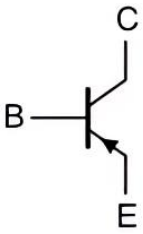
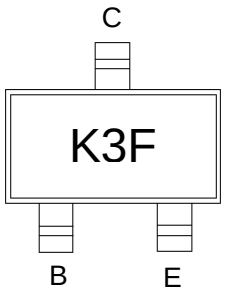
Features

• Epitaxial planar die construction
• Complementary PNP Type available(MMST2222A)

SOT-323 top view



Schematic diagram



Marking and pin assignment

Pb-Free RoHS Halogen-Free

Maximum Ratings (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.6	A
P_C	Collector Power Dissipation	0.2	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

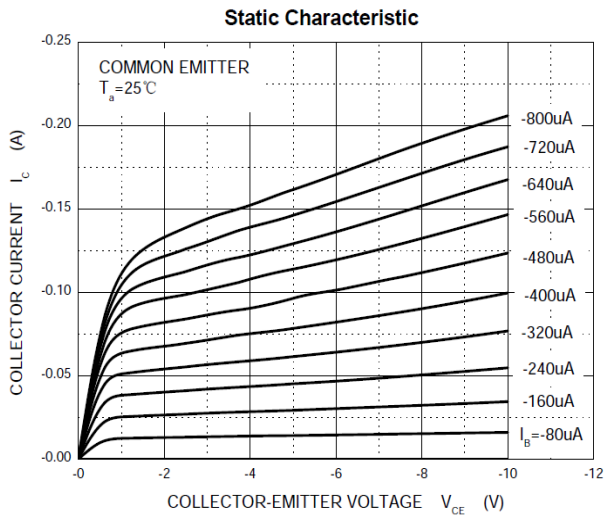
Ordering Information (Example)

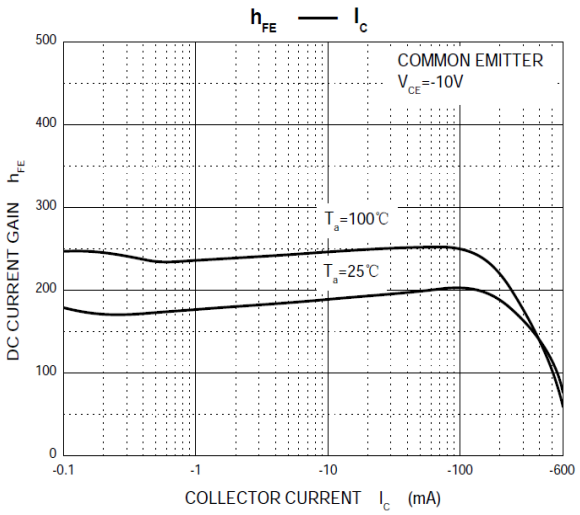
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
MMST2907A	SOT-323	K3F	3,000	45,000	180,000	7"reel

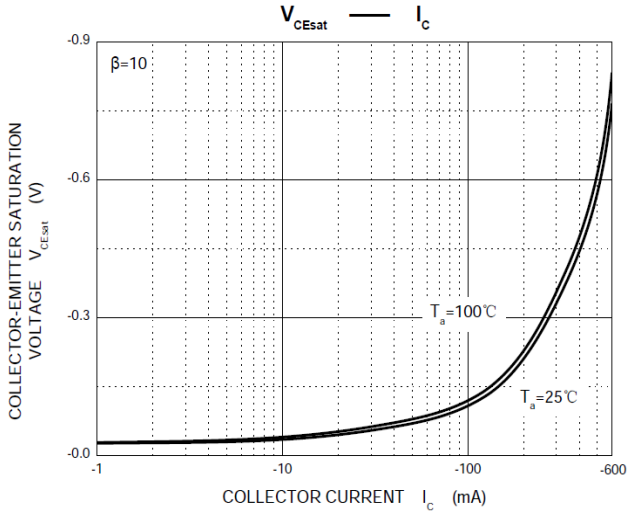
Electrical Characteristics (Ta=25℃ unless otherwise specified)

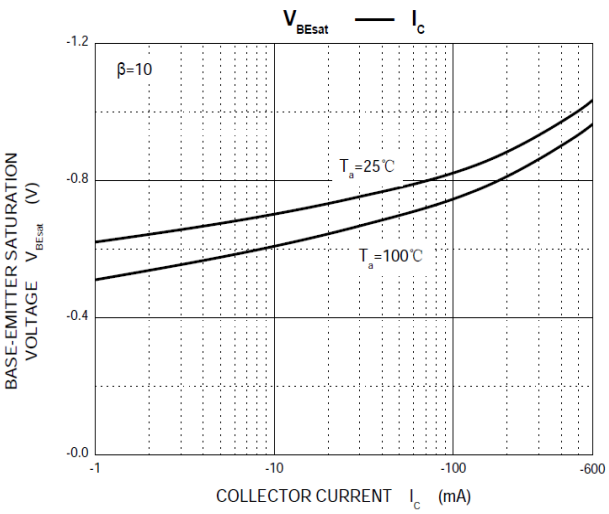
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-10μA,I_E=0	-60	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-10mA, I_B=0	-60	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-10μA,I_C=0	-5	--	--	V
I_{CBO}	Collector cut-off current	V_{CB}=-50V , I_E=0	--	--	-100	nA
I_{EBO}	Emitter cut-off current	V_{EB}=-3V , I_C=0	--	--	-100	nA
I_{CES}	Collector cut-off current	V_{CE}=-30V, I_B=0	--	--	-100	nA
H_{FE1}	DC current gain	V_{CE}=-10V, I_C=-0.1mA	75	--	--	--
H_{FE2}		V_{CE}=-10V, I_C= -1mA	100			
H_{FE3}		V_{CE}=-10V, I_C=-10mA	100			
H_{FE4}		V_{CE}=-10V, I_C= -150mA	100	--	300	
H_{FE5}		V_{CE}=-10V, I_C= -500mA	50			
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=-150mA, I_B=-15mA	--	--	-0.4	V
		I_C=-500mA, I_B=-50mA	--	--	-1.6	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=-150mA, I_B=-15mA	-0.6	--	-1.3	V
		I_C=-500mA, I_B=-50mA	--	--	-2.6	V
f_T	Transition frequency	V_{CE}=-20V,I_C=-50mA,f=100MHz	200	--	--	MHz
C_{ob}	Collector output capacitance	V_{CB}=-10V, I_E=0, f=1MHz	--	--	8	pF
C_{ib}	Input capacitance	V_{EB}=-2V,I_C=0,f=0.1MHz	--	--	30	pF
t_d	Delay time	V_{CC}=-30V, $V_{BE(off)}$=-1.5V ,I_C=-150mA ,I_{B1}=- 15mA	--	--	10	ns
t_r	Rise time		--	--	40	ns
t_s	Storage time	V_{CC}=-30V,I_C=-150mA,I_{B1}=-I_{B2}=-15mA	--	--	80	ns
t_f	Fall time		--	--	30	ns

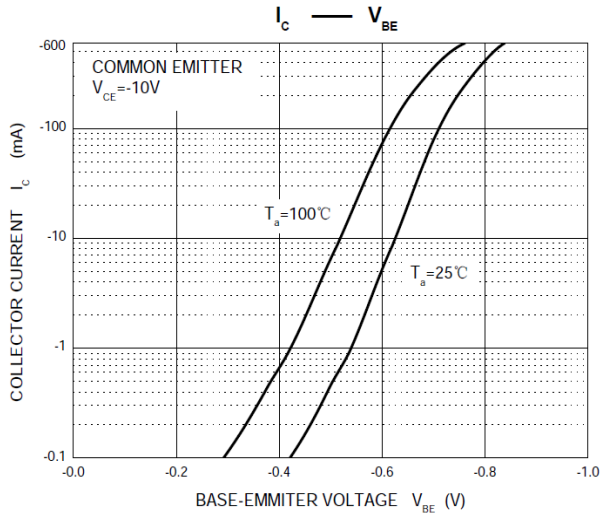
Typical Characteristics

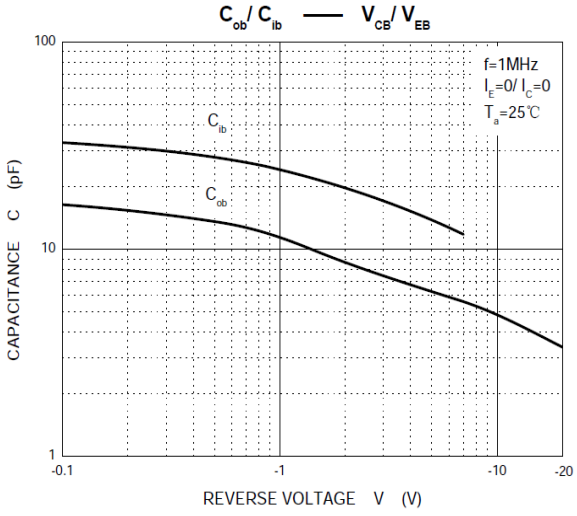


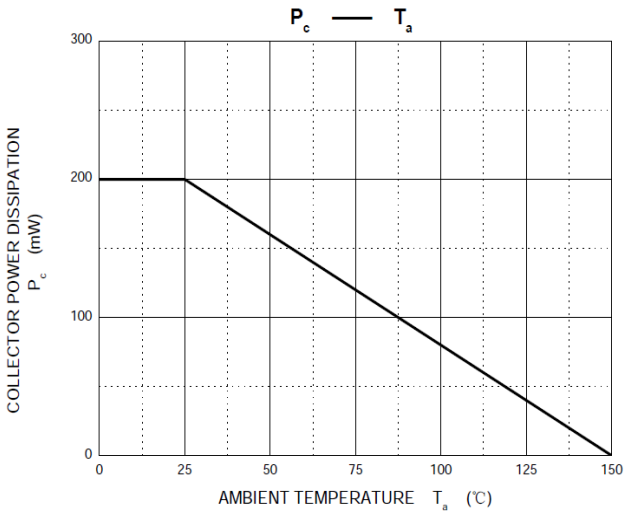




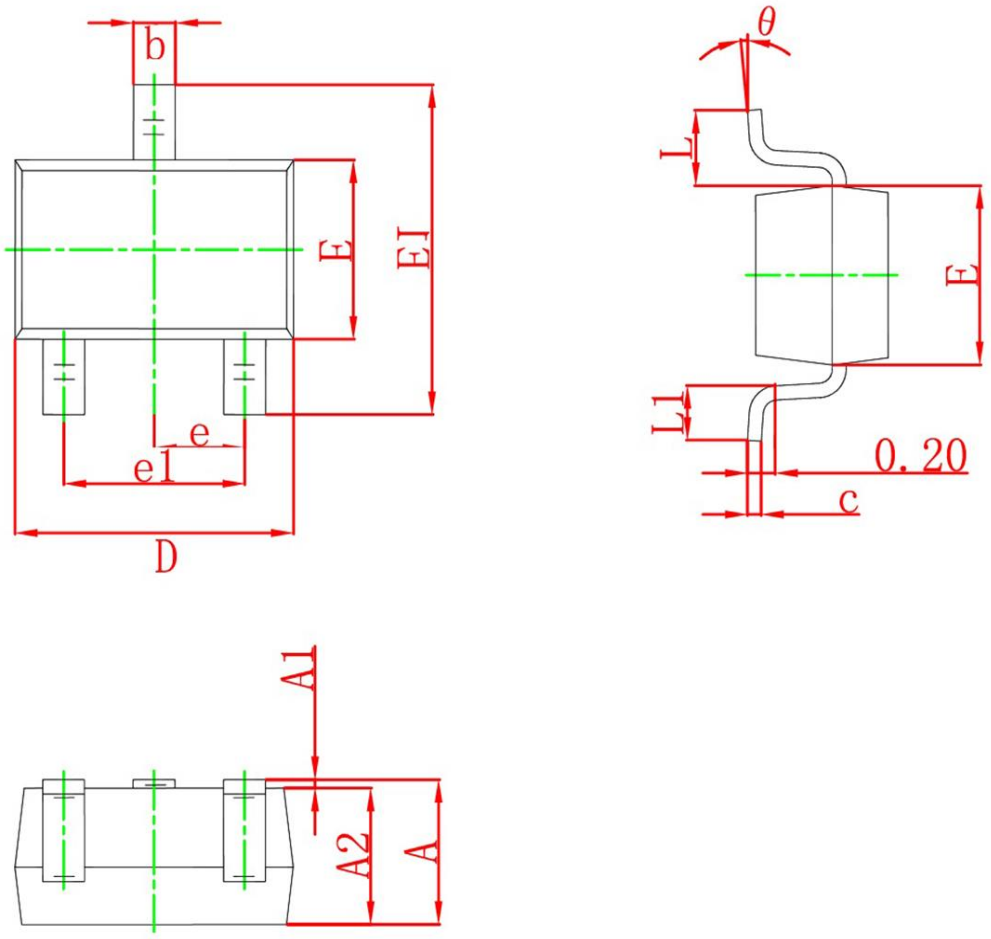








SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°