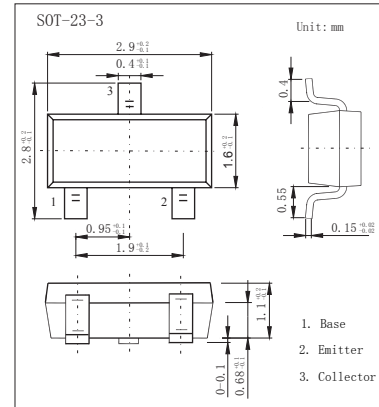


NPN Transistors

MMBTA44 (KMBTA44)

■ Features

- High Collector-Emitter Voltage
- Complement to MMBTA94



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	400	V
Collector - Emitter Voltage	V _{CEO}	400	
Emitter - Base Voltage	V _{EBO}	6	
Collector Current - Continuous	I _C	200	mA
Collector Current -Pulsed	I _{CM}	300	
Collector Power Dissipation	P _C	350	mW
Thermal Resistance From Junction To Ambient	R _{θJA}	357	°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	400			V
Collector- emitter breakdown voltage *1	V _{CEO}	I _C = 1 mA, I _B = 0	400			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C = 0	6			
Collector-base cut-off current	I _{CB0}	V _{CB} = 400 V, I _E = 0			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} = 4V, I _C =0			100	
Collector-emitter saturation voltage *1	V _{CE(sat)1}	I _C =10 mA, I _B =1mA			0.2	V
	V _{CE(sat)2}	I _C =50 mA, I _B =5mA			0.3	
Base - emitter saturation voltage *1	V _{BE(sat)}	I _C =10 mA, I _B =1mA			0.75	
DC current gain *1	h _{FE(1)}	V _{CE} = 10V, I _C = 1mA	50			
	h _{FE(2)}	V _{CE} = 10V, I _C = 10mA	80		300	
	h _{FE(3)}	V _{CE} = 10V, I _C = 50mA	40			
	h _{FE(4)}	V _{CE} = 10V, I _C = 100mA	40			
Collector output capacitance	C _{ob}	V _{CB} = 20V, I _E = 0, f=1MHz			7	pF
Transition frequency	f _T	V _{CE} =20, I _C = 10mA, f=30MHz	50			MHz

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

■ Classification of h_{FE(2)}

Type	MMBTA44	MMBTA44-L
Range	80-300	100-200
Marking	3D	

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■ Typical Characteristics

