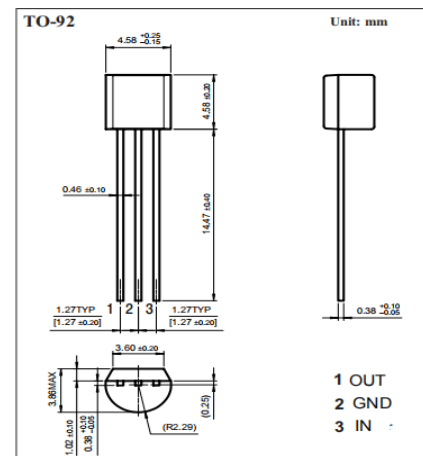


PNP Transistors

MMBT4403

■ Features

- Ideal for Medium Power Amplification and Switching
- Complementary NPN Type Available (MMBT4401)



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	-40	V
Collector - Emitter Voltage	V _{CE0}	-40	
Emitter - Base Voltage	V _{EB0}	-5	
Collector Current	I _C	-600	mA
Total Device Dissipation Alumina Substrate	P _D	300	mW
Thermal Resistance Junction to Ambient	R _{θJA}	417	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature range	T _{stg}	-55 to +150	

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _C = -100 μA, I _E = 0	-40			V
Collector- emitter breakdown voltage	V _{CE0}	I _C = -1.0 mA, I _B = 0	-40			
Emitter - base breakdown voltage	V _{EB0}	I _E = -100 μA, I _C = 0	-5			
Collector-base cut-off current	I _{CB0}	V _{CB} = -35V, I _E = 0			-0.1	μA
Emitter cut-off current	I _{EB0}	V _{EB} = -4V, I _C = 0			-0.1	
Collector-emitter saturation voltage *	V _{CE(sat)}	I _C = -150 mA, I _B = -15 mA			-0.4	V
		I _C = -500 mA, I _B = -50 mA			-0.75	
Base - emitter voltage *	V _{BE(sat)}	I _C = -150 mA, I _B = -15 mA	-0.75		-0.95	
		I _C = -500 mA, I _B = -50 mA			-1.3	
DC current gain *	h _{FE}	I _C = -0.1 mA, V _{CE} = -1.0 V	30			
		I _C = -1.0 mA, V _{CE} = -1.0 V	60			
		I _C = -10 mA, V _{CE} = -1.0 V	100			
		I _C = -150 mA, V _{CE} = -2.0 V	100		300	
		I _C = -500 mA, V _{CE} = -2.0 V	20			
Transition frequency	f _T	I _C = -20mA, V _{CE} = -10V, f = 100MHz	200			MHz
Delay time	t _d	V _{CC} = -30 V, V _{EB} = -2.0 V,			15	ns
Rise time	t _r	I _C = -150 mA, I _{B1} = -15 mA			20	
Storage time	t _s	V _{CC} = -30 V, I _C = -150 mA,			225	
Fall time	t _f	I _{B1} = I _{B2} = -15 mA			30	

* Pulse test: pulse width ≤ 300 μs, duty cycle ≤ 2.0%.

■ Marking

Marking	2T
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■ Typical Characteristics

