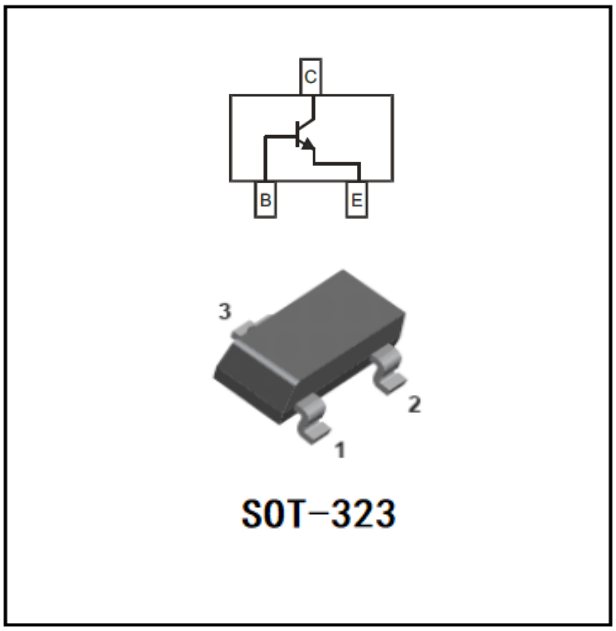
NPN Transistor



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 Power Dissipation	Pc	mW	200
Operation Junction Temperature	T_j	℃	150
Storage Temperature	T_{stg}	℃	-55 to +150

■ Electrical Characteristics (Ta=25℃ unless otherwise noted)

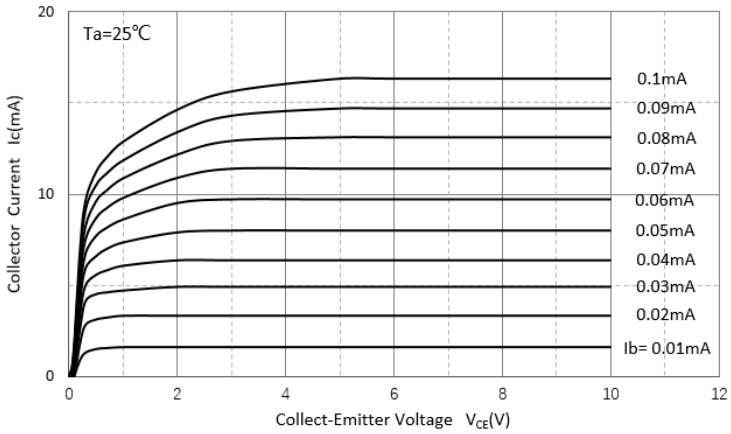
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	IC= 100uA,IE=0	300		
Collector-emitter breakdown voltage	$V_{)CEO}$	V	IC= 1mA, IB=0	300		
Emitter-base breakdown voltage	V_{EBO}	V	IE= 100uA, IC=0	5		
Collector-base cut-off current	I_{CBO}	uA	VCB=200V, IE =0			0.5
Emitter-base 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)

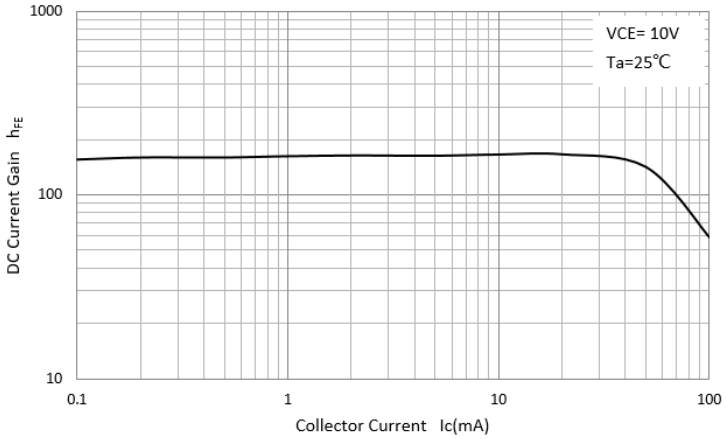
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMSTA42	F2	Approximate 0.005	3000	30000	120000	7" reel

■ Characteristics (Typical)

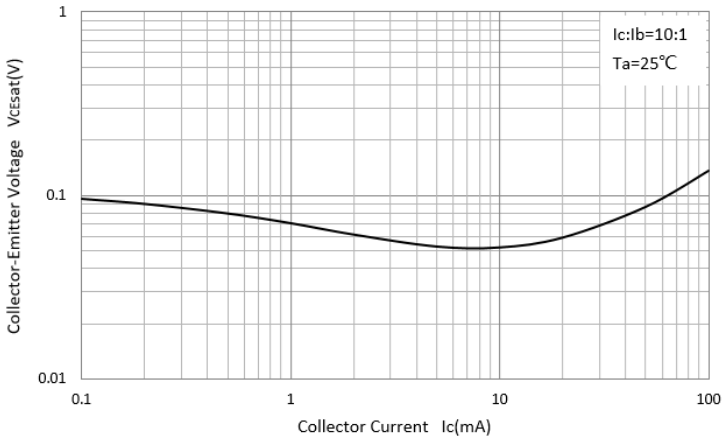
Static Characteristic



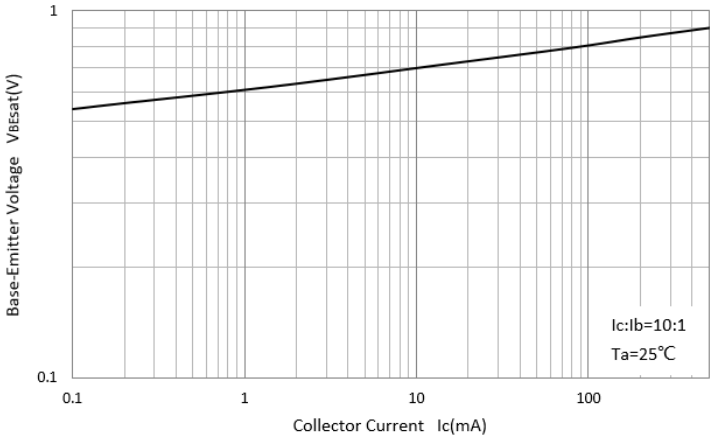
DC Current Gain



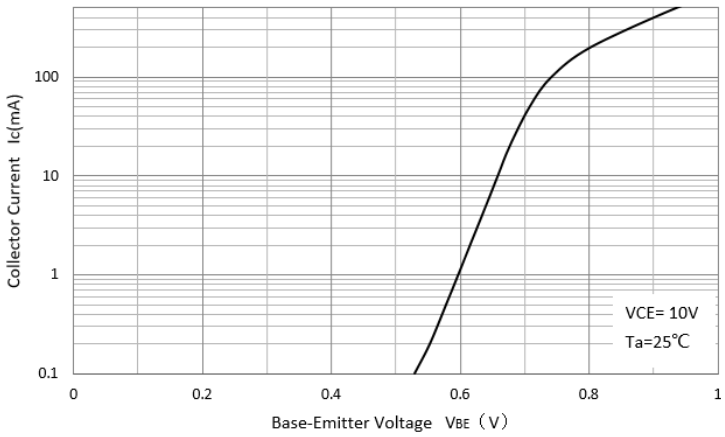
Collector-Emitter Saturation Voltage



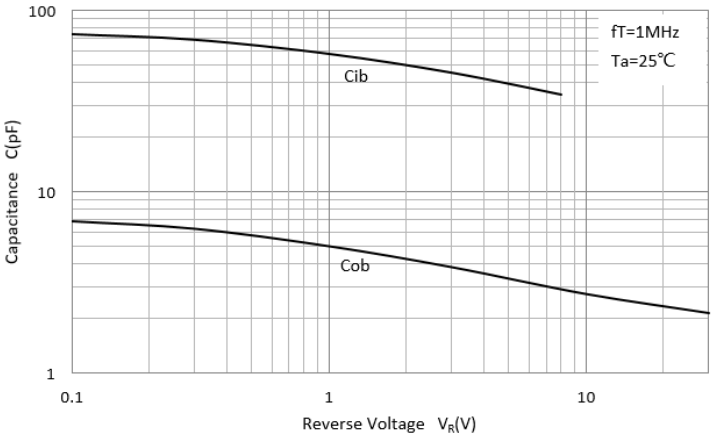
Base-Emitter Saturation Voltage



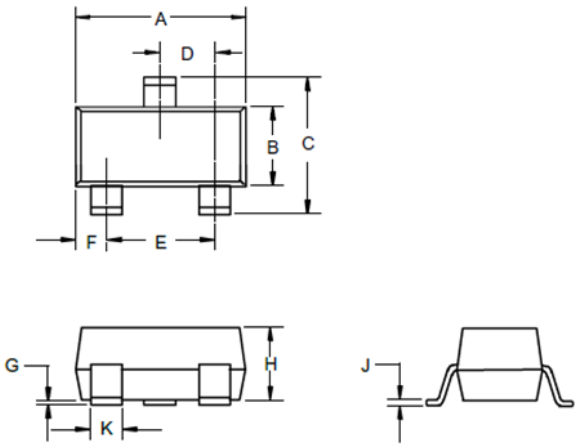
Base-Emitter On Voltage



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

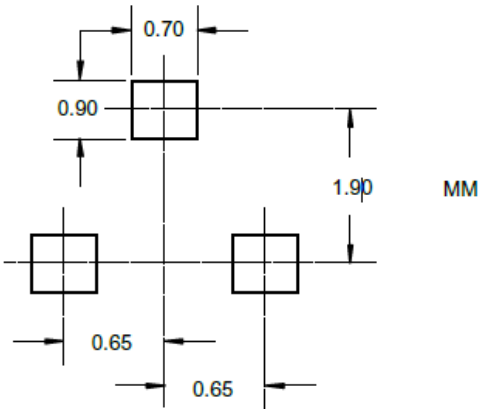


■ SOT-323 Package Outline Dimensions



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	
K	.006	.016	.15	.40	

■ SOT-323 Soldering Footprint



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