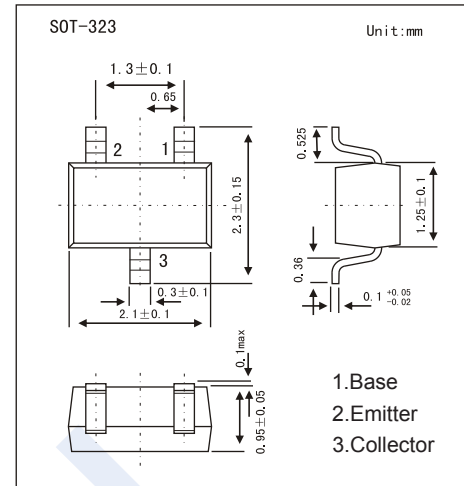


## NPN Transistors

### MMSTA42 (KMSTA42)

#### ■ Features

- High Breakdown Voltage
- Low Collector-Emitter Saturation Voltage
- Complementary to MMSTA92



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	300	V
Collector - Emitter Voltage	V <sub>CE0</sub>	300	
Emitter - Base Voltage	V <sub>EB0</sub>	5	
Collector Current - Continuous	I <sub>C</sub>	200	mA
Collector Current - Pulse	I <sub>CP</sub>	500	
Collector Power Dissipation	P <sub>C</sub>	300	mW
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	417	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>C</sub> = 100 μA, I <sub>E</sub> = 0	300			V
Collector- emitter breakdown voltage	V <sub>CE0</sub>	I <sub>C</sub> = 1 mA, I <sub>B</sub> = 0	300			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0	5			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 200 V, I <sub>E</sub> = 0			0.25	μA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> =0			0.1	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =20 mA, I <sub>B</sub> =2mA			0.2	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =20 mA, I <sub>B</sub> =2mA			0.9	
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1mA	60			
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 10mA	100		200	
	h <sub>FE(3)</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 30mA	75			
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 20V, I <sub>C</sub> = 10mA, f=30MHz	50			MHz

#### ■ Marking

Marking	K3M
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# NPN Transistors

## MMSTA42 (KMSTA42)

■ Typical Characteristics

