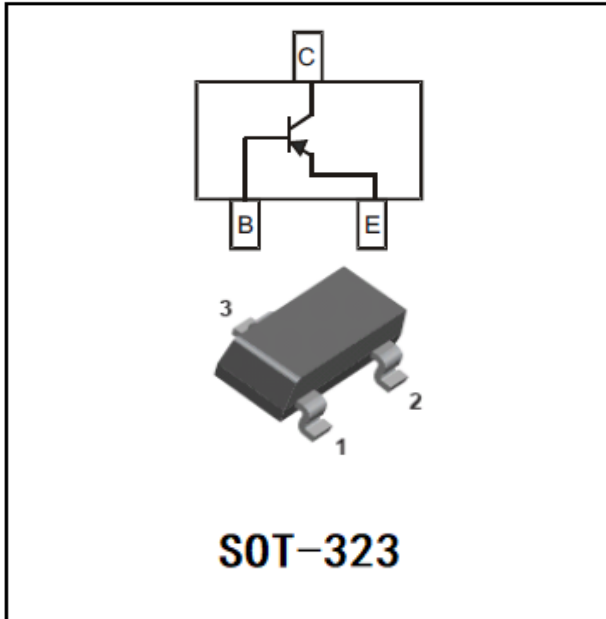


## PNP Transistor



### 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:** K3F

### ■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value
Collector-Base Voltage	$V_{CBO}$	V	-60
Collector-Emitter Voltage	$V_{CEO}$	V	-60
Emitter-Base Voltage	$V_{EBO}$	V	-5
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



## ■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{CBO}$	V	$I_C=-10\mu A, I_E=0$	-60		
Collector-emitter breakdown voltage	$V_{CEO^*}$	V	$I_C=-10mA, I_B=0$	-60		
Emitter-base breakdown voltage	$V_{EBO}$	V	$I_E=-10\mu A, I_C=0$	-5		
Collector-emitter cut-off current	$I_{CEO}$	nA	$V_{CE}=-35V, I_B=0$			-50
Collector-base cut-off current	$I_{CBO}$	nA	$V_{CB}=-50V, I_E=0$			-10
Emitter-base cut-off current	$I_{EBO}$	nA	$V_{EB}=-3V, I_C=0$			-10
DC current gain	$h_{FE}$		$V_{CE}=-10V, I_C=-1mA$	100		
	$h_{FE}$		$V_{CE}=-10V, I_C=-150mA$	100		300
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=-500mA, I_B=-50mA$			-1.6
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=-500mA, I_B=-50mA$			-2.6
Transition frequency	$f_T$	MHz	$V_{CE}=-20V, I_C=-50mA, f=100MHz$	200		
Delay time	$t_d$	ns	$V_{CC}=-30V, I_C=-150mA, I_{B1}=-15mA$			10
Rise time	$t_r$	ns				40
Storage time	$t_s$	ns	$V_{CC}=-30V, I_C=-150mA, I_{B1}=I_{B2}=-15mA$			80
Fall time	$t_f$	ns				30

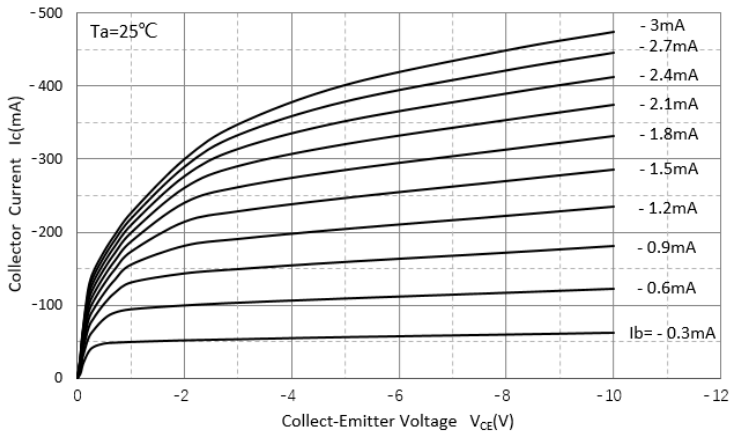
## ■ Ordering Information (Example)

Preferred P/N	Packing Code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
MMST2907A	F2	Approximate 0.005	3000	30000	120000	7" reel

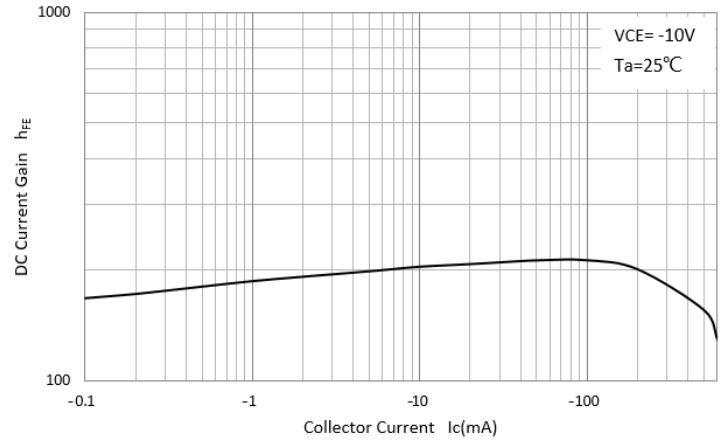


## ■ Characteristics (Typical)

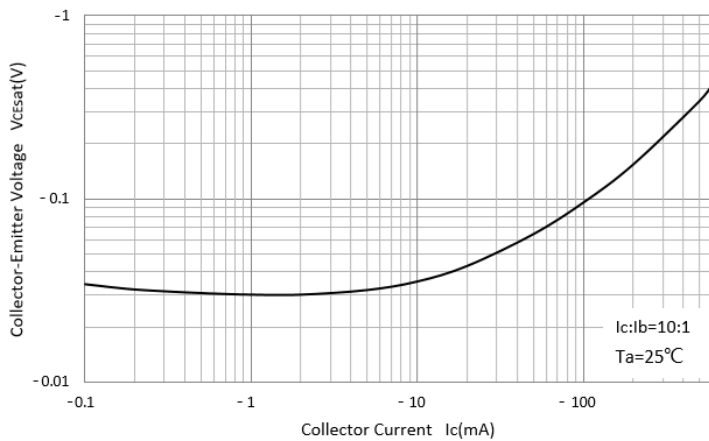
### Static Characteristic



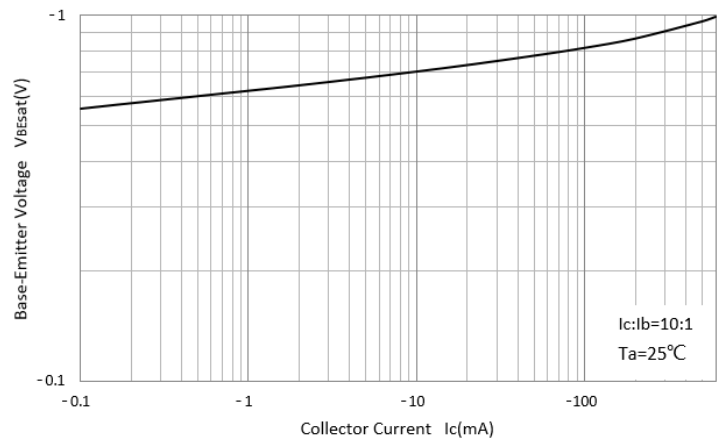
### DC Current Gain



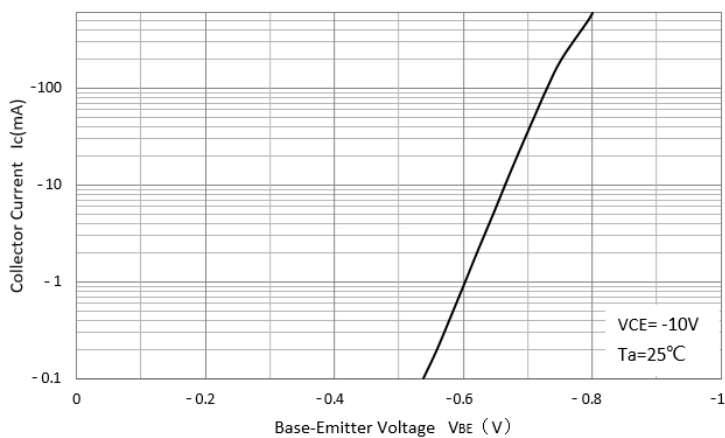
### Collector-Emitter Saturation Voltage



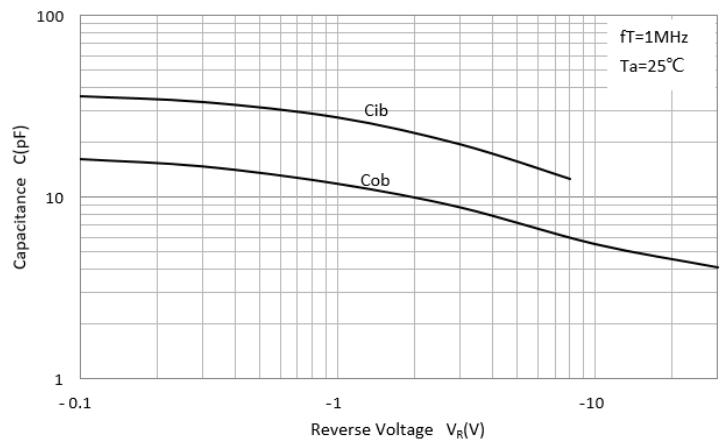
### Base-Emitter Saturation Voltage



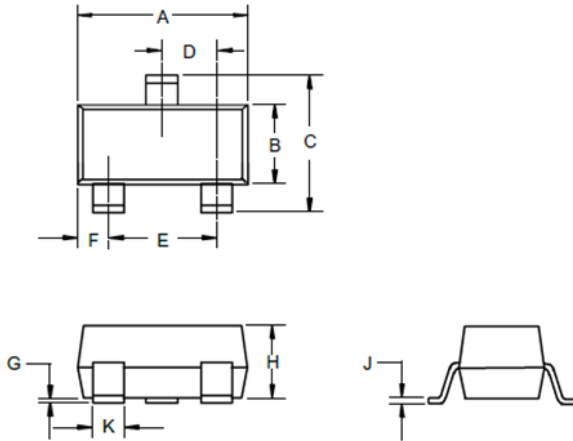
### Base-Emitter On Voltage



### Cob/Cib-V<sub>CB</sub>/V<sub>EB</sub>

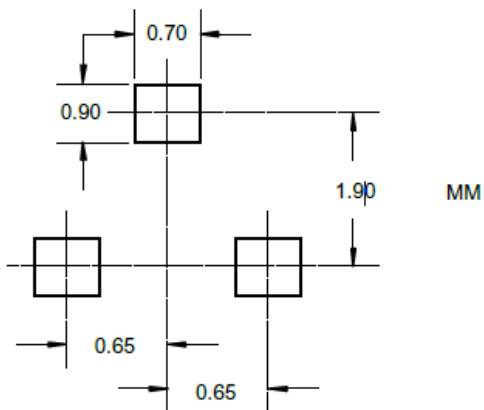


## ■ SOT-323 Package Outline Dimensions



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





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