Elektronische Bauelemente

MMBTA42W

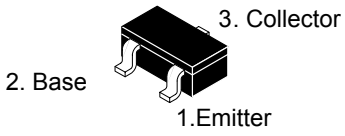
NPN Silicon

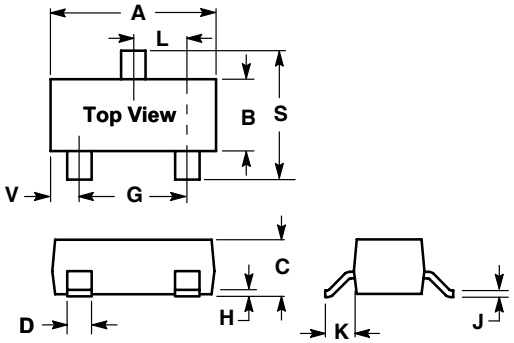
General Purpose Transistor

RoHS Compliant Product

FEATURES

- Plastic-Encapsulate Transistors
- Power dissipation & Collector current
  Pcm: 0.2W Icm: 0.3A
- High voltage $V_{(BR)}$: 300V





SOT-323		
Dim	**Min**	**Max**
A	1.800	2.200
B	1.150	1.350
C	0.800	1.000
D	0.300	0.400
G	1.200	1.400
H	0.000	0.100
J	0.100	0.250
K	0.350	0.500
L	0.590	0.720
S	2.000	2.400
V	0.280	0.420
All Dimension in mm		

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 100 μA, I_E=0	300		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 1 mA, I_B=0	300		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100 μA, I_C=0	5		V
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	μA
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	70		
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	V
Transition frequency	f_T	V_{CE}= 20V, I_C= 10mA f=30MHz	50		MHz

DEVICE MARKING

MMBTA42W=K3M

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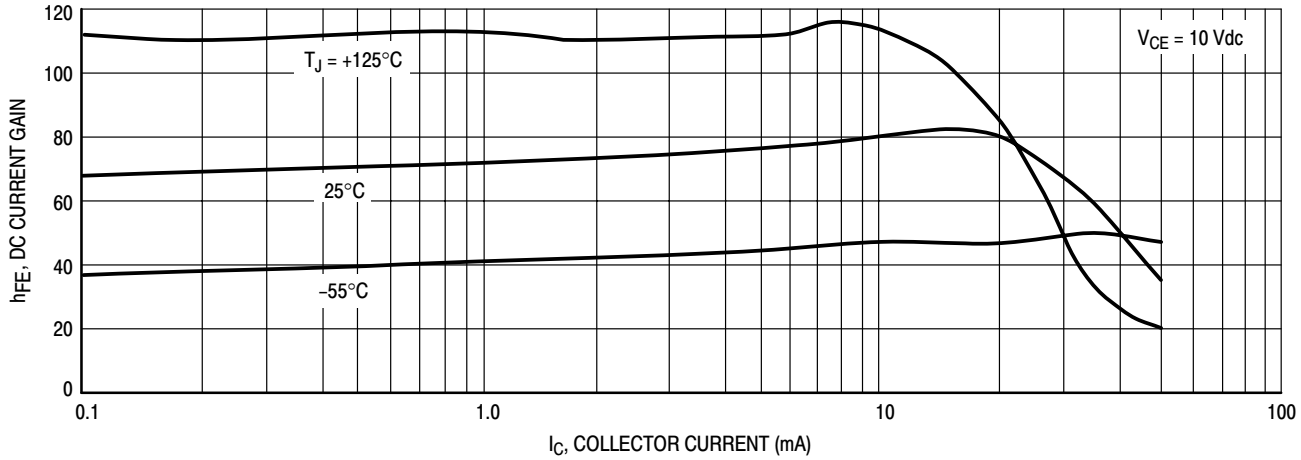


Figure 1. DC Current Gain

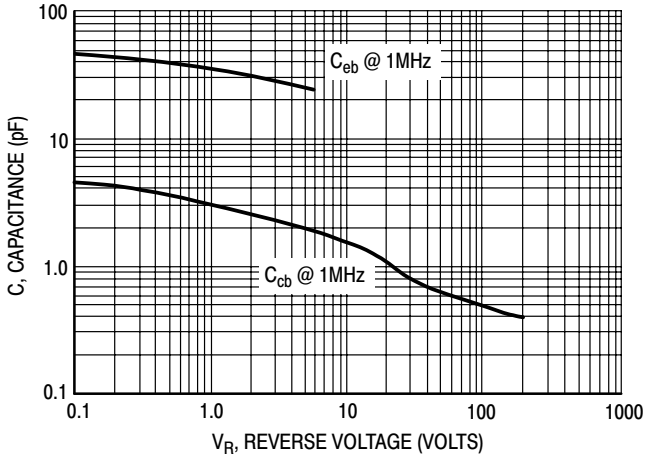


Figure 2. Capacitance

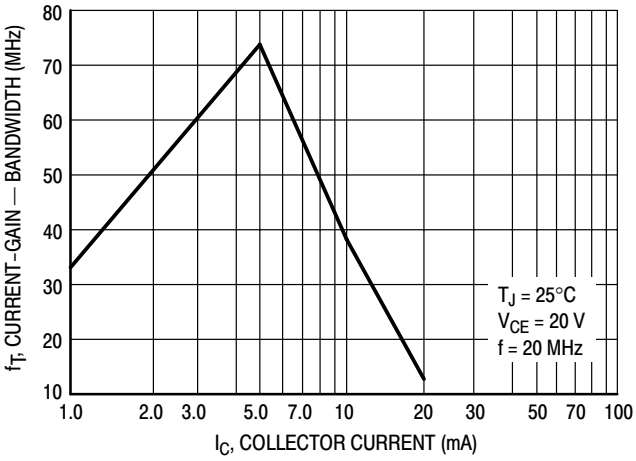
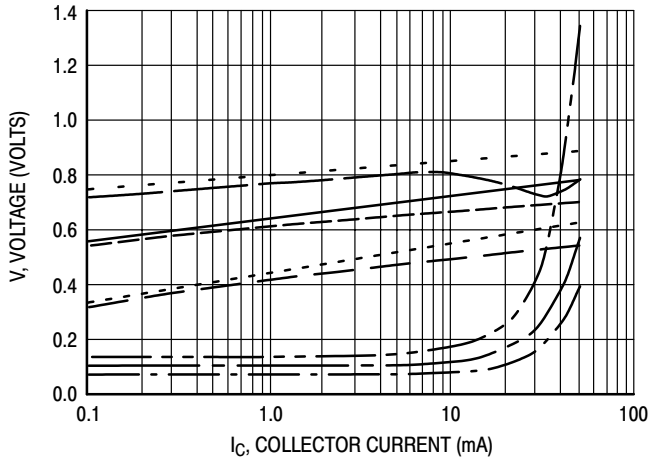


Figure 3. Current–Gain – Bandwidth



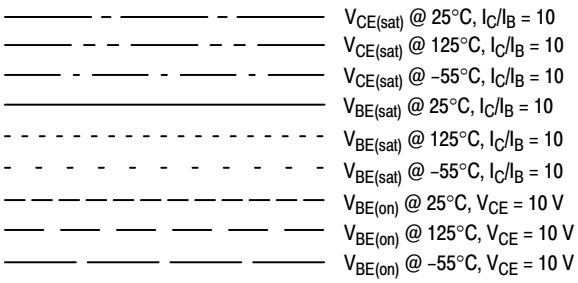


Figure 4. "ON" Voltages