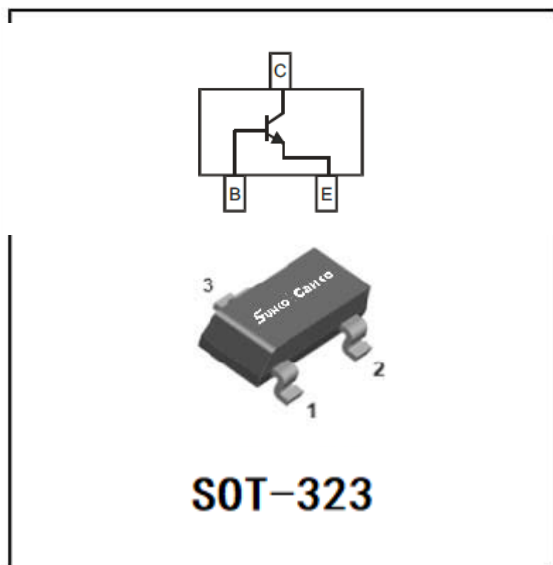


NPN General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: K3X

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

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V		60
Collector-Emitter Voltage	VCEO	V		40
Emitter-Base Voltage	VEBO	V		6
Collector Current -Continuous	IC	mA		600
Total Device Dissipation	PD	mW		200
Junction Temperature	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMST4401	F2	Approximate 0.005	3000	30000	120000	7" reel

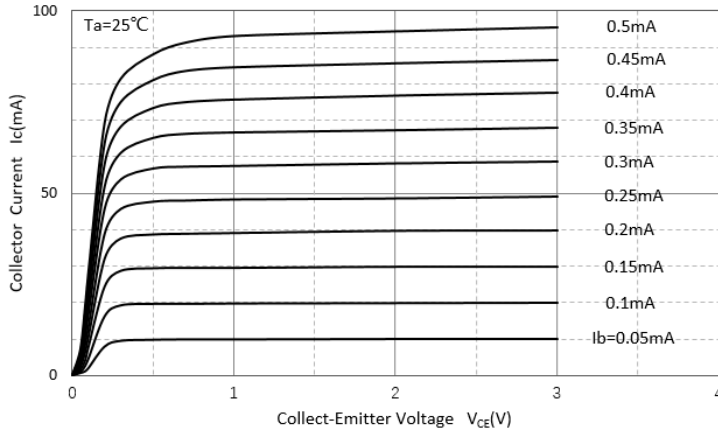
MMST4401

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

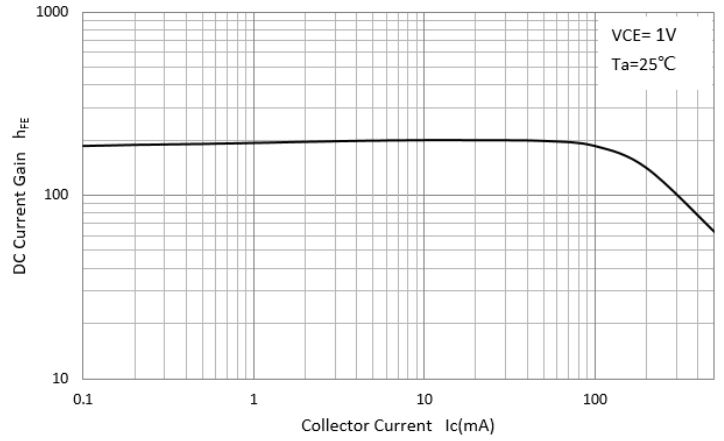
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C=10mA, I_E=0$	60		
Collector-emitter breakdown voltage	$V_{(BR)CEO^*}$	V	$I_C=1mA, I_B=0$	40		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E=100\mu A, I_C=0$	6		
Collector-emitter cut-off current	I_{CEO}	nA	$V_{CE}=35V, I_B=0$			100
Collector-base cut-off current	I_{CBO}	nA	$V_{CB}=35V, I_E=0$			100
Emitter-base cut-off current	I_{EBO}	nA	$V_{EB}=5V, I_C=0$			100
DC current gain	h_{FE}		$V_{CE}=1V, I_C=150mA$	100		300
			$V_{CE}=2V, I_C=500mA$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=150mA, I_B=15mA$			0.4
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=150mA, I_B=15mA$			0.95
Transition frequency	f_T	MHz	$V_{CE}=10V, I_C=20mA, f=100MHz$	250		
Delay time	t_d	ns	$V_{CC}=30V, V_{BE(off)}=0.2V$ $I_C=150\mu A, I_B=15mA$			15
Rise time	t_r	ns				20
Storage time	t_s	ns	$V_{CC}=30V, I_C=150mA, I_B=I_{B2}=15mA$			225
Fall time	t_f	ns				60
Output Capacitance	C_{ob}	pF	$V_{CB}=10V, I_E=0, f=1MHz$			6.5

■ Characteristics (Typical)

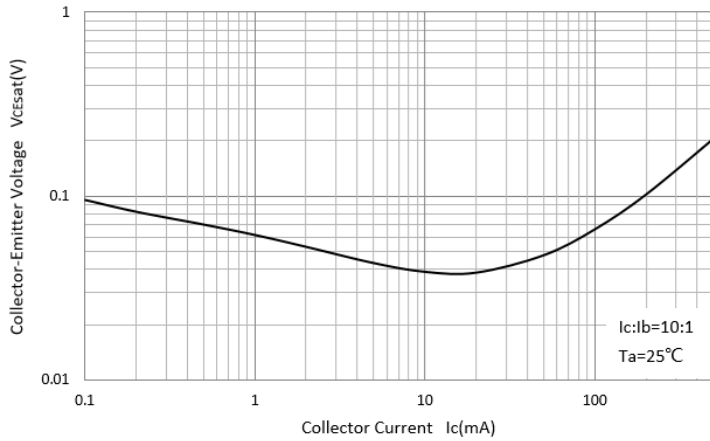
Static Characteristic



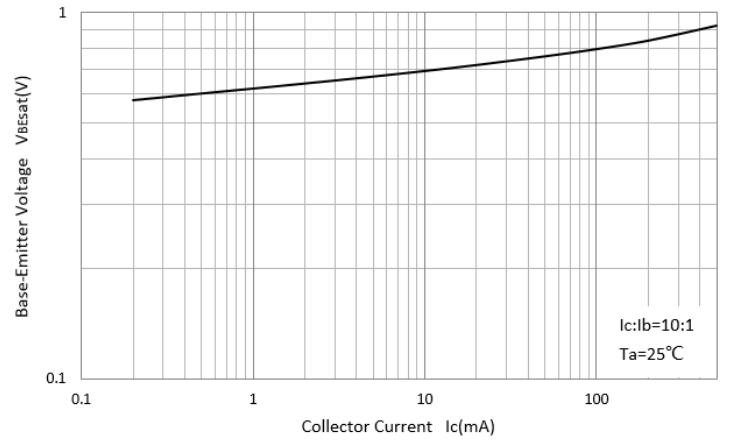
DC Current Gain



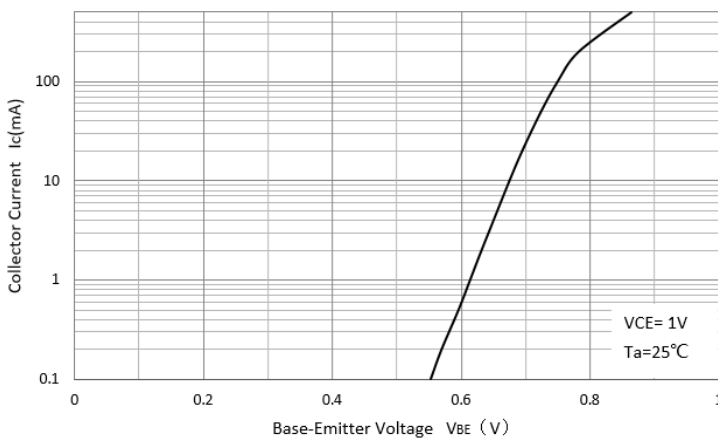
Collector-Emittor Saturation Voltage



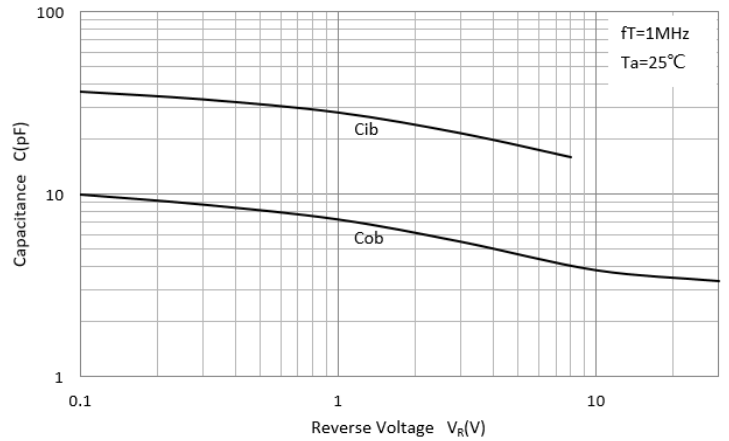
Base-Emittor Saturation Voltage



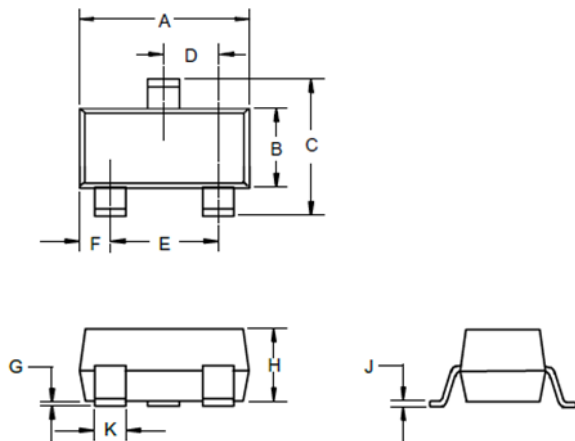
Base-Emittor On Voltage



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

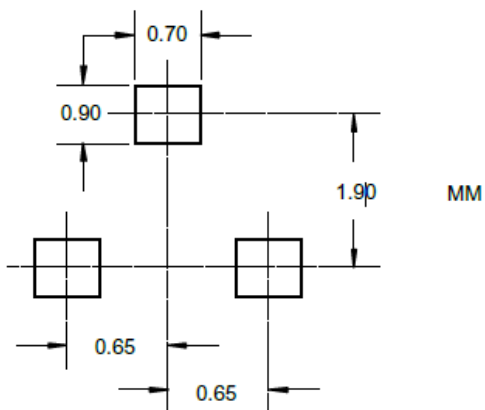


■SOT-323 Package Outline Dimensions



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 Suggested Pad Layout



Disclaimer

The information presented in this document is for reference only. Shanghai Sunco Electronics Co., Ltd reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Russiansunco or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.russiansunco.com](http://www.russiansunco.com) , or consult your nearest Russiansunco's sales office for further assistance.