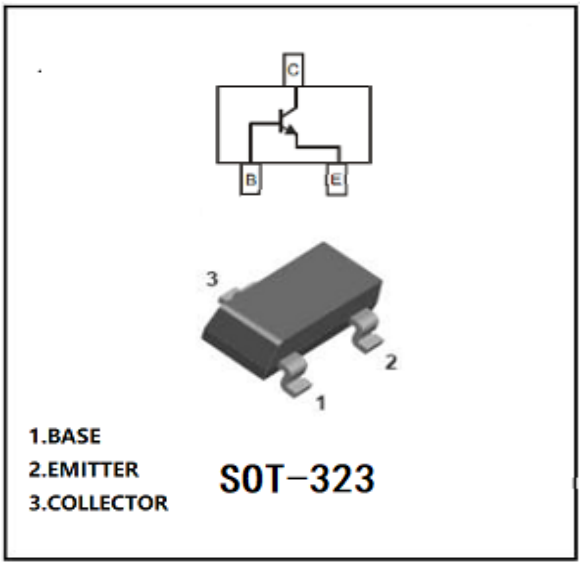
NPN General Purpose Amplifier transistors



Features

- ●Epoxy meets UL-94 V-0 flammability rating
- ●Halogen free available upon request by adding suffix ”HF”
- ●Moisture 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:**

MMSTA05	1H
MMSTA06	1GM

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

Item	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO} MMSTA05 MMSTA06	60 80	V
Collector-Emitter Voltage	V_{CEO} MMSTA05 MMSTA06	60 80	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	500	mA
Collector Power Dissipation	P_C	200	mW
Operation Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55 to +150	℃

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	V_{CBO}	V	IC=100μA,IE=0 MMSTA05 MMSTA06	60 80	
Collector-emitter breakdown voltage	V_{CEO}	V	IC =1mA,IB=0 MMSTA05 MMSTA06	60 80	
Emitter-base breakdown voltage	V_{EBO}	V	IE=100μA,IC=0	4	
Collector-base cut-off current	I_{CBO}	nA	VCB=60V,IE=0, MMSTA05 VCB=80V,IE=0, MMSTA06		100 100
Collector-emitter cut-off current	I_{CEO}	nA	VCE=60V,IB=0		100
Emitter-base cut-off current	I_{EBO}	nA	VEB=3V,IC=0		100
DC current gain	h_{FE}		VCE=1V,IC=10mA	100	400
	h_{FE}		VCE=1V,IC=100mA	100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=100mA,IB=10mA		0.25
Base-emitter saturation voltage	$V_{BE(sat)}$	V	IC=100mA,IB=10mA		1.2

■Other Characteristics（T_a=25℃ Unless otherwise specified）

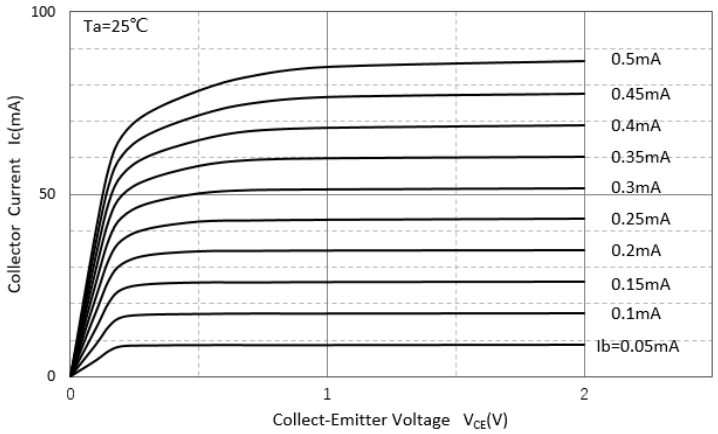
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	Ft	MHz	VCE=2V,IC=10mA,f=100MHz	100	

■Ordering Information (Example)

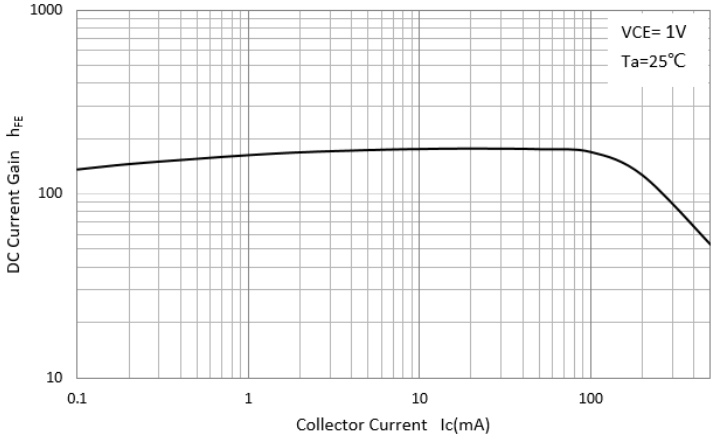
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMSTA05 MMSTA06	F2	Approximate 0.005	3000	30000	120000	7” reel

■**Characteristics**(Typical)

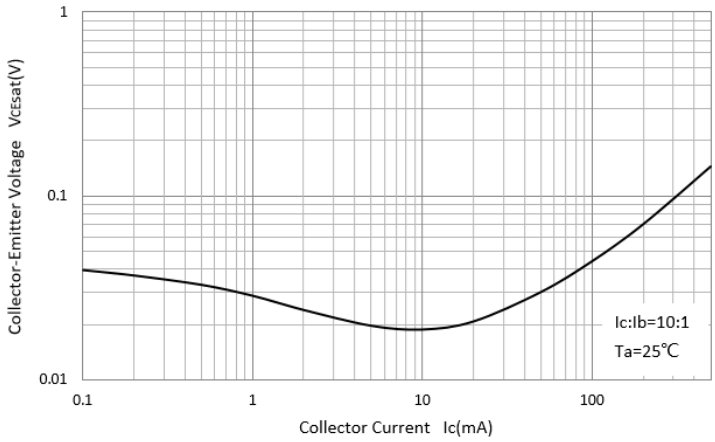
Static Characteristic



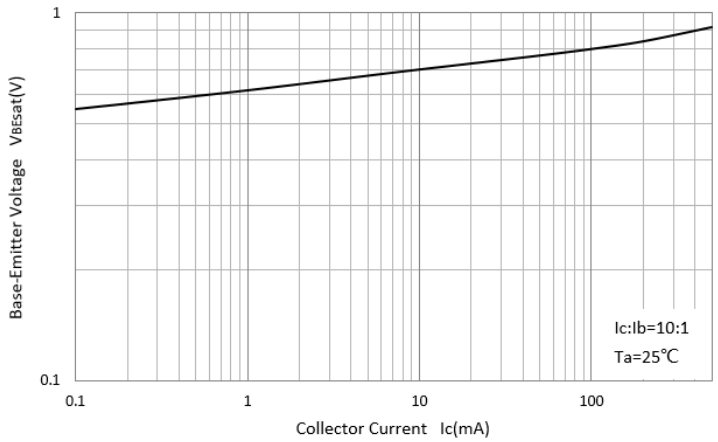
DC Current Gain



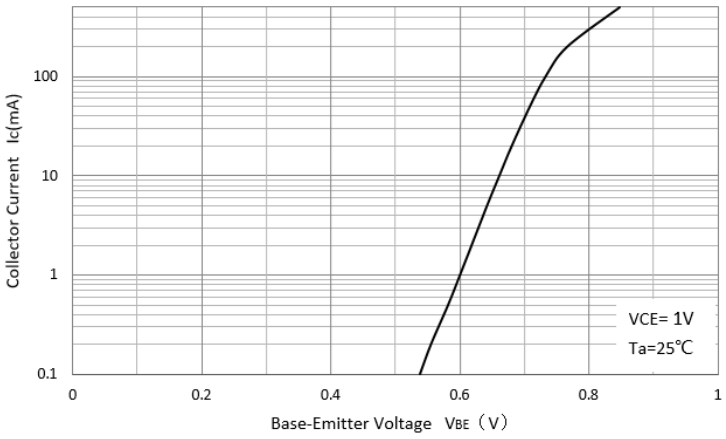
Collector-Emitter Saturation Voltage



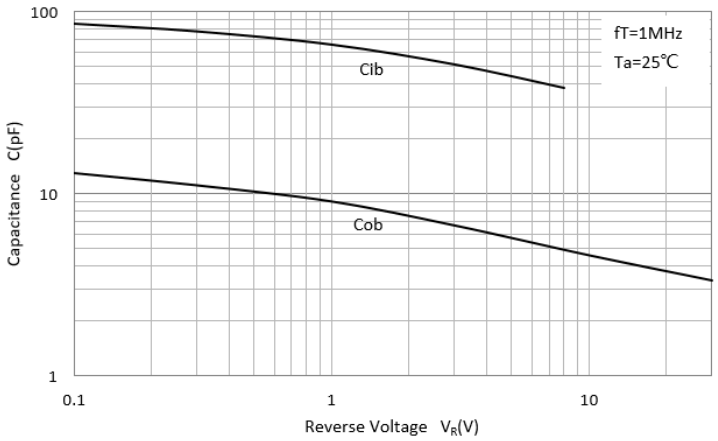
Base-Emitter Saturation Voltage



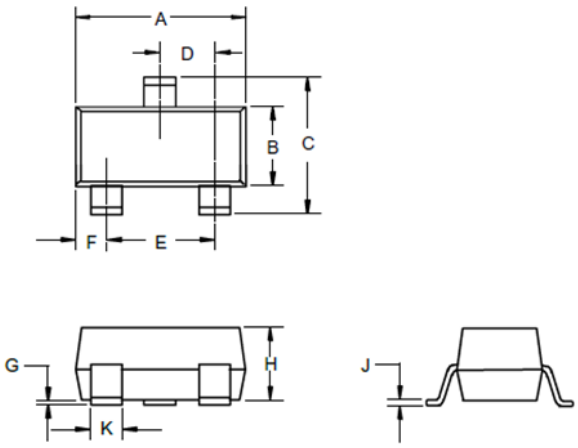
Base-Emitter On Voltage



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

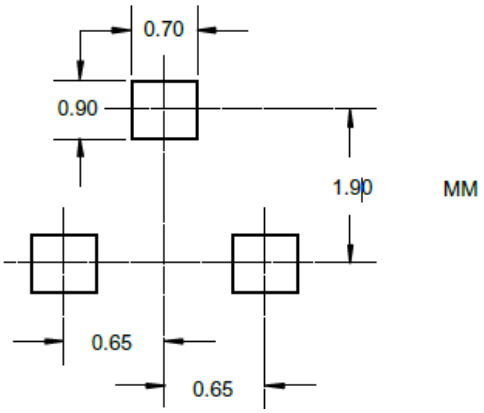


■ SOT-323 Package Outline Dimensions



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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