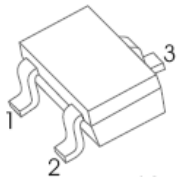


Features

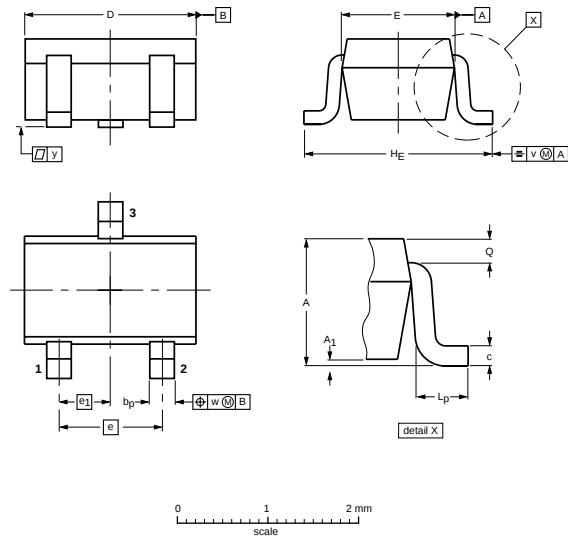
- Complementary to MMST3906



SOT-323

1. BASE
2. EMITTER
3. COLLECTOR

SOT-323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	60	V
V _{CE0}	Collector-Emitter Voltage	40	V
V _{EB0}	Emitter-Base Voltage	5	V
I _c	Collector Current	200	mA
P _c	Collector Power Dissipation	200	mW
R _{GJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

MMST3904

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO} *	I _C =10μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO} *	I _C =1mA, I _B =0	40			V
Emitter-base breakdown voltage	V _{(BR)EBO} *	I _E =10μA, I _C =0	5			V
Collector cut-off current	I _{CBO} *	V _{CB} =60V, I _E =0			60	nA
Collector cut-off current	I _{CEX}	V _{CE} =30V, V _{BE(off)} =3V			50	nA
DC current gain	h _{FE} *	V _{CE} =1V, I _C =100μA	40			
		V _{CE} =1V, I _C =1mA	70			
		V _{CE} =1V, I _C =10mA	100		300	
		V _{CE} =1V, I _C =50mA	60			
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =10mA, I _B =1mA			0.25	V
		I _C =50mA, I _B =5mA			0.3	V
Base-emitter saturation voltage	V _{BE(sat)} *	I _C =10mA, I _B =1mA			0.85	V
		I _C =50mA, I _B =5mA			0.95	V
Transition frequency	f _T	V _{CE} =20V, I _C =10mA, f=100MHz	300			MHz
Collector output capacitance	C _{ob}	V _{CB} =5V, I _E =0, f=1MHz			4	pF
Collector output capacitance	C _{ib}	V _{EB} =0.5V, I _E =0, f=1MHz			8	pF
Delay time	t _d	V _{CC} =3V, V _{BE(off)} =0.5V I _C =10mA,			35	ns
Rise time	t _r	I _{B1} =1mA			35	ns
Storage time	t _s	V _{CC} =3V, I _C =10mA, I _{B1} = I _{B2} =1mA			225	ns
Fall time	t _f				75	ns

*Pulse test: pulse width ≤300μs, duty cycles ≤ 2.0%.

RATING AND CHARACTERISTIC CURVES (MMST3904)

