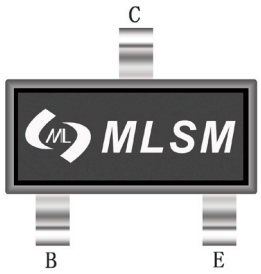
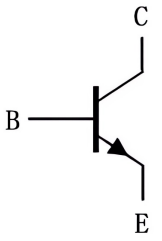
Features

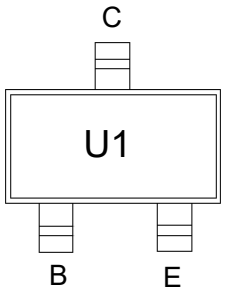
• Low voltage



SOT-23 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	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	A
P_C	Collector Power Dissipation	225	W
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	556	°C/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

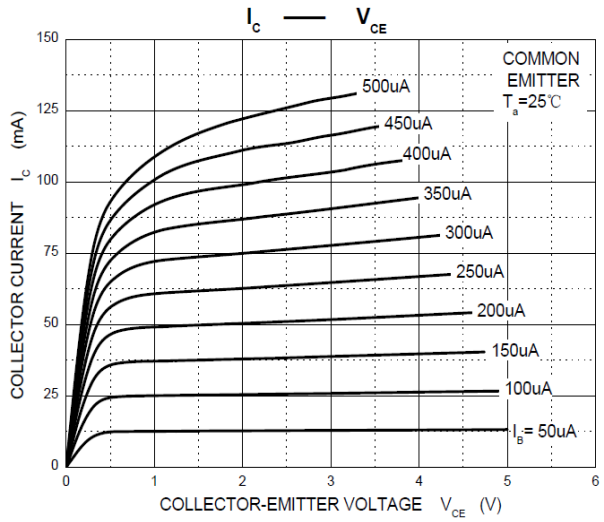
Ordering Information (Example)

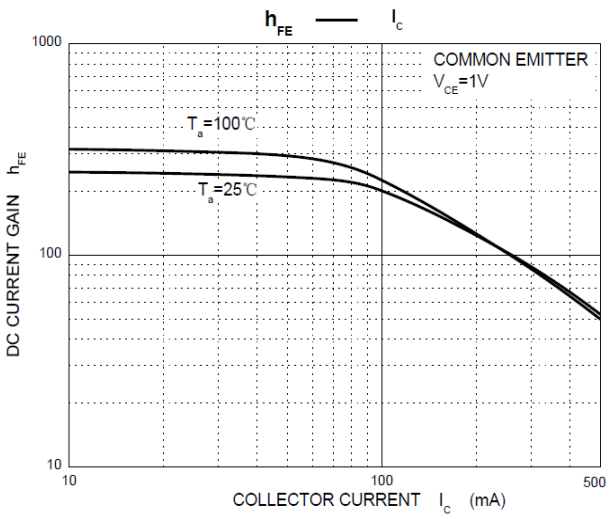
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BCX19	SOT-23	U1	3,000	45,000	180,000	7"reel

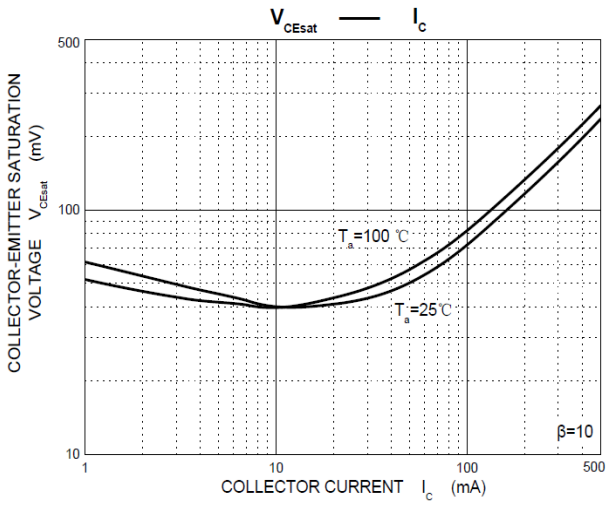
Electrical Characteristics (Ta=25℃ unless otherwise specified)

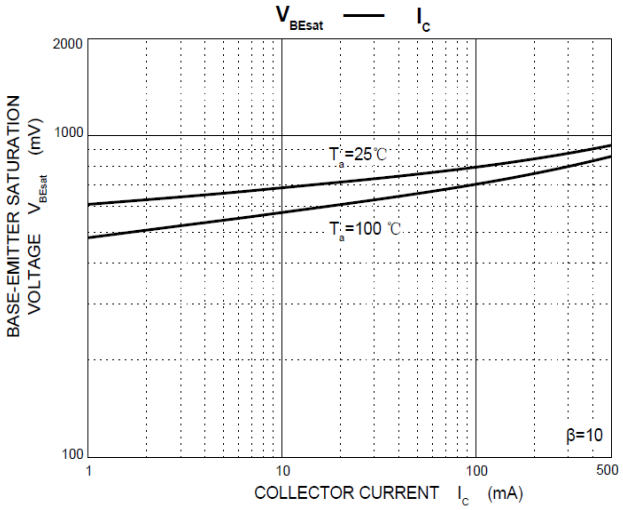
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=100μA,I_E=0	50	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA, I_B=0	45	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=100μA,I_C=0	5	--	--	V
I_{CBO}	Collector cut-off current	V_{CB}=20V , I_E=0	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	V_{EB}=5V , I_C=0	--	--	10	μA
$H_{FE(1)}$	DC current gain	V_{CE}=1V, I_C=100mA	100	--	600	
$H_{FE(2)}$	DC current gain	V_{CE}=1V, I_C=300mA	70	--	--	
$H_{FE(3)}$	DC current gain	V_{CE}=1V, I_C=500mA	40	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=500mA, I_B=50mA	--	--	0.62	V
$V_{BE(on)}$	Base-emitter voltage	Ic=500mA, V_{CE}=1V	--	--	1.2	V

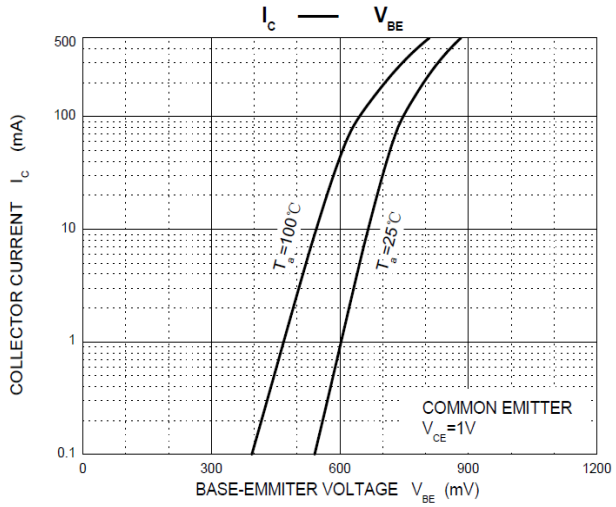
Typical Operating Characteristics

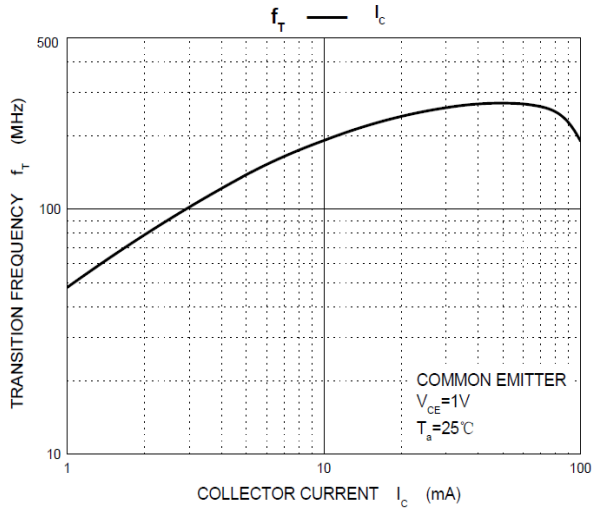


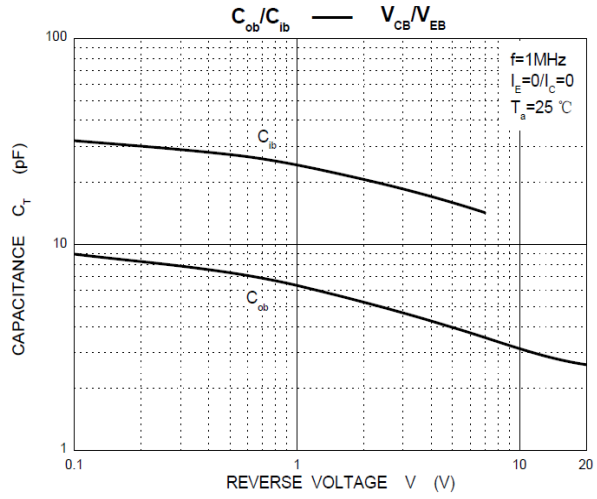


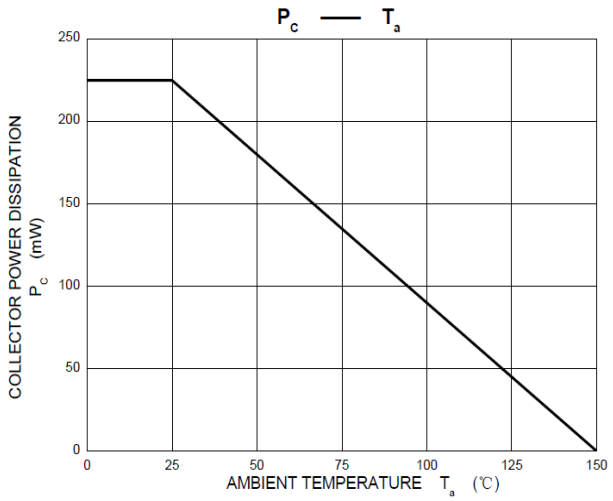




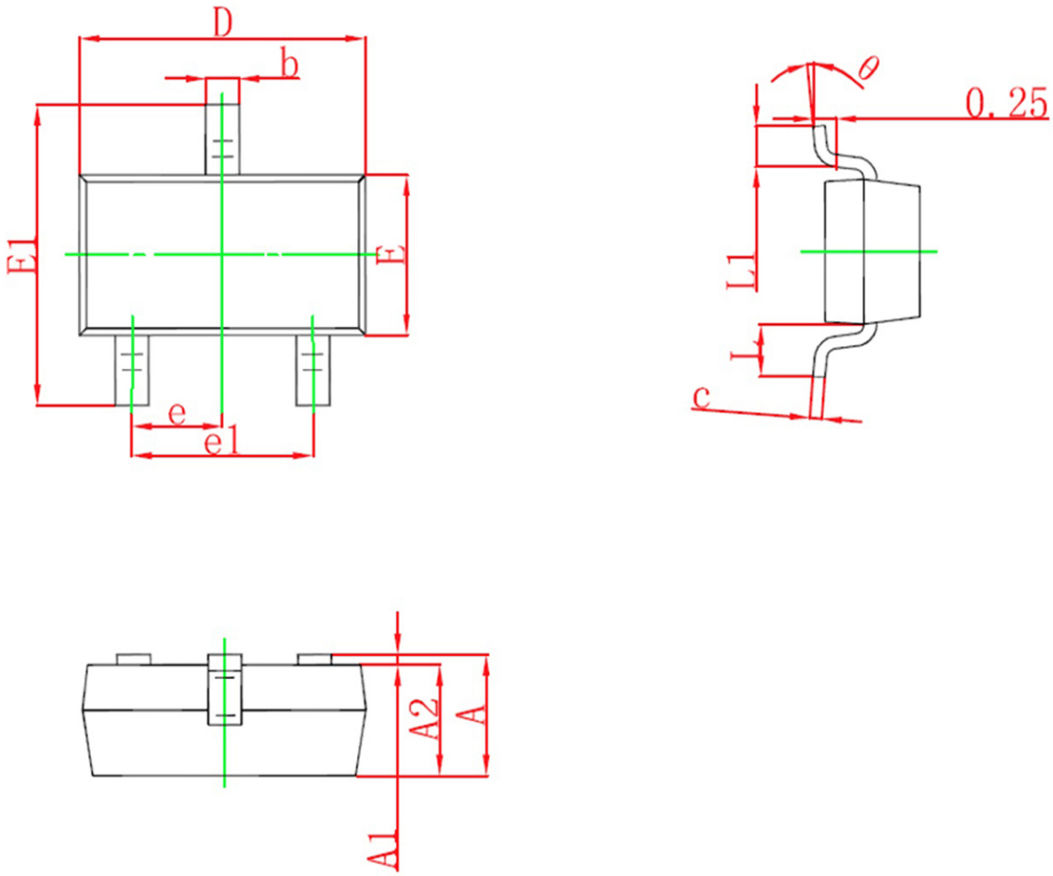








SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°