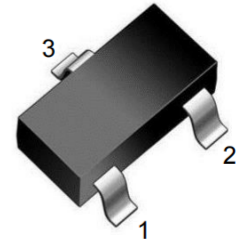


FEATURES

- Complementary to MMST5401
- Small Surface Mount Package
- Ideal for Medium Power Amplification and Switching



SOT-323 top view

1. BASE
2. EMITTER
3. COLLECTOR

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

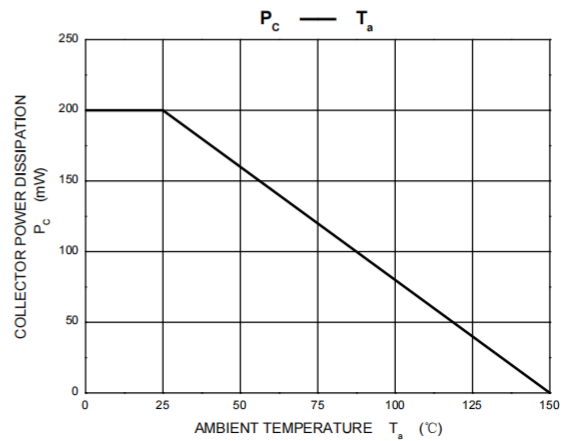
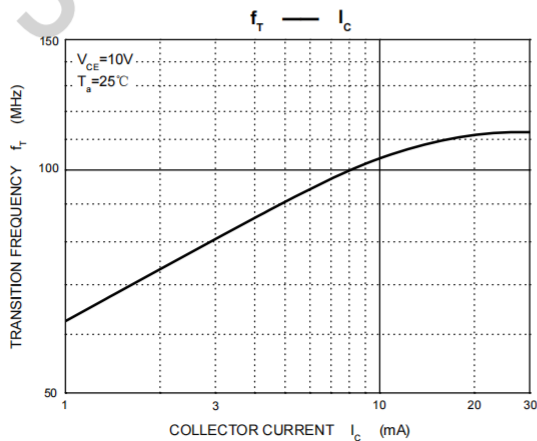
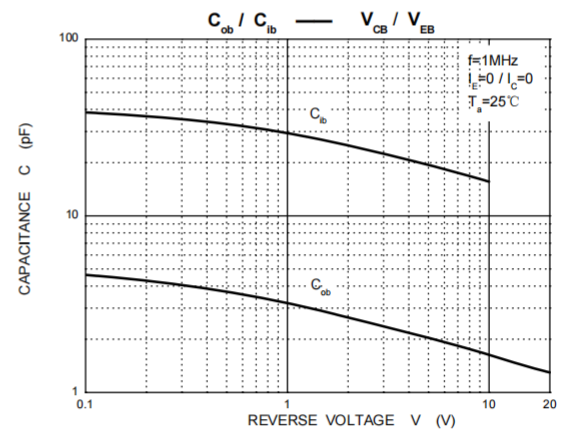
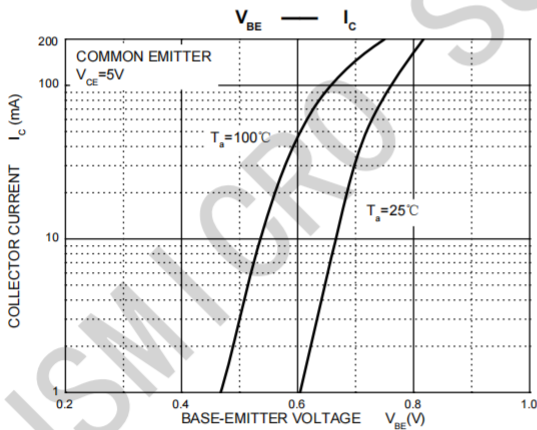
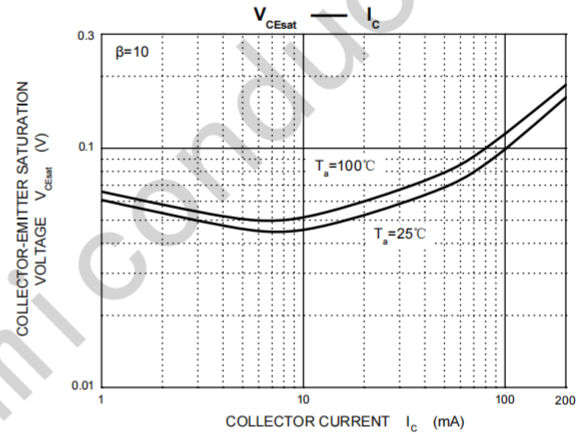
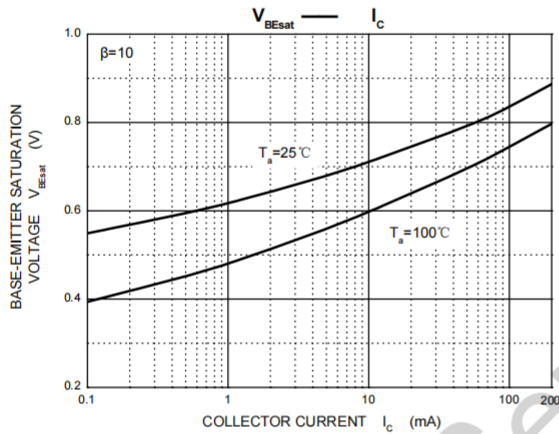
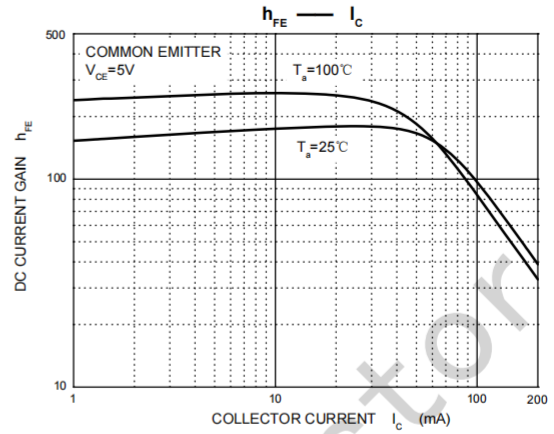
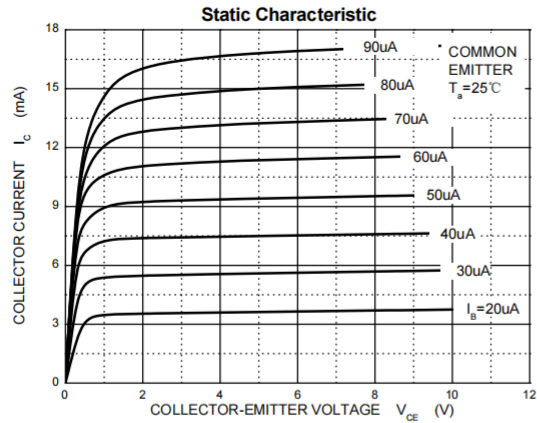
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_{C}	Collector Current	600	mA
P_{C}	Collector Power Dissipation	200	mW
$R_{\theta\text{JA}}$	Thermal Resistance From Junction To Ambient	625	$^{\circ}\text{C/W}$
T_{j}	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	$I_{\text{C}}=100\mu\text{A}, I_{\text{E}}=0$	180			V
Collector-emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}^*$	$I_{\text{C}}=1\text{mA}, I_{\text{B}}=0$	160			V
Emitter-base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	$I_{\text{E}}=10\mu\text{A}, I_{\text{C}}=0$	6			V
Collector cut-off current	I_{CBO}	$V_{\text{CB}}=120\text{V}, I_{\text{E}}=0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}}=4\text{V}, I_{\text{C}}=0$			50	nA
DC current gain	h_{FE}	$V_{\text{CE}}=5\text{V}, I_{\text{C}}=1\text{mA}$	80			
		$V_{\text{CE}}=5\text{V}, I_{\text{C}}=10\text{mA}$	80		300	
		$V_{\text{CE}}=5\text{V}, I_{\text{C}}=50\text{mA}$	30			
Collector-emitter saturation voltage	$V_{\text{CE}(\text{sat})}$	$I_{\text{C}}=50\text{mA}, I_{\text{B}}=5\text{mA}$			0.2	V
		$I_{\text{C}}=10\text{mA}, I_{\text{B}}=1\text{mA}$			0.15	V
Base-emitter saturation voltage	$V_{\text{BE}(\text{sat})}$	$I_{\text{C}}=50\text{mA}, I_{\text{B}}=5\text{mA}$			1	V
		$I_{\text{C}}=10\text{mA}, I_{\text{B}}=1\text{mA}$			1	V
Transition frequency	f_{T}	$V_{\text{CE}}=10\text{V}, I_{\text{C}}=10\text{mA}, f=100\text{MHz}$	100		300	MHz
Collector output capacitance	C_{ob}	$V_{\text{CB}}=10\text{V}, I_{\text{E}}=0, f=1\text{MHz}$			6	pF

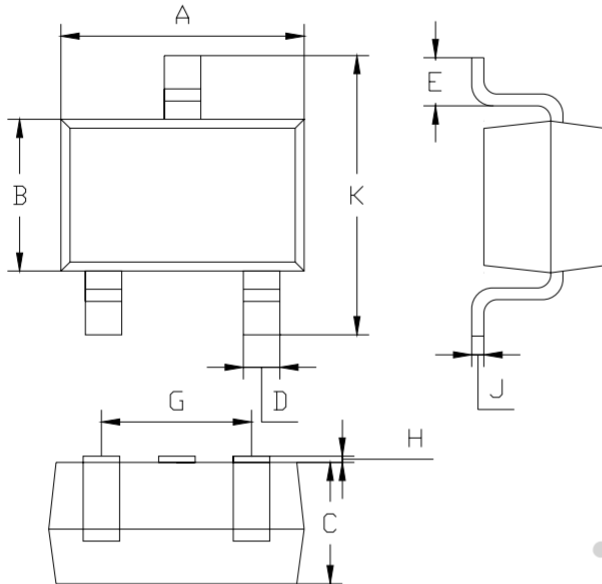
*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycles $\leq 2.0\%$.

Typical Characteristics



Package Information

SOT-323



SOT-323		
Dim	Min	Max
A	1.8	2.2
B	1.15	1.35
C	1.0Typical	
D	0.15	0.35
E	0.25	0.40
G	1.2	1.4
H	0.02	0.1
J	0.1Typical	
K	2.1	2.3
All Dimensions in mm		

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