

NPN General Purpose Transistor

MMST5551

FEATURES

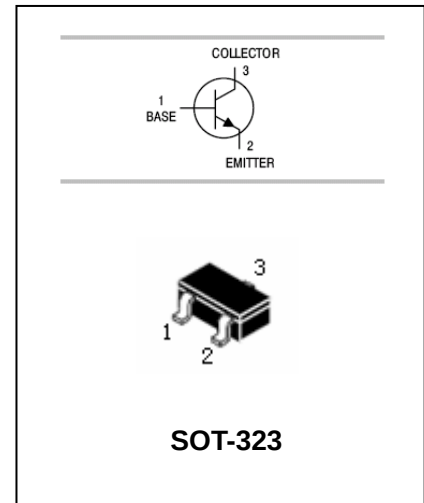
- Epitaxial planar die construction.
- Complementary PNP type available (MMST5401).
- Also available in lead free version.



Lead-free

APPLICATIONS

- Ideal for medium power amplification and switching.



ORDERING INFORMATION

Type No.	Marking	Package Code
MMST5551	K4N	SOT-323

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	UNIT
V_{CBO}	collector-base voltage	180	V
V_{CEO}	collector-emitter voltage	160	V
V_{EBO}	emitter-base voltage	6	V
I_C	collector current (DC)	0.6	A
P_C	Collector dissipation	0.3	W
$R_{\theta JA}$	Thermal resistance junction to ambient	625	°C/W
T_j, T_{stg}	junction and storage temperature	-55 to +150	°C



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

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu\text{A}, I_E=0$	180		
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=0.1\text{mA}, I_B=0$	160		
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu\text{A}, I_C=0$	6		
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = 120\text{V}$	-	50	nA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = 4\text{V}$	-	50	nA
h_{FE}	DC current gain	$V_{CE} = 5\text{V}; I_C = 1\text{mA}$ $V_{CE} = 5\text{V}; I_C = 10\text{mA}$ $V_{CE} = 5\text{V}; I_C = 50\text{mA}$	80 80 30	- 250 -	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = 50\text{mA}; I_B = 5\text{mA}$ $I_C = 10\text{mA}; I_B = 1\text{mA}$	-	0.2 0.15	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = 50\text{mA}; I_B = 5\text{mA}$ $I_C = 10\text{mA}; I_B = 1\text{mA}$	-	1 1	V
f_T	transition frequency	$I_C = 10\text{mA}; V_{CE} = 10\text{V};$ $f = 100\text{MHz}$	80	-	MHz

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

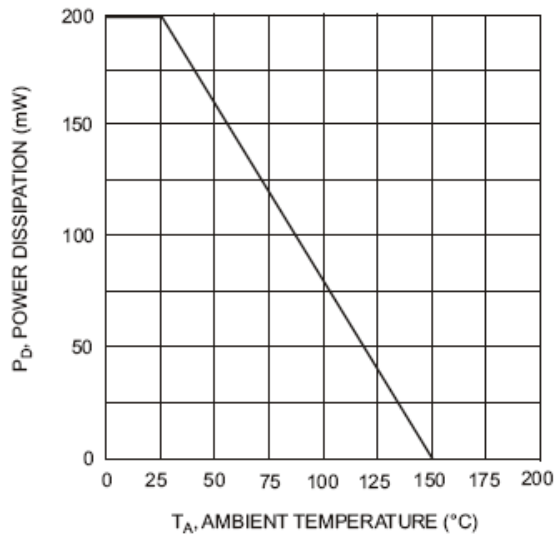


Fig. 1, Max Power Dissipation vs Ambient Temperature

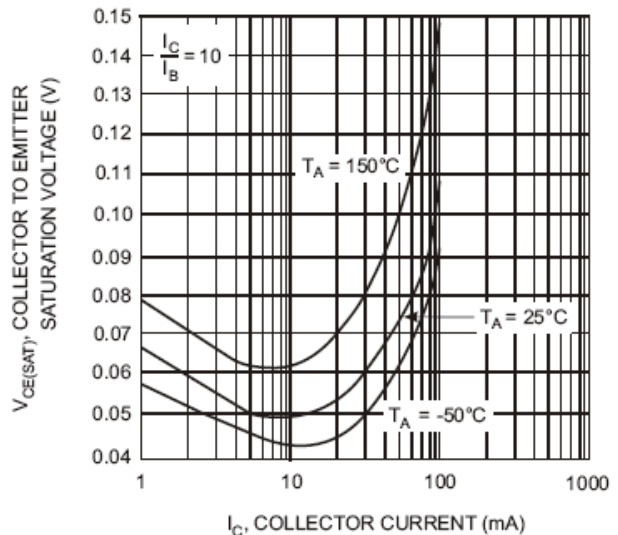
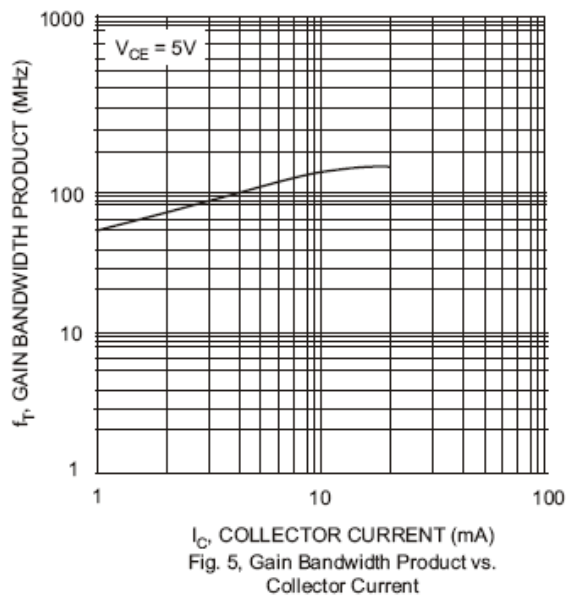
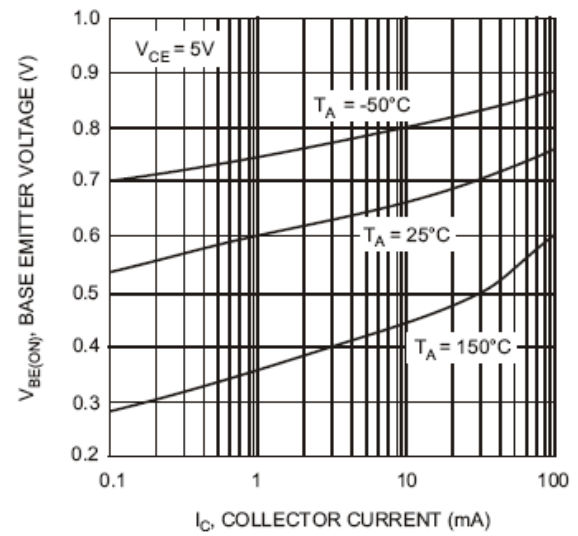
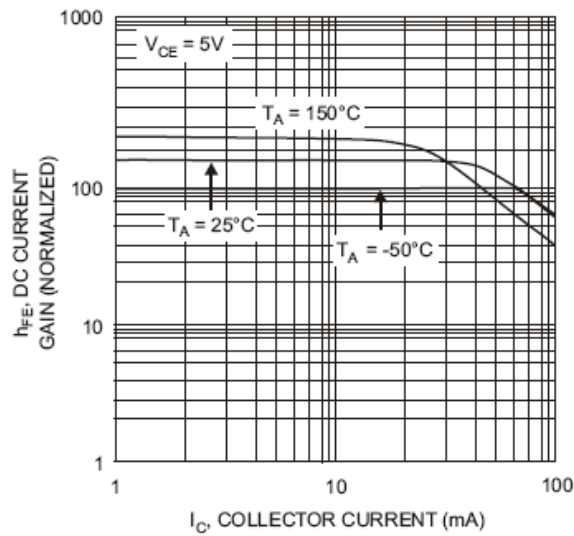


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

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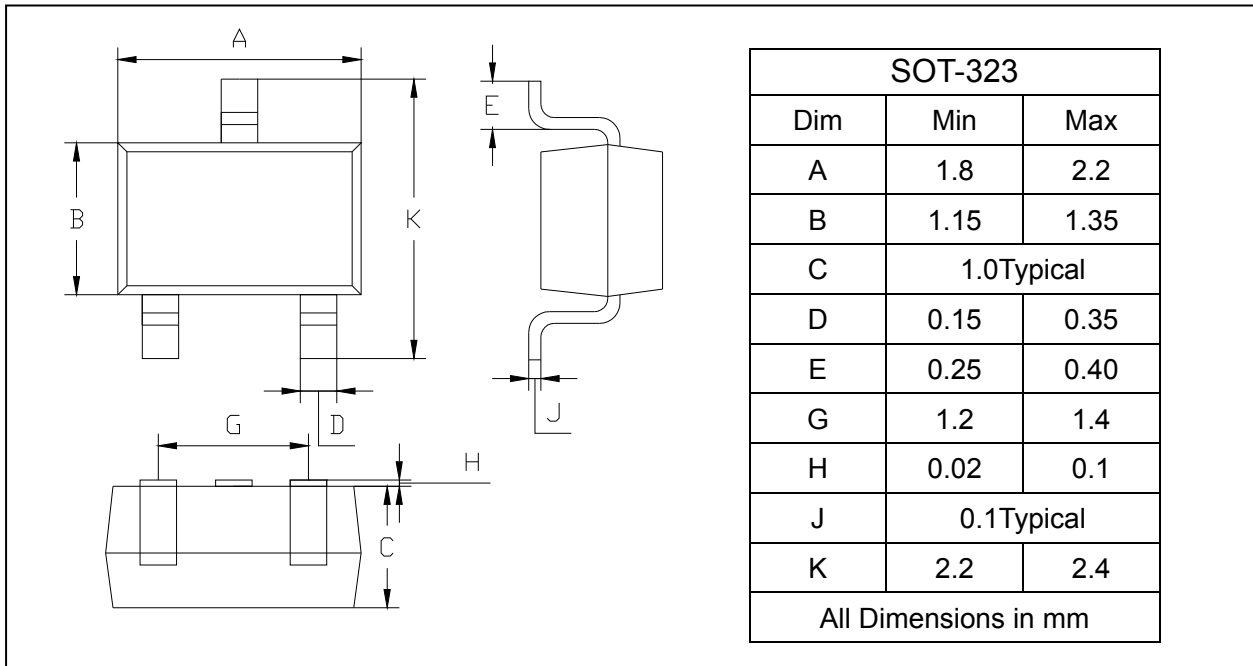
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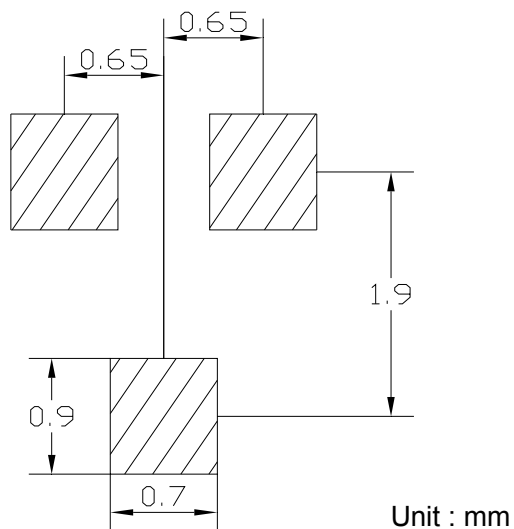
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMST5551	SOT-323	3000/Tape&Reel