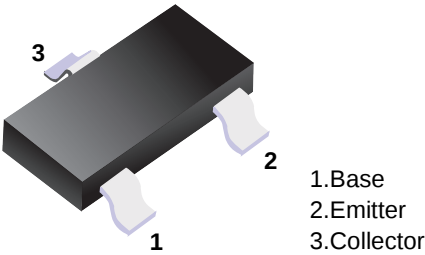


MMBTA42

NPN Transistors

■ Features

- High breakdown voltage
- Low collector-emitter saturation voltage
- Complementary to MMBTA92 (PNP)



■ Simplified outline(SOT-23)

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	VCBO	300	V
Collector - Emitter Voltage	VCEO	300	
Emitter - Base Voltage	VEBO	5	
Collector Current - Continuous	IC	500	mA
Collector Power Dissipation	PC	350	mW
Thermal Resistance Junction to Ambient	RθJA	357	℃/W
Junction Temperature	TJ	150	℃
Storage Temperature Range	Tstg	-55 to 150	

■ Electrical Characteristics Ta = 25℃

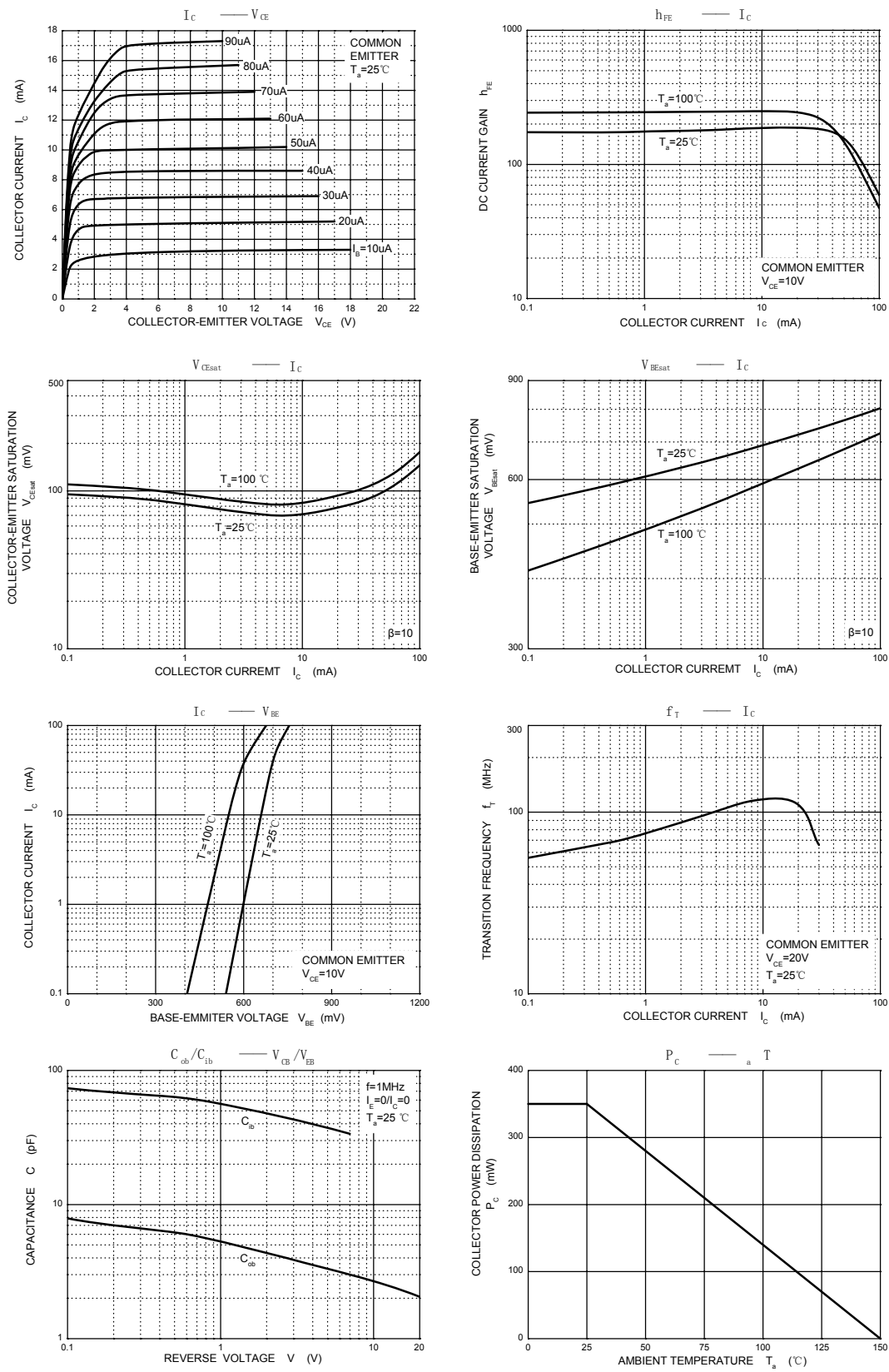
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	VCBO	IC= 100 μA, IE= 0	300			V
Collector- emitter breakdown voltage	VCEO	IC= 1 mA, IB= 0	300			
Emitter - base breakdown voltage	VEBO	IE= 100 uA, IC= 0	5			
Collector-base cut-off current	ICBO	VCB= 200 V , IE= 0			0.1	uA
Emitter cut-off current	IEBO	VEB= 5V , IC=0			0.1	
Collector-emitter saturation voltage	VCE(sat)	IC= 20 mA, IB= 2mA			0.2	V
Base - emitter saturation voltage	VBE(sat)	IC= 20mA, IB= 2mA			0.9	
DC current gain	hfe (1)	VCE= 10V, IC= 1mA	60			
	hfe (2)	VCE= 10V, IC= 10mA	100		300	
	hfe (3)	VCE= 10V, IC= 30mA	60			
Transition frequency	fT	VCE= 20V, IC= 10mA, f=30MHz	50			MHz

■ Classification of hfe(2)

Type	MMBTA42	MMBTA42-L
Range	100-300	100-200
Marking	1D	

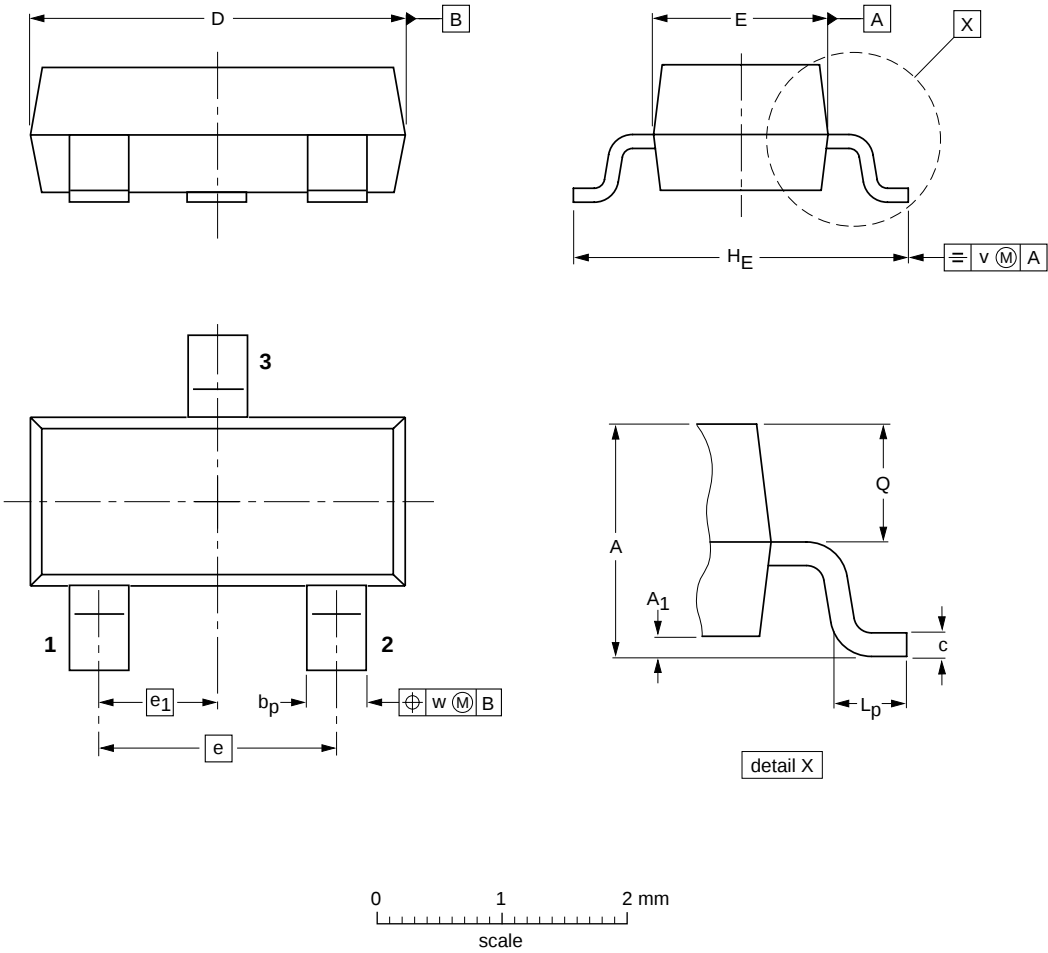
MMBTA42

Typical Characteristics



MMBTA42

■ SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1