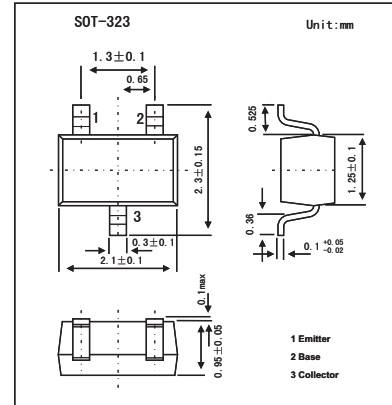


# MMSTA42

### ■ 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>CEO</sub>	300	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current -Continuous	I <sub>C</sub>	300	mA
Collector Power Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to 150	°C

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-to-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 100 μA, I <sub>E</sub> =0	300			V
Collector-to-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1 mA, I <sub>B</sub> =0	300			V
Emitter-to-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 100 μA, I <sub>C</sub> =0	5			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 200 V, I <sub>E</sub> =0			0.25	μA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> =0			0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1mA	60			
		V <sub>CE</sub> = 10V, I <sub>C</sub> = 10mA	100		200	
		V <sub>CE</sub> = 10V, I <sub>C</sub> = 30mA	75			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =20 mA, I <sub>B</sub> = 2mA			0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 20 mA, I <sub>B</sub> = 2mA			0.9	V
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 20V, f = 1.0MHz, I <sub>E</sub> = 0			3.0	pF
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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