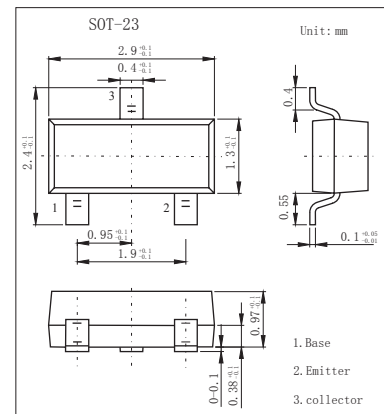


NPN Transistors

MMBTA42-HF (KMBTA42-HF)

■ Features

- High Voltage Transistors

■ 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	0.3	A
Collector Current-Peak	I_{CM}	0.5	A
Collector Power Dissipation	P_C	0.35	W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu\text{A}, I_E = 0$	300			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}, I_B = 0$	300			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 200\text{V}, I_E = 0$			0.25	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5\text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$			0.2	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$			0.9	
DC current gain	$h_{FE(1)}$	$V_{CE} = 10\text{V}, I_C = 1 \text{ mA}$	60			
	$h_{FE(2)}$	$V_{CE} = 10\text{V}, I_C = 10 \text{ mA}$	100		200	
	$h_{FE(3)}$	$V_{CE} = 10\text{V}, I_C = 30 \text{ mA}$	60			
Transition frequency	f_T	$V_{CE} = 20\text{V}, I_C = 10 \text{ mA}, f = 30 \text{ MHz}$	50			MHz

■ Marking

Marking	1D F
---------	------

NPN Transistors

MMBTA42-HF (KMBTA42-HF)

Typical Characteristics

