

NPN General Purpose Transistor

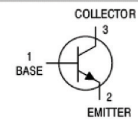


Features:

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

Applications:

- Ideal for medium power amplification and switching.



SOT-323

Maximum Rating: @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Unit
Collector-base Voltage	V_{CBO}	180	V
Collector-emitter Voltage	V_{CEO}	160	
Emitter-base Voltage	V_{EBO}	6	
Collector Current (DC)	I_C	0.6	A
Collector Dissipation	P_C	0.3	W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_j, T_{stg}	-55 to 150	$^\circ\text{C}$

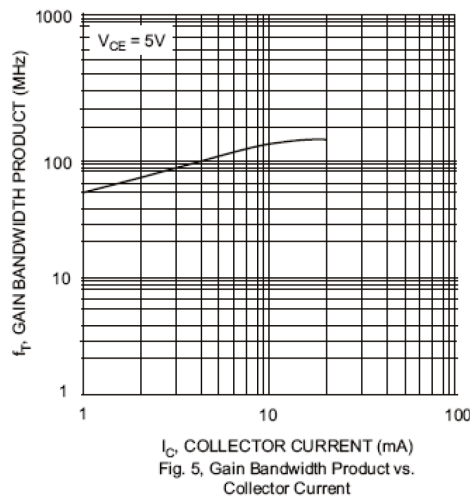
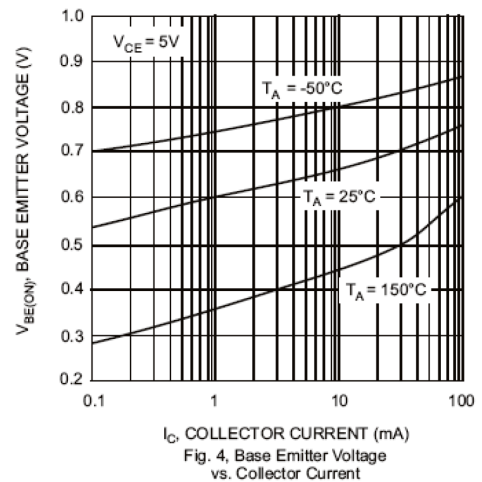
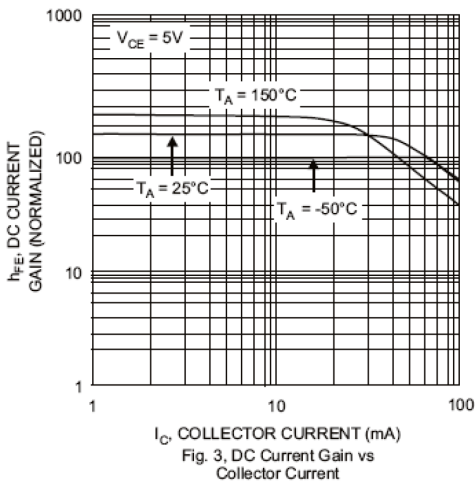
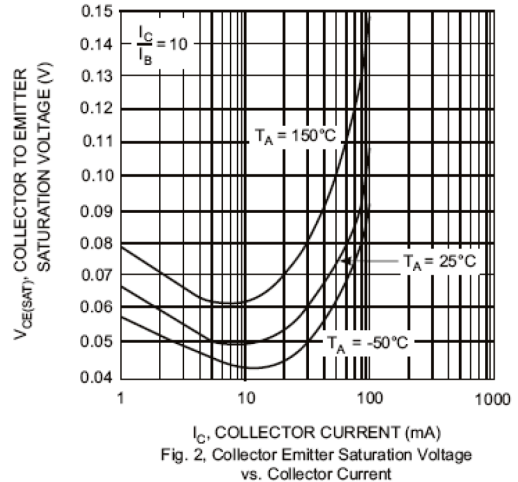
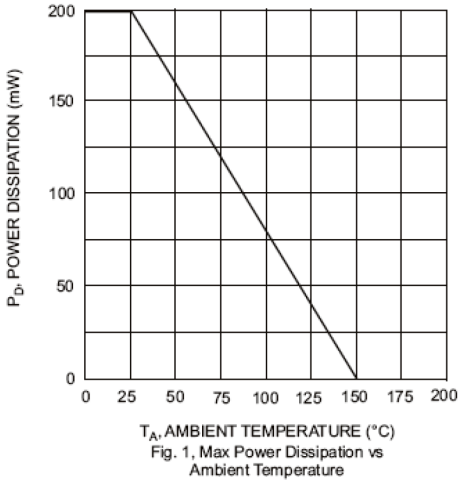
Electrical Characteristics: @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Collector-base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	180		
Collector-emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 0.1\text{mA}, I_B = 0$	160		
Emitter-base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	6		
Collector Cut-off Current	I_{CBO}	$I_E = 0; V_{CB} = 120\text{V}$	-	50	nA
Emitter Cut-off Current	I_{EBO}	$I_C = 0; V_{EB} = 4\text{V}$	-	50	
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}; I_C = 1\text{mA}$ $V_{CE} = 5\text{V}; I_C = 10\text{mA}$ $V_{CE} = 5\text{V}; I_C = 50\text{mA}$	80 80 30	- 250 -	
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}; I_B = 5\text{mA}$ $I_C = 10\text{mA}; I_B = 1\text{mA}$	-	0.2 0.15	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}; I_B = 5\text{mA}$ $I_C = 10\text{mA}; I_B = 1\text{mA}$	-	1 1	
Transition Frequency	f_T	$I_C = 10\text{mA}; V_{CE} = 10\text{V};$ $f = 100\text{MHz}$	80	-	MHz

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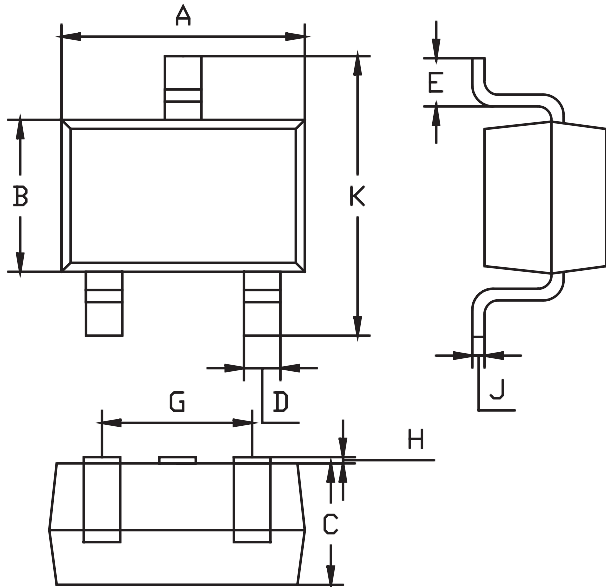
Typical Characteristics: @ $T_A = 25^\circ\text{C}$ unless otherwise specified



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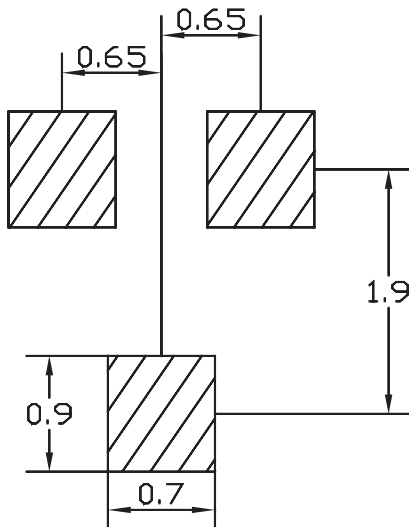


Package Outline:



SOT-323		
Dim	Min.	Max.
A	1.8	2.2
B	1.15	1.35
C	1 Typical	
D	0.15	0.35
E	0.25	0.4
G	1.2	1.4
H	0.02	0.1
J	0.1 Typical	
K	2.1	2.3
All Dimensions in mm		

Soldering Footprint:



Dimensions : Millimetres

Part Number Table

Description	Part Number
Transistor, Bipolar, NPN, 160V, 600mA, SOT-323	MMST5551-7-F

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