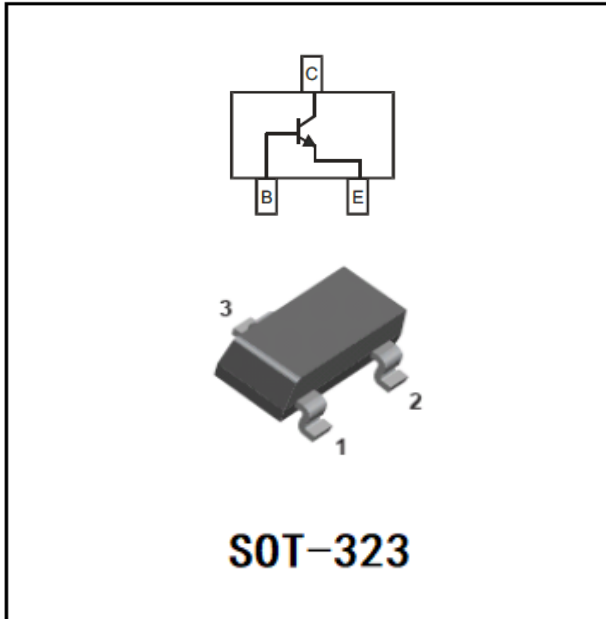


## NPN General Purpose Amplifier



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Marking: K4N

### ■ Maximum Ratings (Ta=25°C)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage*	$V_{CE0}$	V	$I_C=1.0\text{mA}, I_B=0$	160
Collector-Base Voltage	$V_{CB0}$	V	$I_C=100\mu\text{A}, I_E=0$	180
Emitter-Base Voltage	$V_{EB0}$	V	$I_E=10\mu\text{A}, I_C=0$	6.0
Collector Current	$I_C$	mA		600
Collector Power Dissipation	$P_C$	mW		200
Operation Junction Temperature	$T_j$	°C		150
Storage Temperature	$T_{stg}$	°C		-55 to +150



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## ■Electrical Characteristics (T<sub>a</sub>=25°C)

Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage	V <sub>CEO</sub>	V	I <sub>C</sub> =1.0mA, I <sub>B</sub> =0	160	
Collector-Base Voltage	V <sub>CBO</sub>	V	I <sub>C</sub> =100μA, I <sub>E</sub> =0	180	
Emitter-Base Voltage	V <sub>EBO</sub>	V	I <sub>E</sub> =10μA, I <sub>C</sub> =0	6	
Collector-Base Cut-off Current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =120Vdc		50
Emitter-Base Cut-off Current	I <sub>EBO</sub>	nA	V <sub>EB</sub> =4Vdc		50
DC Current Gain	h <sub>FE</sub>		I <sub>C</sub> =1.0mA V <sub>CE</sub> =5.0Vdc	80	
			I <sub>C</sub> =10mA V <sub>CE</sub> =5.0Vdc	100	300
			I <sub>C</sub> =50mA V <sub>CE</sub> =5.0Vdc	30	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =50mA I <sub>B</sub> =5.0mA		0.2
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	V	I <sub>C</sub> =50mA I <sub>B</sub> =5.0mA		1.0

## ■Small-signal Characteristics (T<sub>a</sub>=25°C)

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	f <sub>T</sub>	MHz	I <sub>C</sub> =10mA, V <sub>CE</sub> =5.0Vdc, f=30MHz	100	300

## ■Ordering Information (Example)

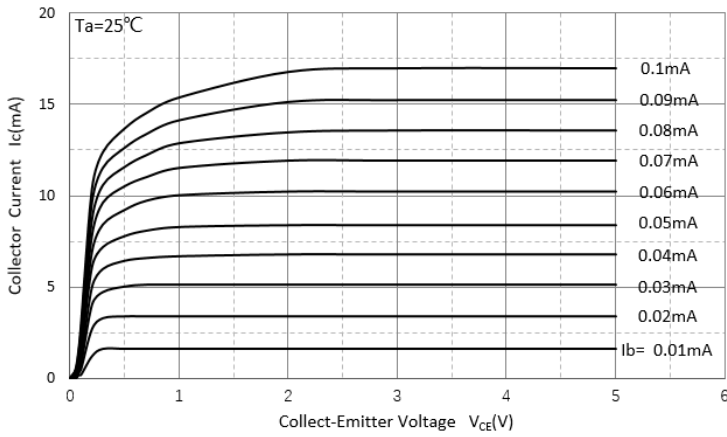
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMST5551	F2	Approximate 0.005	3000	30000	120000	7" reel



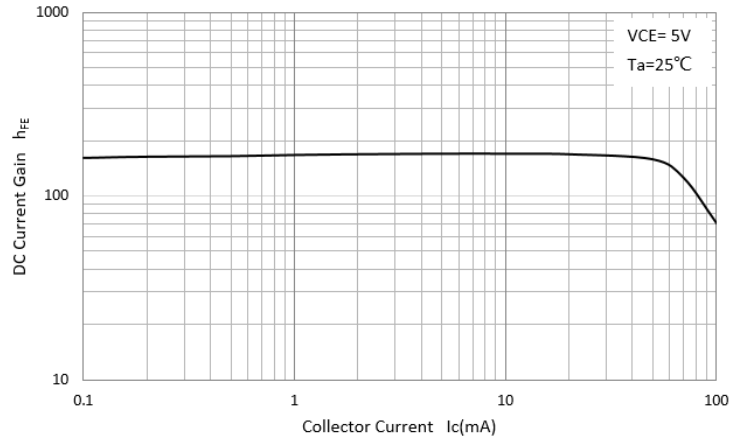
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## ■ Characteristics(Typical)

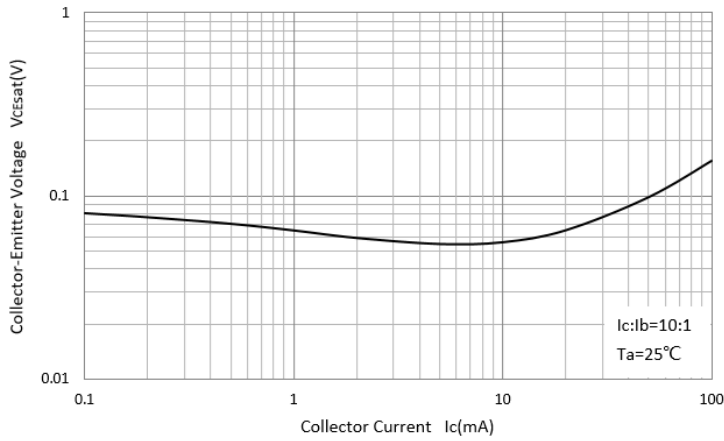
Static Characteristic



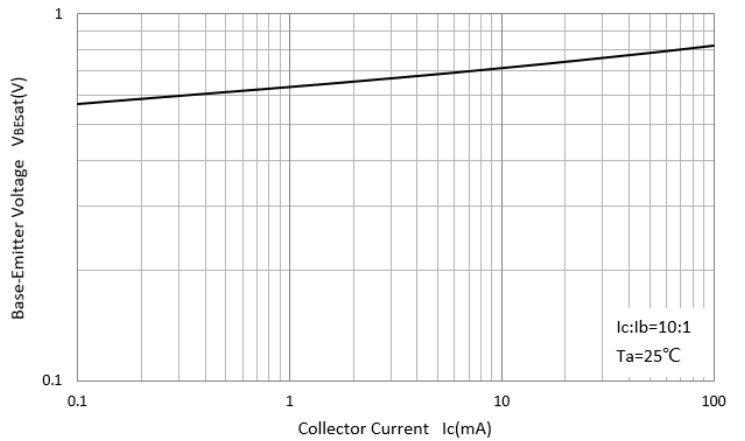
DC Current Gain



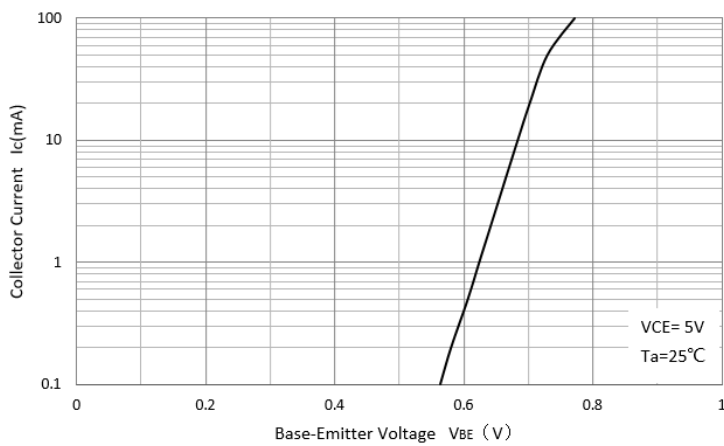
Collector-Emmitter Saturation Voltage



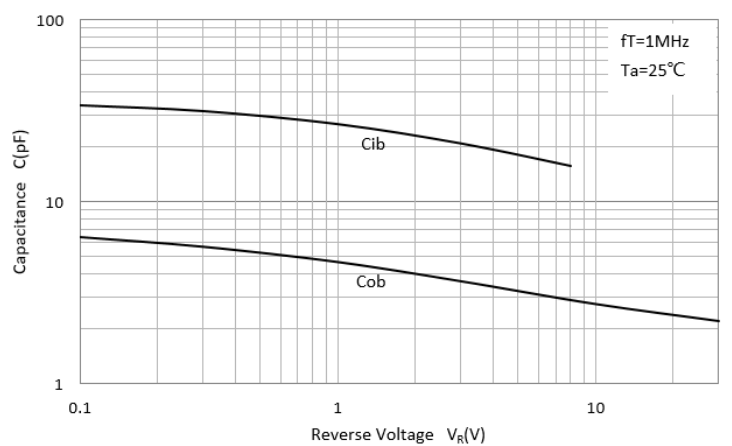
Base-Emmitter Saturation Voltage



Base-Emmitter On Voltage



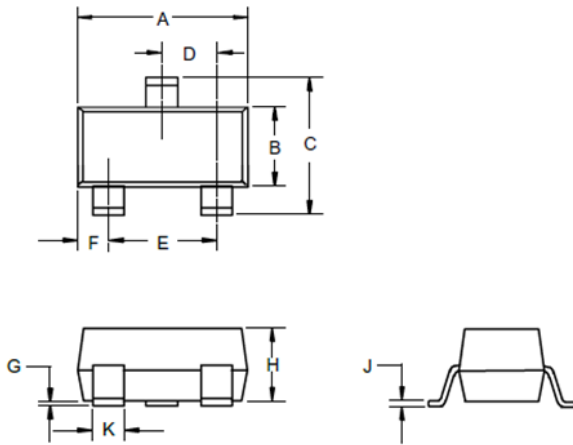
$C_{ob}/C_{ib}-V_{CB}/V_{EB}$





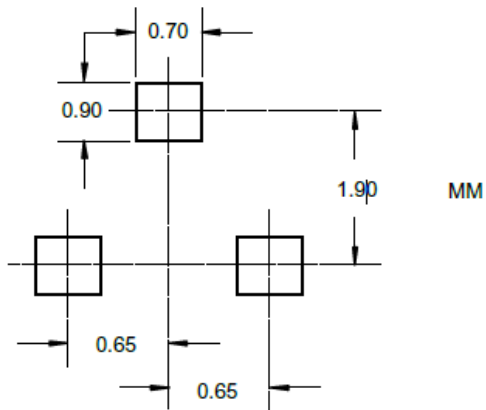
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## ■SOT-323 Package Outline Dimensions



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
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





# MMST5551

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