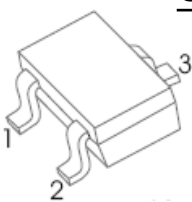


TRANSISTOR (NPN)	SOT-323 Plastic-Encapsulate Transistors
SOT-323  1. BASE 2. EMITTER 3. COLLECTOR	Features Complementary to MMST3906

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

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

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, I _{B1} =1mA			35	ns
Rise time	t _r				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 cycle ≤ 2.0%.

Typical Characteristics

