{ mA}, I_B = -1\text{ mA}$			-0.2	V
	$V_{CE(sat)2}$	$I_C = -50\text{ mA}, I_B = -5\text{ mA}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -10\text{ mA}, I_B = -1\text{ mA}$			-1	V
	$V_{BE(sat)2}$	$I_C = -50\text{ mA}, I_B = -5\text{ mA}$			-1	V
Transition frequency	f_T	$V_{CE} = -25V, I_C = -10\text{ mA}, f = 30\text{ MHz}$	100			MHZ

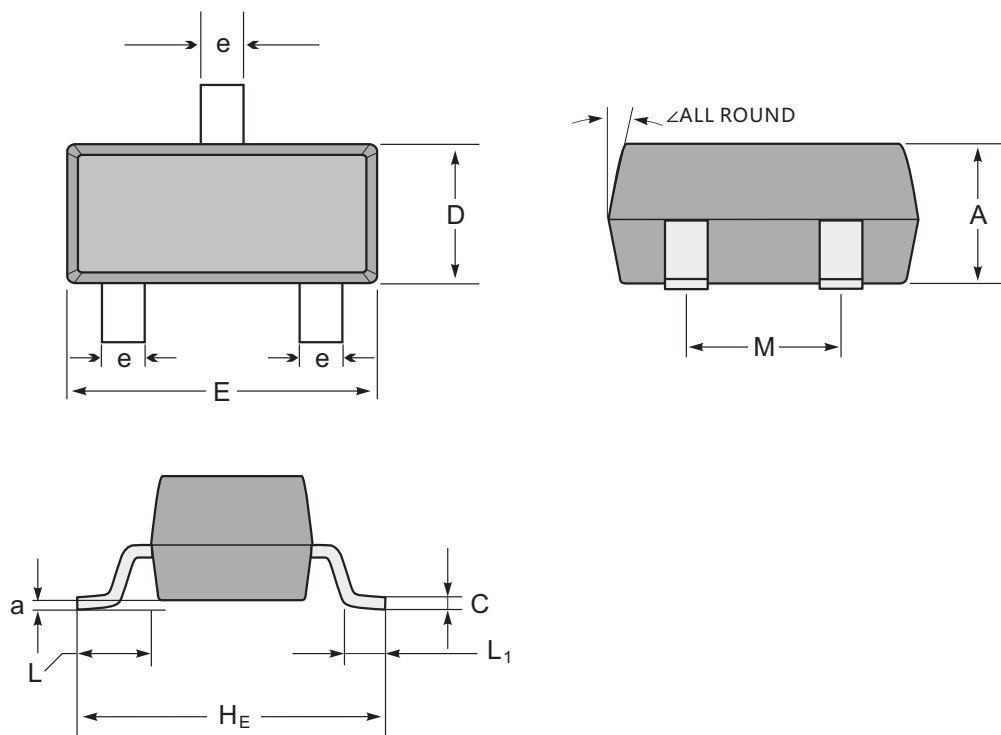
CLASSIFICATION OF $h_{FE(1)}$

RANK	L	H
RANGE	100-200	200-300

TYPICAL CHARACTERISTICS



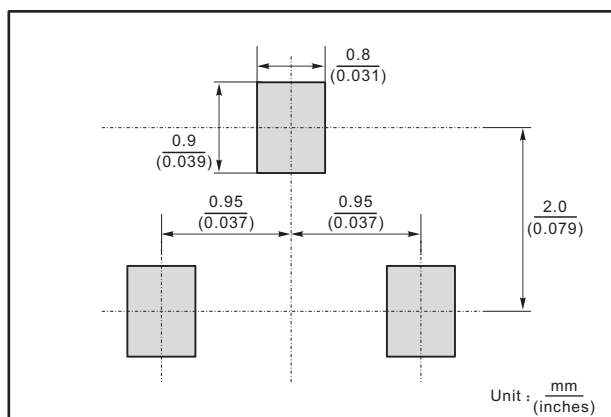
SOT-23 Package Outline Dimensions



SOT-23 mechanical data

UNIT		A	C	D	E	H _E	e	M	L	L ₁	a	∠
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0	12°
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15	
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0	
	min	35	3	47	110	87	12	67			6	

The recommended mounting pad size

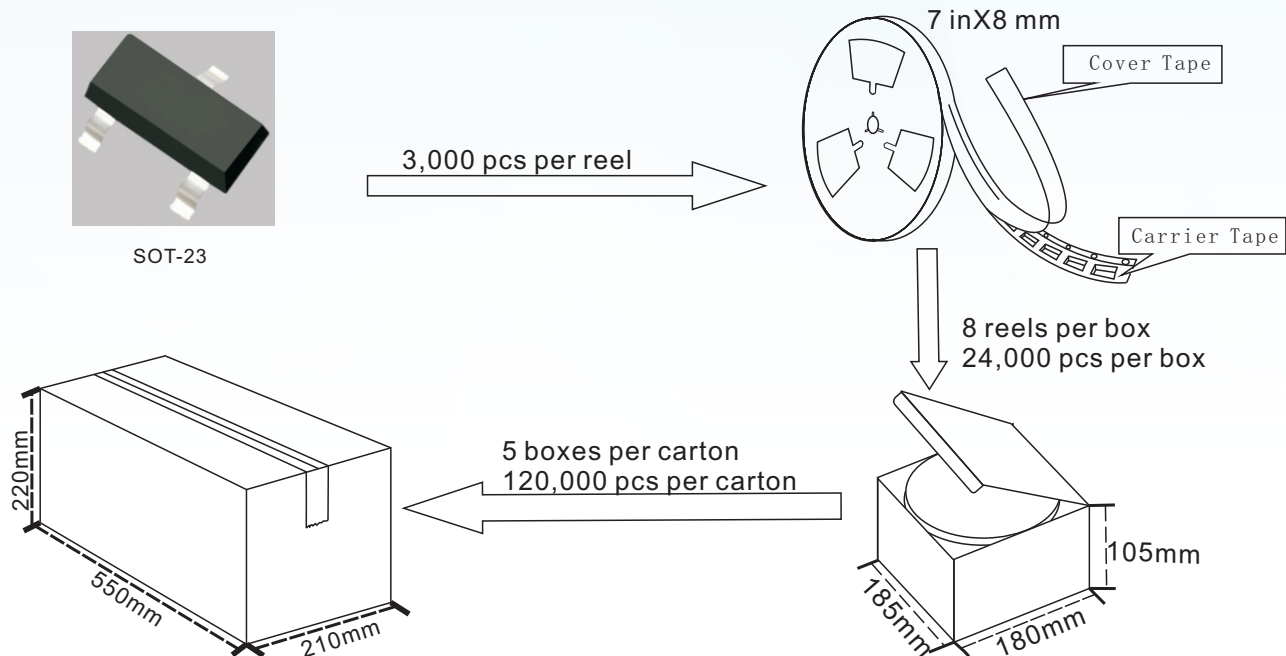


Marking

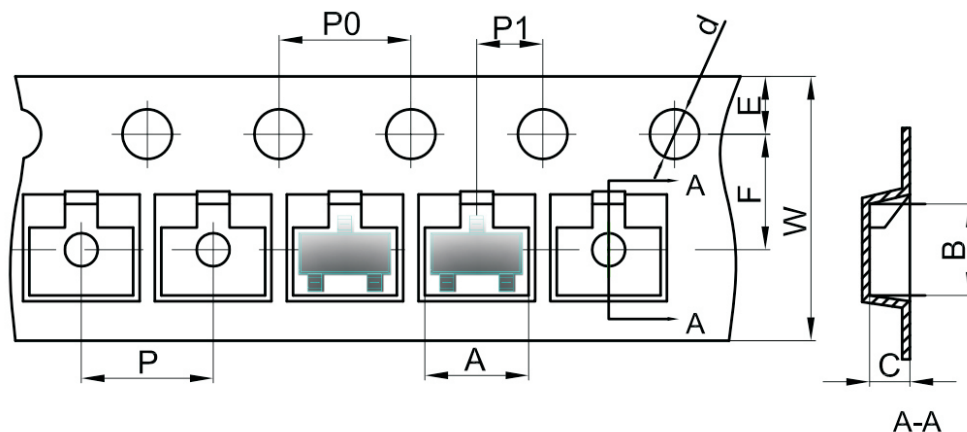
Type number	Marking code
MMBT5401	2L

SOT-23 Packing

1.The method of packaging and dimension are shown as below figure. (Dimension in mm)

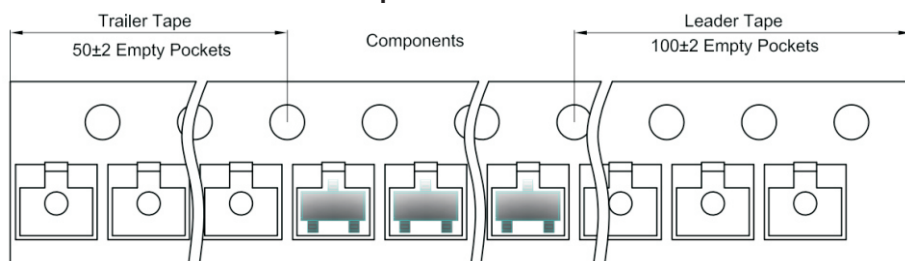


SOT-23 Embossed Carrier Tape



Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



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