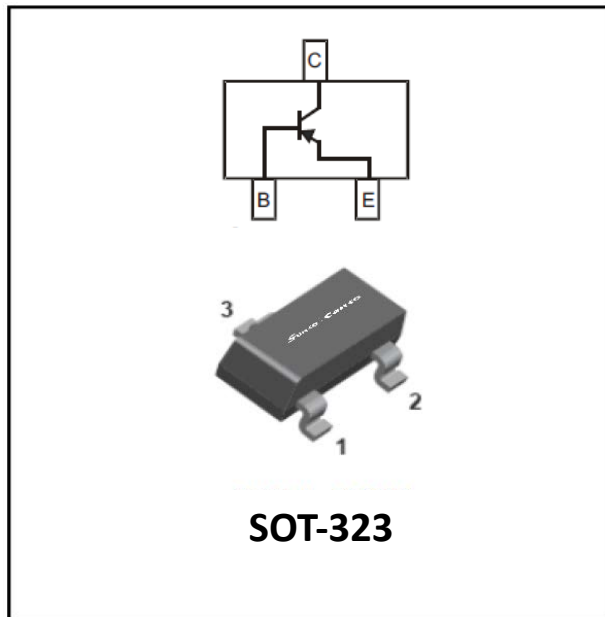


PNP General Purpose Amplifier



Features

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

Mechanical Data

- **Package:** SOT-323
Molding compound meets UL 94 V-0 flammability rating, -compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** K5N

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

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	V_{CBO}	V	$I_C = -10\mu A, I_E = 0$	-40
Collector-Emitter Voltage	V_{CEO}	V	$I_C = -1mA, I_B = 0$	-40
Emitter-Base Voltage	V_{EBO}	V	$I_E = -10\mu A, I_C = 0$	-5
Collector Current	I_C	mA		-200
Collector Power Dissipation	P_C	mW		200
Operation Junction Temperature	T_j	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150

MMST3906

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	V _{CBO}	V	I _C =-10μA, I _E =0	-40	
Collector-emitter breakdown voltage	V _{CEO}	V	I _C =-1mA, I _B =0	-40	
Emitter-base breakdown voltage	V _{EBO}	V	I _E =-10μA, I _C =0	-5	
Collector-Base cut-off current	I _{CBO}	nA	V _{CB} =-40V, I _E =0		-100
Collector-Emitter cut-off current	I _{CEX}	nA	V _{CE} =-30V, V _{EB} =-3V,		-50
DC current gain	h _{FE}		V _{CE} =-1V, I _C =-100uA	60	
	h _{FE}		V _{CE} =-1V, I _C =-1mA	80	
	h _{FE}		V _{CE} =-1V, I _C =-10mA	100	300
	h _{FE}		V _{CE} =-1V, I _C =-50mA	60	
	h _{FE}		V _{CE} =-1V, I _C =-100mA	30	
Collector-emitter saturation voltage	V _{CE(sat)}	V	I _C =-50mA, I _B =-5mA		-0.4
Base-emitter saturation voltage	V _{BE(sat)*}	V	I _C =-50mA, I _B =-5mA		-0.95

■Other Characteristics (T_a=25°C Unless otherwise specified)

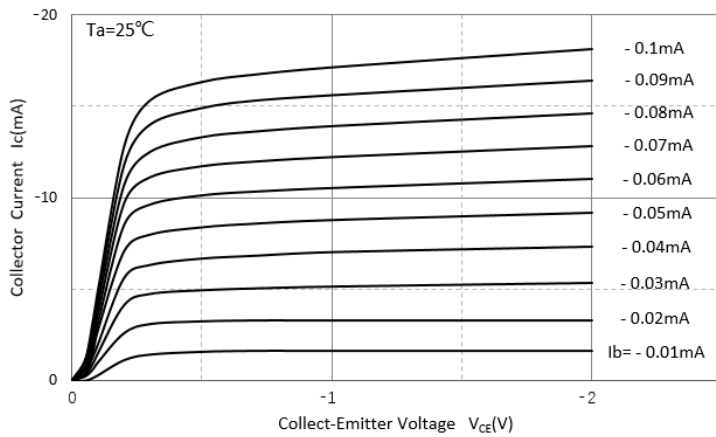
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	F _t	MHz	V _{CE} =-20V, I _C =-10mA, f=100MHz	250	
Delay time	t _d	ns	V _{CC} =-3V, I _C =-10mA, V _{BE(off)} =-0.5V, I _{B1} =-1mA		35
Rise time	t _r	ns			35
Storage time	t _s	ns	V _{CC} =-3V, I _C =-10mA, I _{B1} =I _{B2} =-1mA		225
Fall time	t _f	ns			75

■Ordering Information (Example)

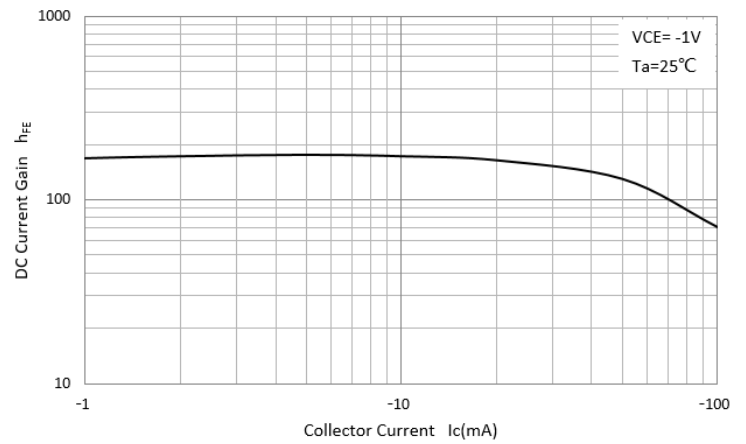
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMST3906	F2	Approximate 0.005	3000	30000	120000	7" reel

■Characteristics(Typical)

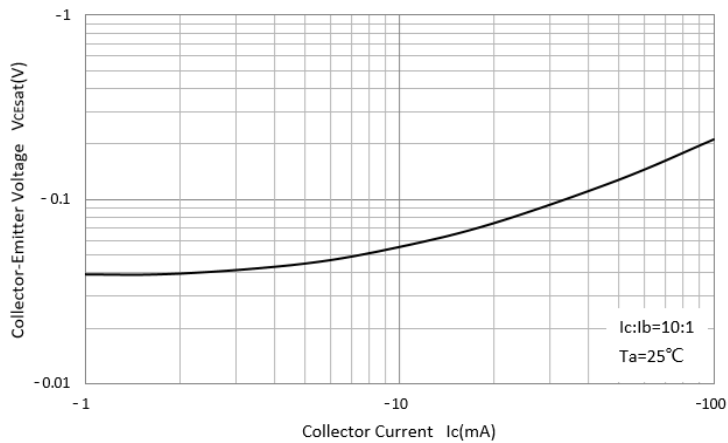
Static Characteristic



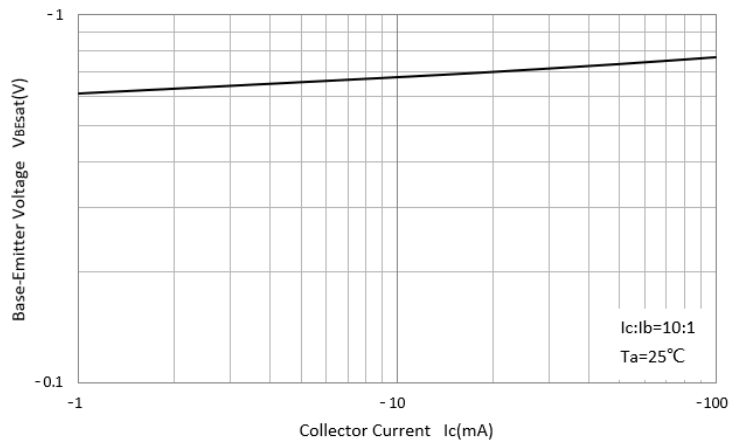
DC Current Gain



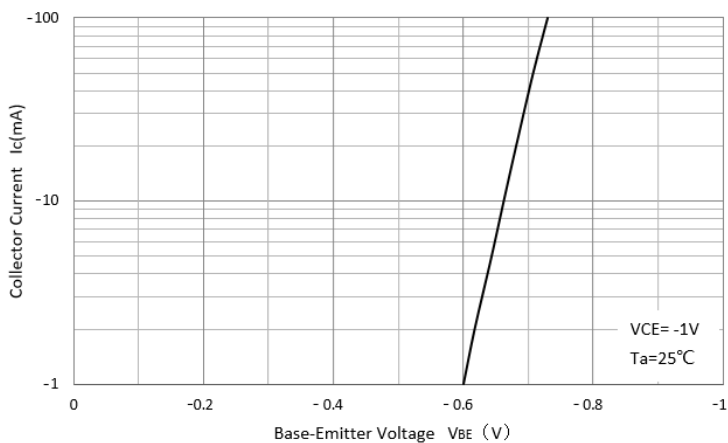
Collector-Emitter Saturation Voltage



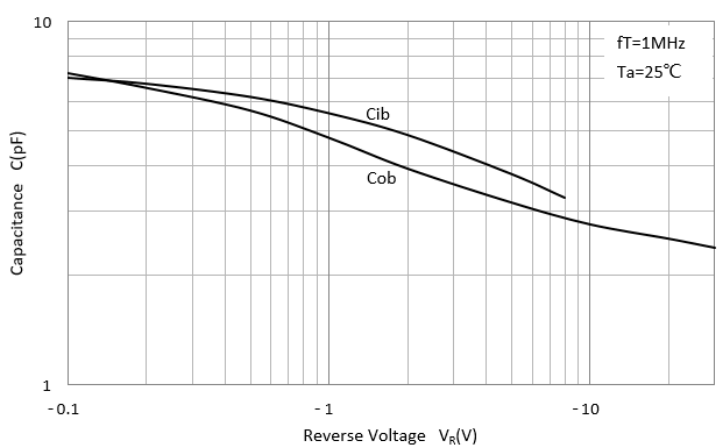
Base-Emitter Saturation Voltage



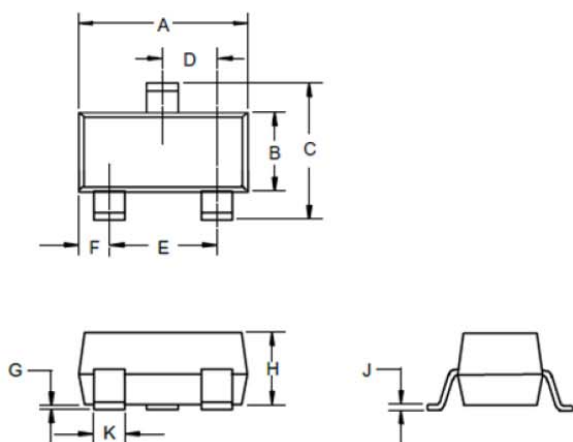
Base-Emitter On Voltage



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

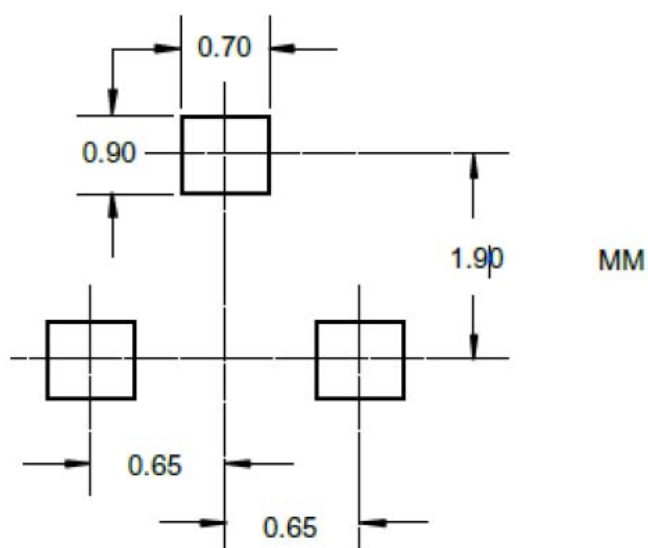


■SOT-323 Package Outline Dimensions



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



MM

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