

NPN Silicon Epitaxial Planar Transistor

MMSTA42

FEATURES

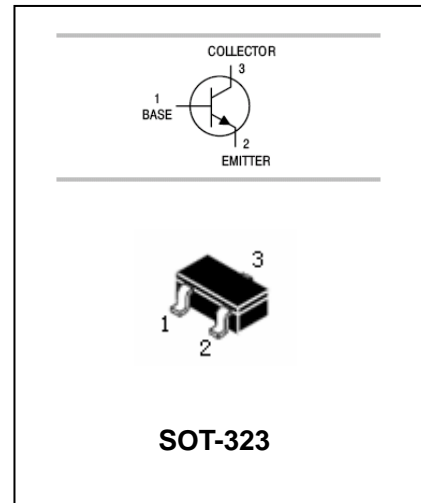
- Power dissipation.($P_C=0.35W$)



Lead-free

APPLICATIONS

- Audio frequency general purpose amplifier.



ORDERING INFORMATION

Type No.	Marking	Package Code
MMSTA42	K3M	SOT-323

MAXIMUM RATING @ $T_a=25^{\circ}C$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	310	V
V_{CEO}	Collector-Emitter Voltage	305	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	500	mA
P_C	Collector Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-55~150	$^{\circ}C$

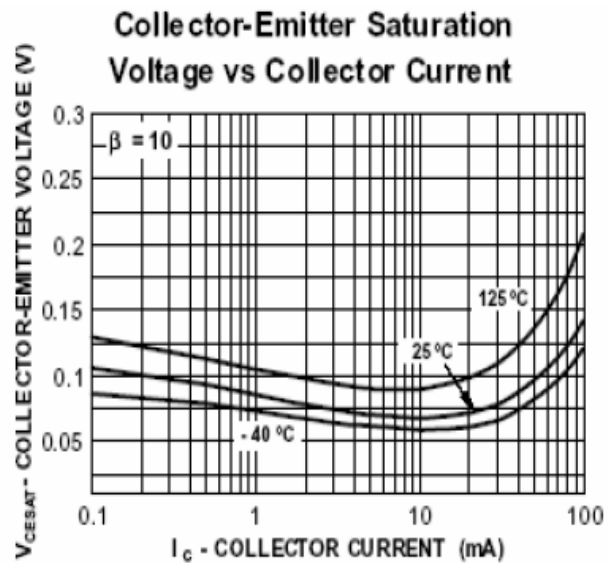
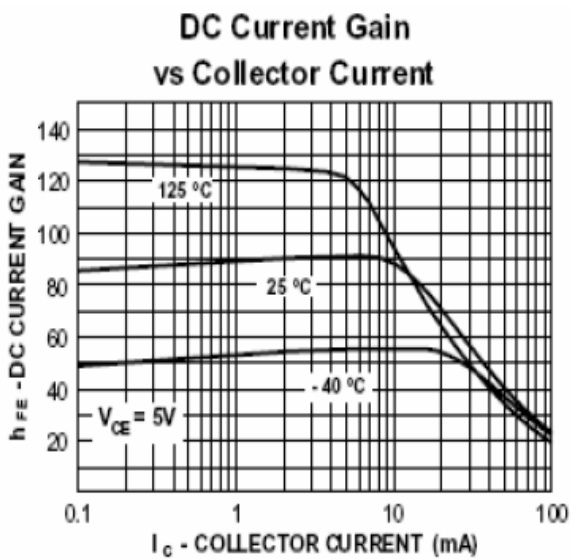
NPN Silicon Epitaxial Planar Transistor

MMSTA42

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

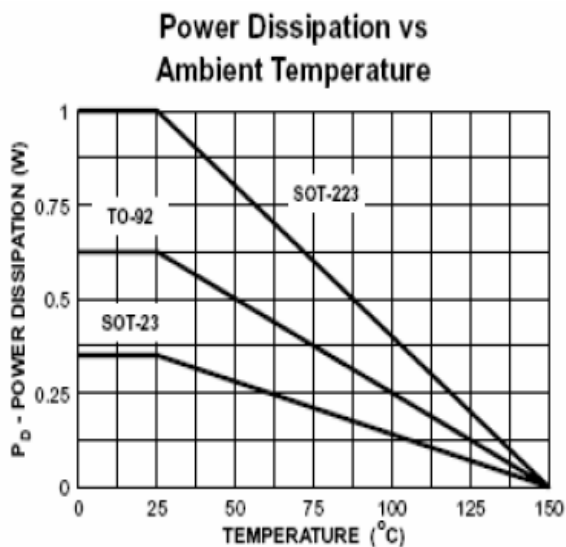
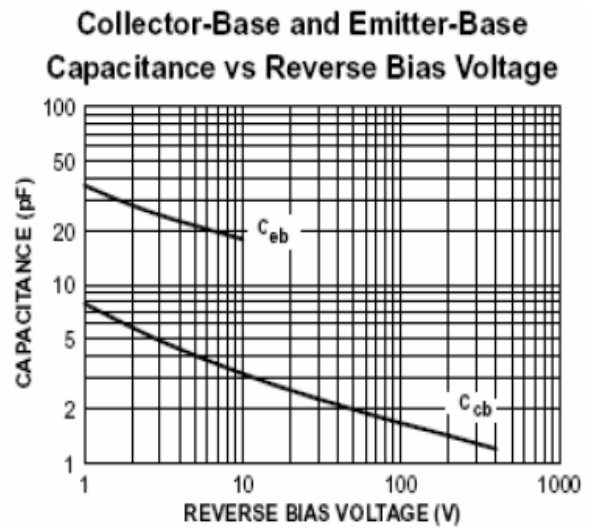
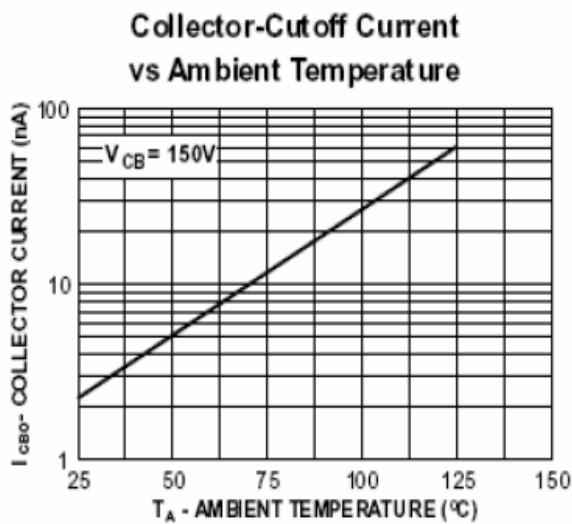
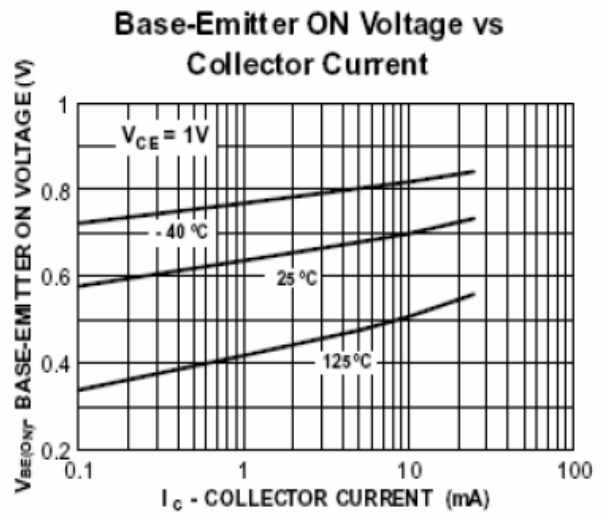
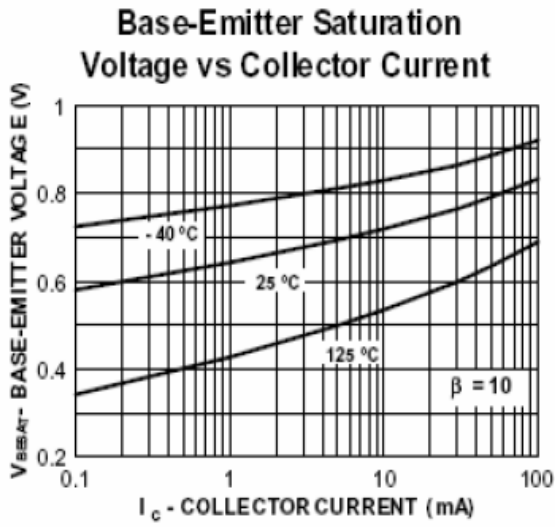
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	310		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	305		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=200V, I_E=0$		0.25	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		0.1	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=1mA$	60		
		$V_{CE}=10V, I_C=10mA$	100	200	
		$V_{CE}=10V, I_C=30mA$	60		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=20mA, I_B=2mA$		0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=20mA, I_B=2mA$		0.9	V
Transition frequency	f_T	$V_{CE}=20V, I_E=10mA$ $f=30MHz$	50		MHz

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



NPN Silicon Epitaxial Planar Transistor

MMSTA42



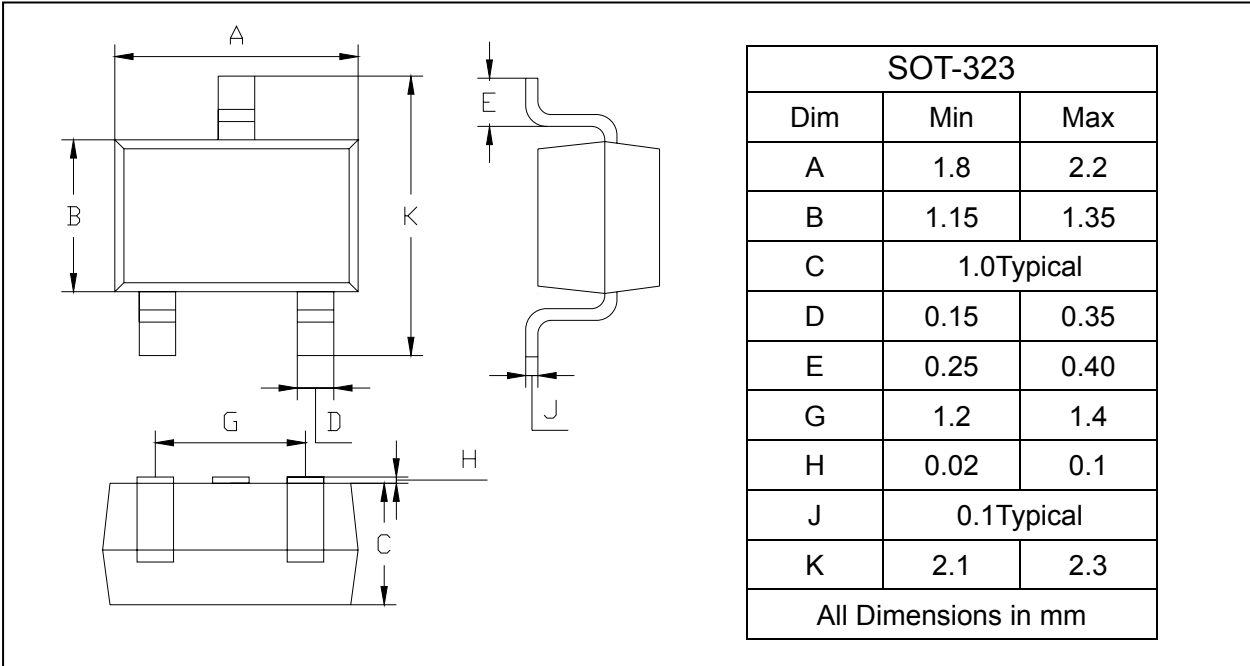
NPN Silicon Epitaxial Planar Transistor

MMSTA42

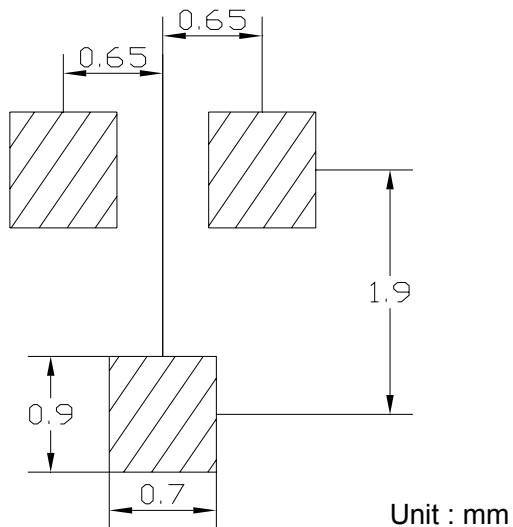
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMSTA42	SOT-323	3000/Tape&Reel

www.s-manuals.com