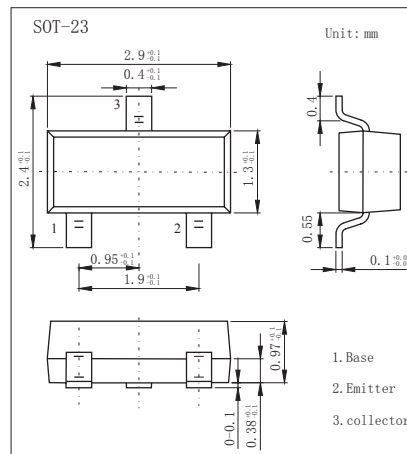


PNP Transistors

MMBT5401 (KMBT5401)

■ Features

- High Voltage Transistors
- Pb-Free Packages are Available



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-160	V
Collector-emitter voltage	V_{CE0}	-150	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current-continuous	I_C	-0.6	A
Collector Power Dissipation	P_C	300	mW
Junction and storage temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CB0}	$I_C = -100 \mu\text{A}, I_E = 0$	-160			V
Collector-emitter breakdown voltage *	V_{CE0}	$I_C = -1.0 \text{ mA}, I_B = 0$	-150			V
Emitter-base breakdown voltage	V_{EB0}	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector cutoff current	I_{CBO}	$V_{CB} = -120 \text{ V}, I_E = 0$			-0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -4.0 \text{ V}, I_C = 0$			-0.1	μA
DC current gain *	h_{FE}	$I_C = -1.0 \text{ mA}, V_{CE} = -5 \text{ V}$	80			
		$I_C = -10 \text{ mA}, V_{CE} = -5 \text{ V}$	100		300	
		$I_C = -50 \text{ mA}, V_{CE} = -5 \text{ V}$	50			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = -50 \text{ mA}, I_B = -5.0 \text{ mA}$			-0.5	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = -50 \text{ mA}, I_B = -5.0 \text{ mA}$			-1.0	V
Transistor frequency	f_T	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}, f = 30 \text{ MHz}$	100			MHz

* Pulse Test: Pulse Width = 300 μs , Duty Cycle=2.0%.

■ Classification of $h_{FE}(2)$

Type	MMBT5401	MMBT5401-L	MMBT5401-H
Range	100-300	100-200	200-300
Marking	2L		

MMBT5401 (KMBT5401)

Typical Characteristics

