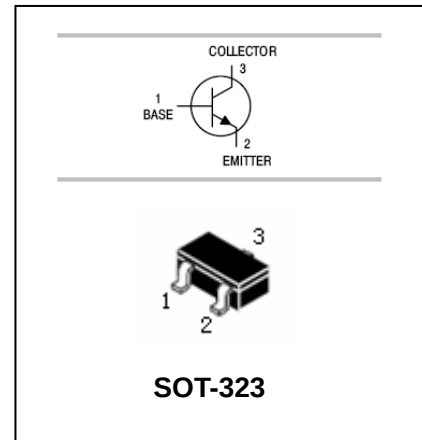


NPN Silicon Epitaxial Planar Transistor

MMSTA42

FEATURES

- Power dissipation.($P_C=0.35W$)
- Complementary PNP Type Available (MMSTA92)
- Ideal for Medium Power Amplification And Switching.
- Also Available in Lead Free Version.



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	300	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	200	mA
P_C	Collector Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	$^{\circ}C$



NPN Silicon Epitaxial Planar Transistor

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ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	300		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	300		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB}=200\text{V}, I_E=0$		100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=6\text{V}, I_C=0$		100	nA
DC current gain	h_{FE}	$V_{CE}=10\text{V}, I_C=1\text{mA}$	25		
		$V_{CE}=10\text{V}, I_C=10\text{mA}$	40		
		$V_{CE}=10\text{V}, I_C=30\text{mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=20\text{mA}, I_B=2\text{mA}$		0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=20\text{mA}, I_B=2\text{mA}$		0.9	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_E=10\text{mA}$ $f=30\text{MHz}$	50		MHz

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

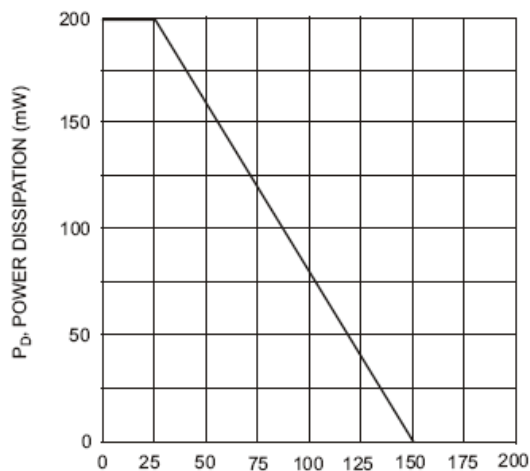


Fig. 1, Max Power Dissipation vs Ambient Temperature

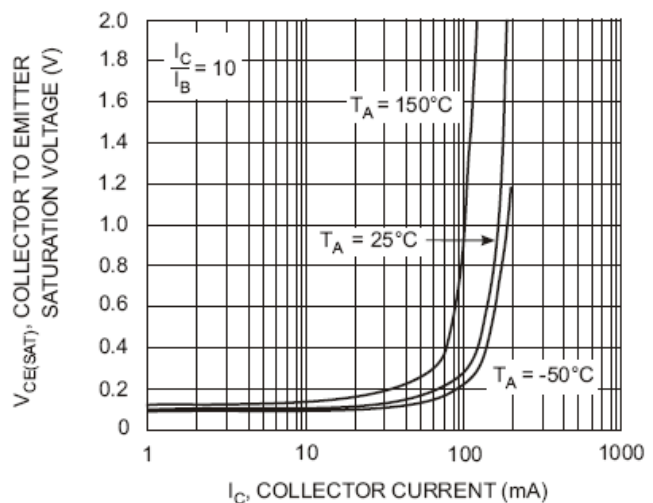
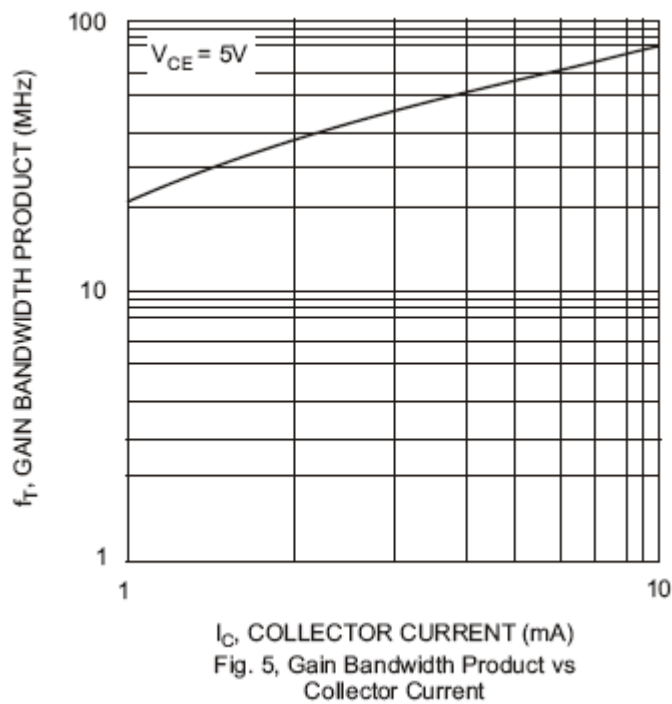
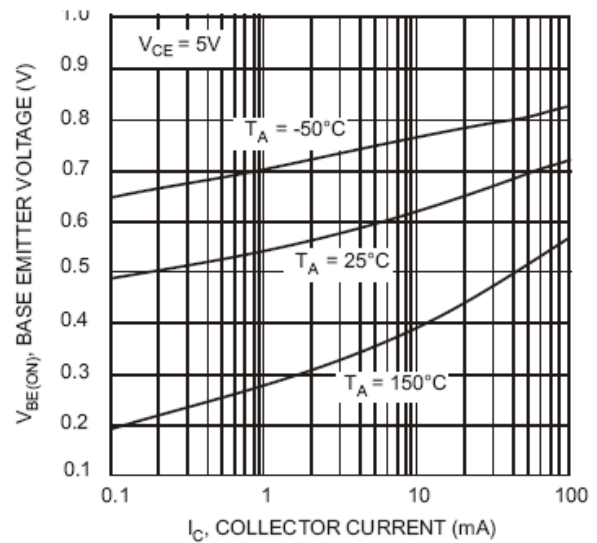
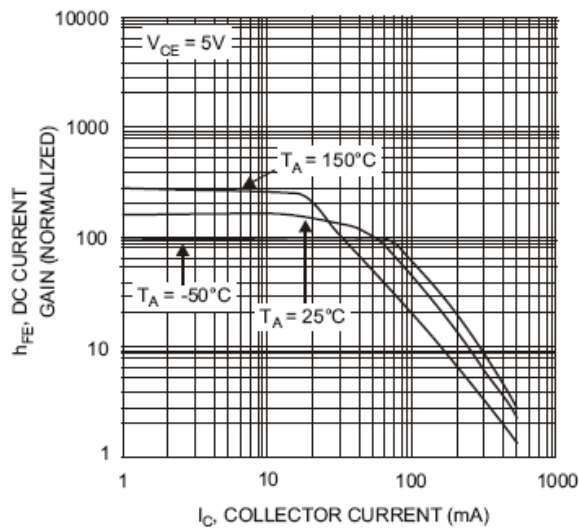


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

NPN Silicon Epitaxial Planar Transistor

MMSTA42



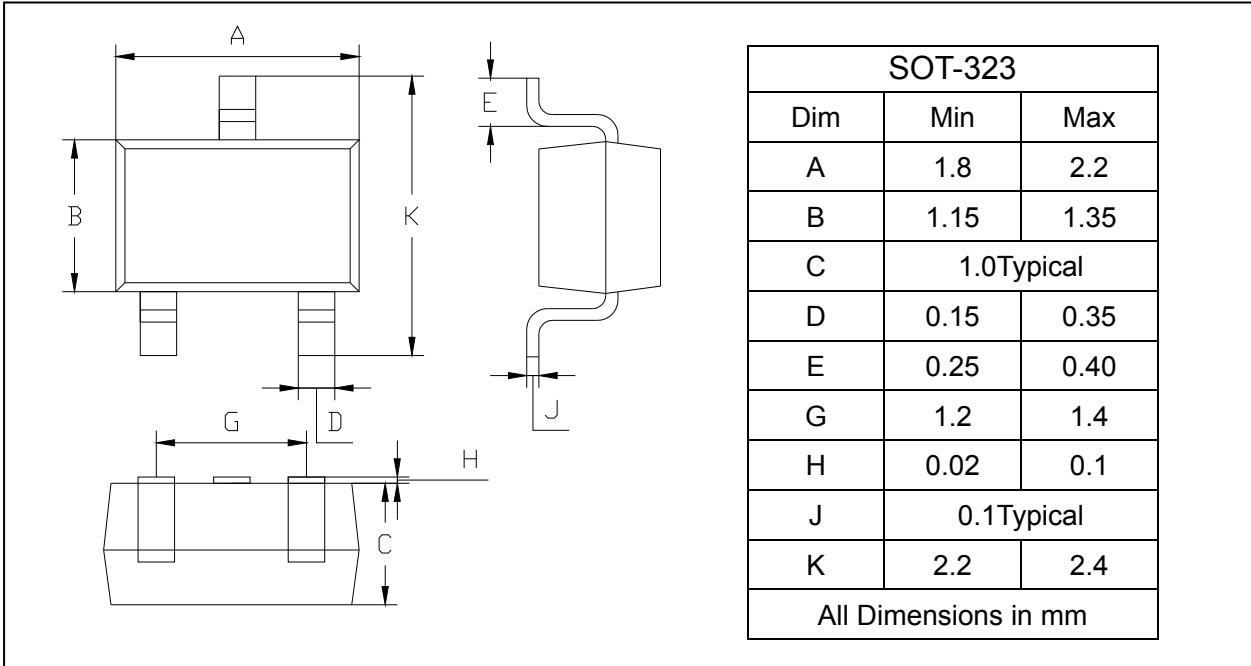
NPN Silicon Epitaxial Planar Transistor

MMSTA42

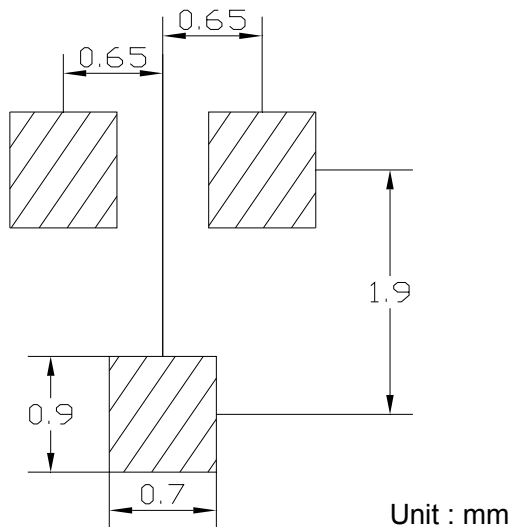
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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