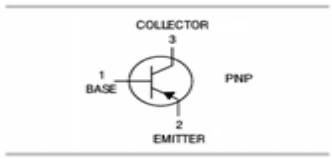
PNP General Purpose Transistor MMST5401

FEATURES

HF

- Epitaxial planar die construction
- Complementary NPN type available (MMST5551)
- Also available in lead free version



SOT-323

APPLICATIONS

- Ideal for medium power amplification and switching

ORDERING INFORMATION

Type No.	Marking	Package Code
MMST5401	K4M	SOT-323

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	UNIT
V_{CBO}	collector-base voltage	-160	V
V_{CEO}	collector-emitter voltage	-150	V
V_{EBO}	emitter-base voltage	-5	V
I_C	collector current (DC)	-0.6	A
P_C	Collector dissipation	0.2	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 @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-100μA,I_E=0	-160		
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-1mA,I_B=0	-150		
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-10μA,I_C=0	-5		
I_{CBO}	collector cut-off current	I_E=0;V_{CB} = -120V	-	-50	nA
I_{EBO}	emitter cut-off current	I_C=0; V_{EB} = -3V	-	-50	nA
h_{FE}	DC current gain	V_{CE}=-5V; I_C=-1mA V_{CE}=-5V;I_C=-10mA V_{CE}=-5V;I_C=-50 mA	50 60 50	- 240 -	
$V_{CE(sat)}$	collector-emitter saturation voltage	I_C=-50 mA; I_B=-5mA I_C=-10mA; I_B=-1mA	-	-0.5 -0.2	V
$V_{BE(sat)}$	base-emitter saturation voltage	I_C=-50mA;I_B=-5mA I_C=-10mA; I_B=-1mA	-	-1 -1	V
f_T	transition frequency	I_C=-10mA; V_{CE}= -10V, f=100MHz	100	300	MHz
NF	Noise figure	I_C=-200mA,V_{CE}=-5.0V, f=100MHz		8	dB

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

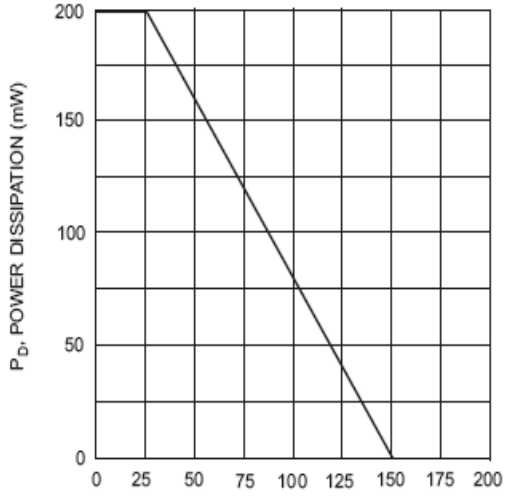

Fig. 1, Max Power Dissipation vs Ambient Temperature

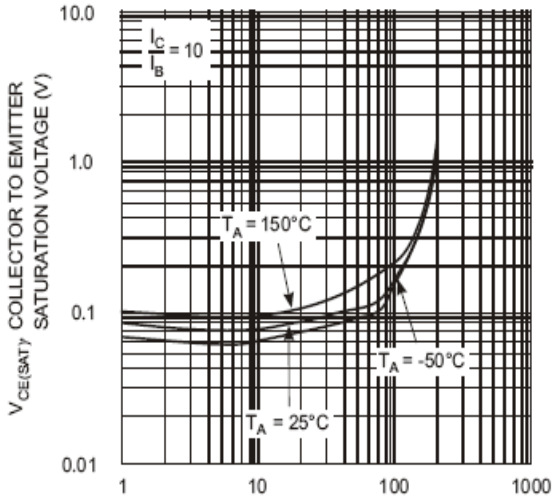

Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

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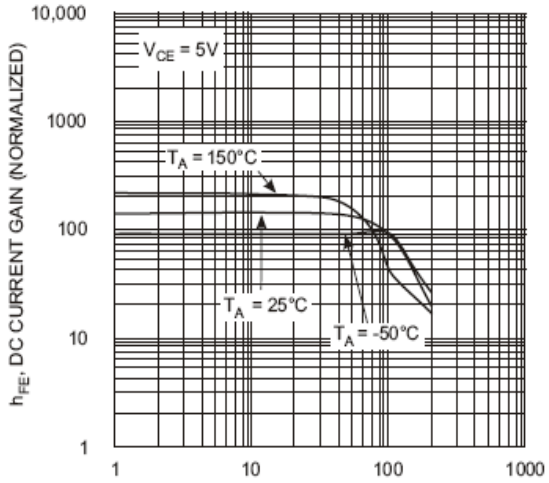

Fig. 3, DC Current Gain vs. Collector Current

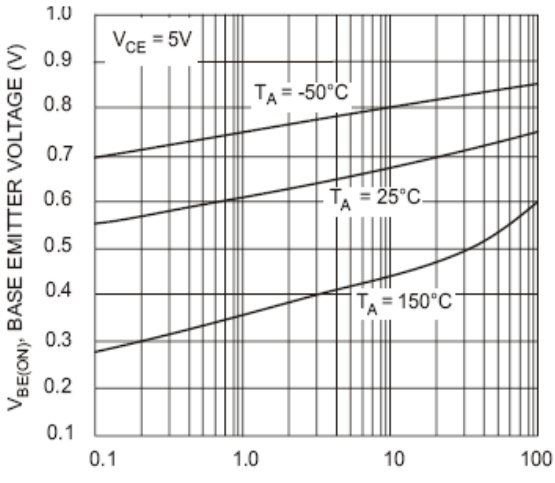

Fig. 4, Base Emitter Voltage vs. Collector Current

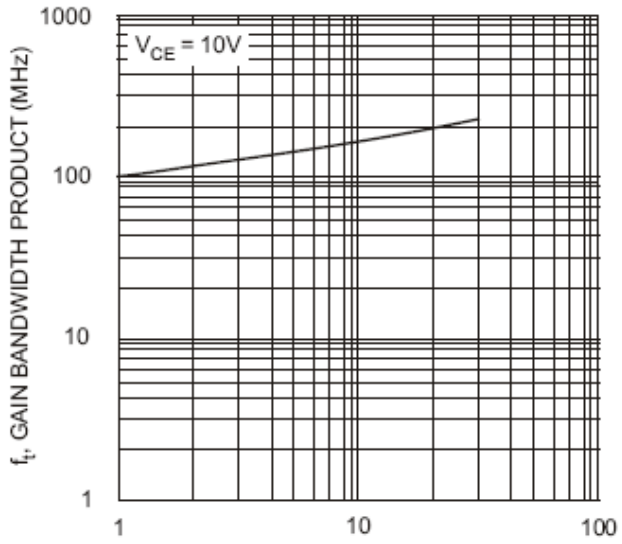

Fig. 5, Gain Bandwidth Product vs Collector Current

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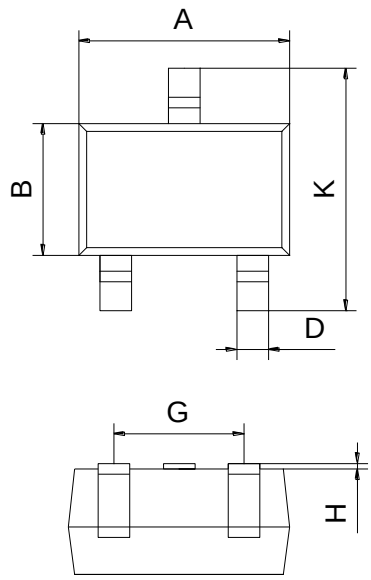
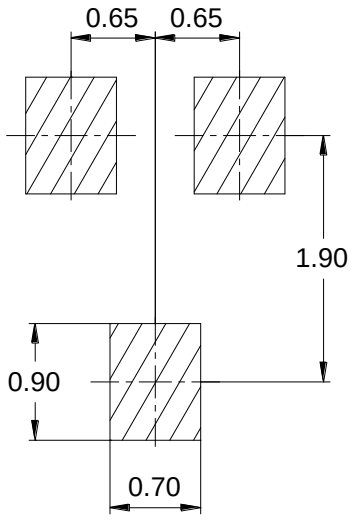
PACKAGE OUTLINE

Plastic surface mounted package SOT-323



SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
MMST5401	SOT-323	3000 pcs / Tape & Reel