

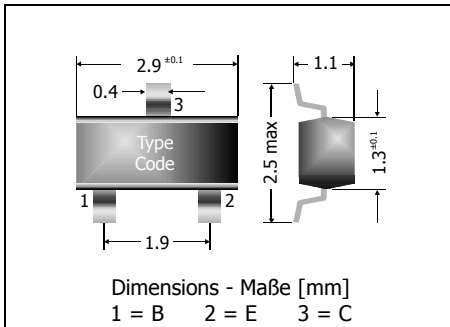
MMBT5401

PNP

Surface Mount General Purpose Si-Epi-Planar Transistors
Si-Epi-Planar Universaltransistoren für die Oberflächenmontage

PNP

Version 2007-11-09



Power dissipation – Verlustleistung

250 mW

Plastic case
KunststoffgehäuseSOT-23
(TO-236)

Weight approx. – Gewicht ca.

0.01 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziertStandard packaging taped and reeled
Standard Lieferform getupet auf Rolle

Maximum ratings (T_A = 25°C)

Grenzwerte (T_A = 25°C)

			MMBT5401
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	- V _{CEO}	150 V
Collector-Base-voltage – Kollektor-Basis-Spannung	E open	- V _{CBO}	160 V
Emitter-Base-voltage – Emitter-Basis-Spannung	C open	- V _{EBO}	5 V
Power dissipation – Verlustleistung		P _{tot}	250 mW ¹⁾
Collector current – Kollektorstrom (dc)		- I _C	600 mA
Junction temperature – Sperrschichttemperatur		T _j	-55...+150°C
Storage temperature – Lagerungstemperatur		T _s	-55...+150°C

Characteristics (T_j = 25°C)

Kennwerte (T_j = 25°C)

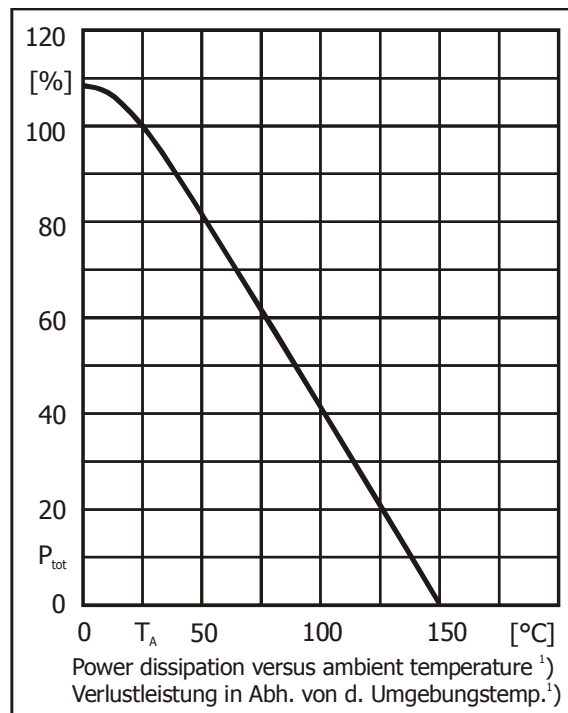
			Min.	Typ.	Max.
DC current gain – Kollektor-Basis-Stromverhältnis ²⁾					
- V _{CE} = 5 V, - I _C = 1 mA - V _{CE} = 5 V, - I _C = 10 mA - V _{CE} = 5 V, - I _C = 50 mA	MMBT5400	h _{FE}	30	–	–
		h _{FE}	40	–	180
		h _{FE}	40	–	–
- V _{CE} = 5 V, - I _C = 1 mA - V _{CE} = 5 V, - I _C = 10 mA - V _{CE} = 5 V, - I _C = 50 mA	MMBT5401	h _{FE}	50	–	–
		h _{FE}	60	–	240
		h _{FE}	50	–	–
Collector-Emitter saturation voltage – Kollektor-Emitter-Sättigungsspg. ²⁾					
- I _C = 10 mA, - I _B = 1 mA - I _C = 50 mA, - I _B = 5 mA		- V _{CEsat}	–	–	0.2 V
		- V _{CEsat}	–	–	0.5 V
Base-Emitter saturation voltage – Basis-Emitter-Sättigungsspannung ²⁾					
- I _C = 10 mA, - I _B = 1 mA - I _C = 50 mA, - I _B = 5 mA		- V _{BEsat}	–	–	1.0 V
		- V _{BEsat}	–	–	1.0 V

1 Mounted on P.C. board with 3 mm² copper pad at each terminal
 Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluss

2 Tested with pulses t_p = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 μs, Schaltverhältnis ≤ 2%

Characteristics (T_j = 25°C)
Kennwerte (T_j = 25°C)

Collector-Base cutoff current – Kollektor-Basis-Reststrom					
- V _{CB} = 120 V, (E open)	MMBT5401	- I _{CBO}	–	–	50 nA
- V _{CB} = 120 V, T _j = 100°C, (E open)	MMBT5401	- I _{CBO}	–	–	50 µA
Emitter-Base-cutoff current – Emitter-Basis-Reststrom					
- V _{EB} = 4 V, (C open)		- I _{EBO}	–	–	50 nA
Gain-Bandwidth Product – Transitfrequenz					
- I _C = 10 mA, - V _{CE} = 10 V, f = 100 MHz		f _T	100 MHz	–	300 MHz
Collector-Base Capacitance – Kollektor-Basis-Kapazität					
- V _{CB} = 10 V, I _E = i _e = 0, f = 1 MHz		C _{CBO}	–	–	6 pF
Noise figure – Rauschzahl					
- V _{CE} = 5 V, - I _C = 200 µA, R _S = 10 Ω, f = 1 kHz	MMBT5401	F	–	–	8 dB
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft		R _{thA}	< 420 K/W ¹⁾		
Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren		MMBT5551			
Marking - Stempelung		MMBT5401 = 2Lx			



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Montage auf Leiterplatte mit 3 mm² Kupferbelag (Löt-pad) an jedem Anschluss