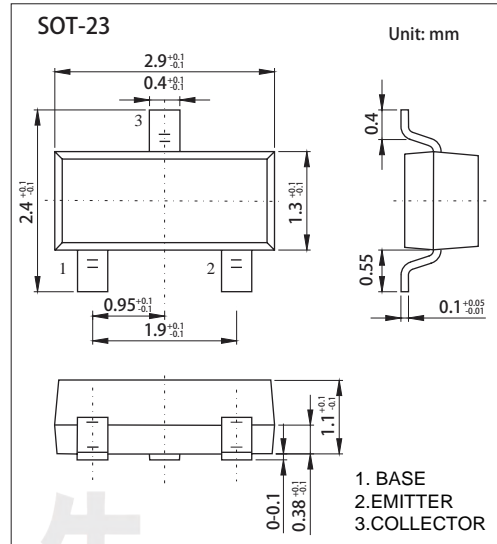


NPN Transistors MMBTA42

■ Features

- High breakdown voltage
- Low collector-emitter saturation voltage
- Complementary to MMBTA92



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	300	V
Collector - Emitter Voltage	V_{CE0}	300	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	300	mA
Collector Current-Peak	I_{CM}	500	
Collector Power Dissipation	P_C	350	mW
Thermal Resistance, junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to 150	

Transistor

NPN Transistors

MMBTA42

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collecto- base breakdown voltage	V _{CB0}	I _C = 100 μA, I _E =0	300			V
Collector- emitter breakdown voltage	V _{CEO}	I _C = 1 mA, I _B =0	300			
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 μA, I _C =0	5			
Collector cut-off current	I _{CBO}	V _{CB} = 200 V, I _E =0			0.25	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C =0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =20 mA, I _B = 2mA			0.2	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C =20 mA, I _B = 2mA			0.9	
DC current gain	h _{FE(1)}	V _{CE} = 10V, I _C = 1mA	60			
	h _{FE(2)}	V _{CE} = 10V, I _C = 10mA	100		200	
	h _{FE(3)}	V _{CE} = 10V, I _C = 30mA	60			
Transition frequency	f _T	V _{CE} = 20V, I _C = 10mA, f=30MHz	50			MHz

■ Marking

Marking	1D
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NPN Transistors MMBTA42

Typical Characteristics

