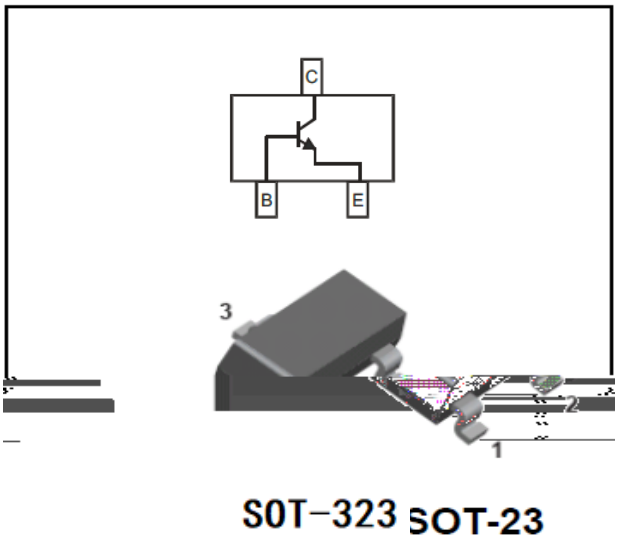
MMSTA42

NPN Transistor



Features

- ●Epoxy meets UL-94 V-0 flammability rating
- ●Halogen free available upon request by adding suffix ”HF”
- ●Moitsure Sensitivity Level 1
- ●High Conductance
- ●Surface Mount Package Ideally Suited for Automatic Insertion

Mechanical Data

- ● **Package**: SOT-323

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

- ● **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- ● **Marking**: K3M

■ **Maximum Ratings** (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Value
Collector-Base Voltage	V_{CBO}	V	300
Collector-Emitter Voltage	V_{CEO}	V	300
Emitter-Base Voltage	V_{EBO}	V	5
Collector Current	I_C	mA	100

Collector Pow Symbol

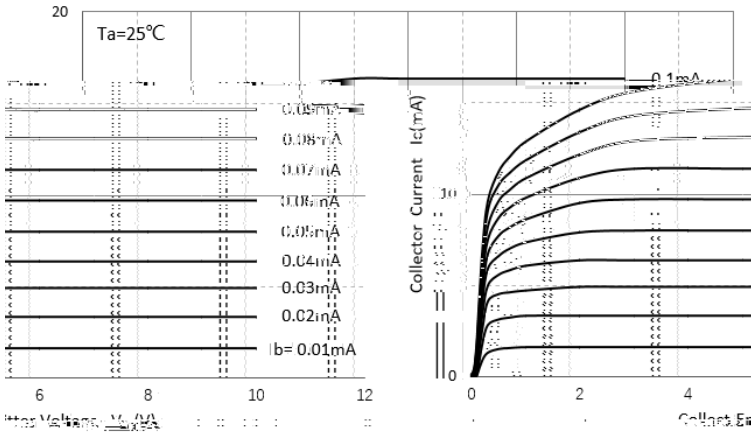
		Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	IC= 100uA,IE=0	300		
Collector-emitter breakdown voltage	$V_{)CEO}$	V	IC= 1mA, IB=0	300		
Emitter-base breakdown voltage	V_{EBO}	V	IE= 100uA, IC=0	5		
Collector-base cut-off current	I_{CBO}	uA	VCB=200V, IE =0			0.5
Emitter-base cut-off current	I_{EBO}	uA	VEB=5 V , IC=0			0.5
DC current gain	$h_{FE\ 1}$		VCE= 10V, IC= 1mA	25		
	$h_{FE\ 2}$		VCE= 10V, IC=10mA	40		300
	$h_{FE\ 3}$		VCE=10V, IC=30mA	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=20mA, IB= 2mA			0.5
Base-emitter saturation voltage	$V_{BE(sat)}$	V	IC=20mA, IB= 2mA			1.0
Transition frequency	f_T	MHz	VCE=20V,IC=10mA,f=30MHz	50		

■ **Ordering Information** (Example)

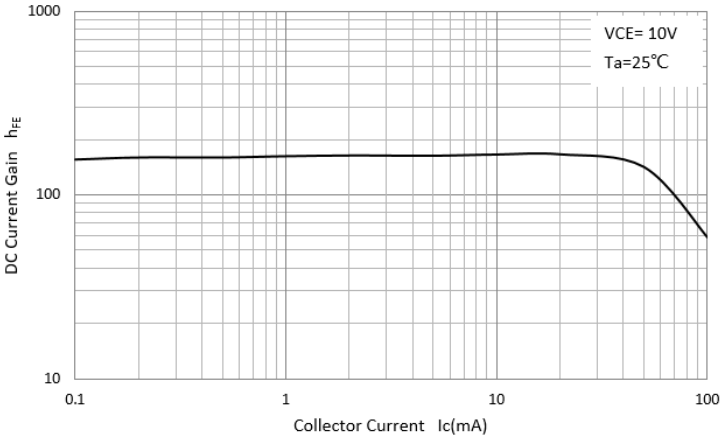
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMSTA42	F2	Approximate 0.005	3000	30000	120000	7" reel

■ **Characteristics** (Typical)

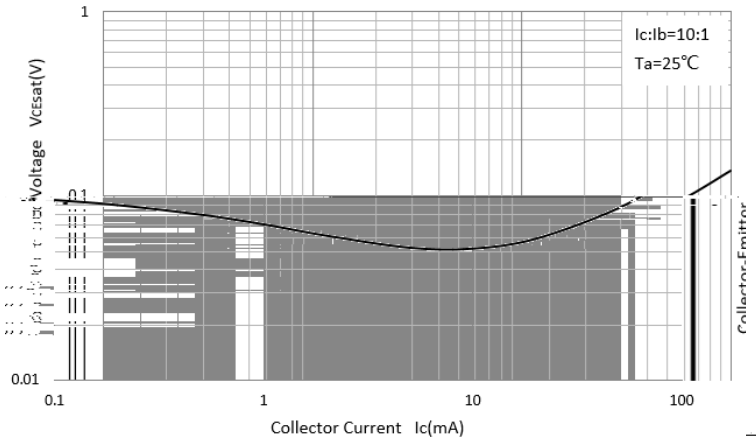
Static Characteristic



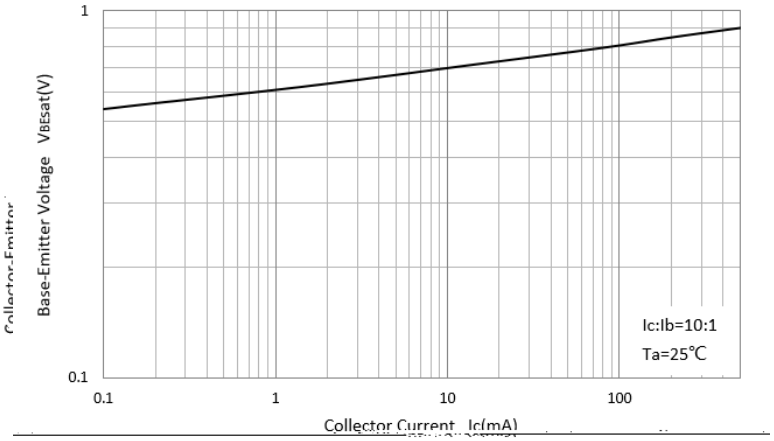
DC Current Gain



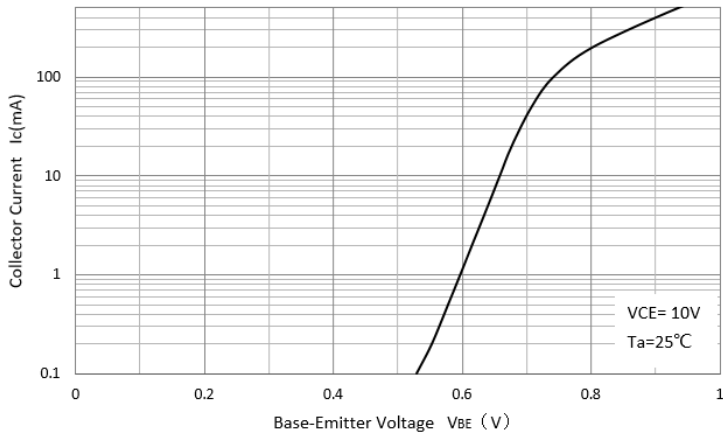
Collector-Emitter Saturation Voltage



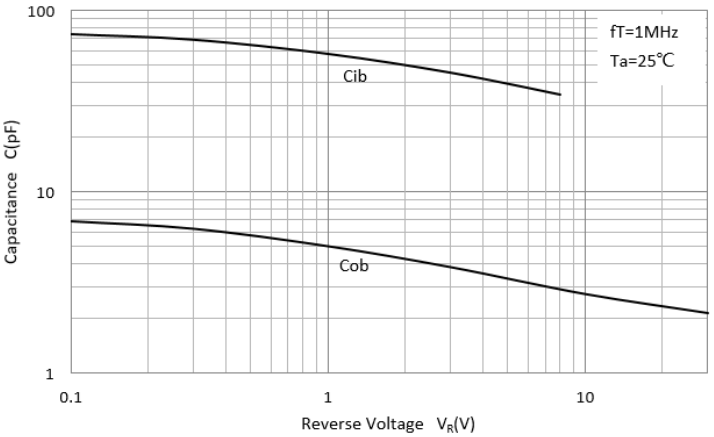
Base-Emitter Saturation Voltage



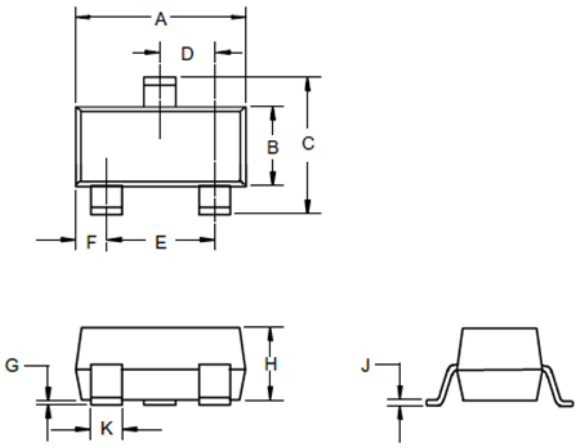
Base-Emitter On Voltage



Cob/Cib-V_{CB}/V_{EB}

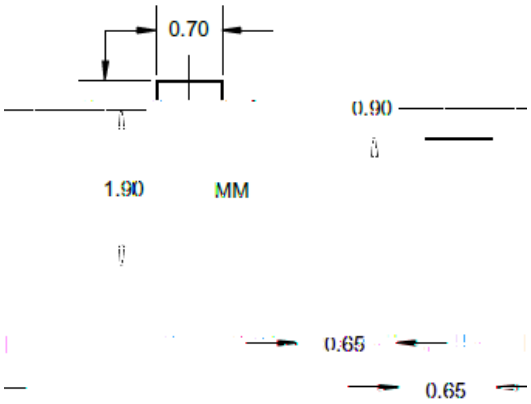


■ SOT-323 Package Outline Dimensions



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	

■ SOT-323 Soldering Footprint



Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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