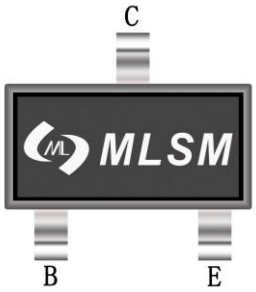
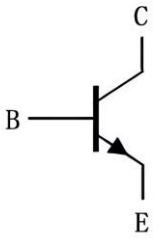
Features

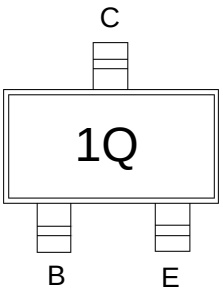
- SmallPackageLowVCE(sat)
- HighcollectorcurrentcapabilityICandICM
- Highcollectorcurrentgain(hFE)athighIC
- Highefficiencyduetolessheatgeneration
- RequiredSmallPrinted-CircuitBoard(PCB)area
- ComplementarytoCJ3515



SOT-523 top view



Schematic diagram



Marking and pin assignment

Pb-Free RoHS HAL Halogen-Free

Maximum Ratings (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	15	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.5	A
I_{CM}	CollectorCurrent-Peak	1	A
P_C	Collector Power Dissipation	150	W
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	833	°C/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

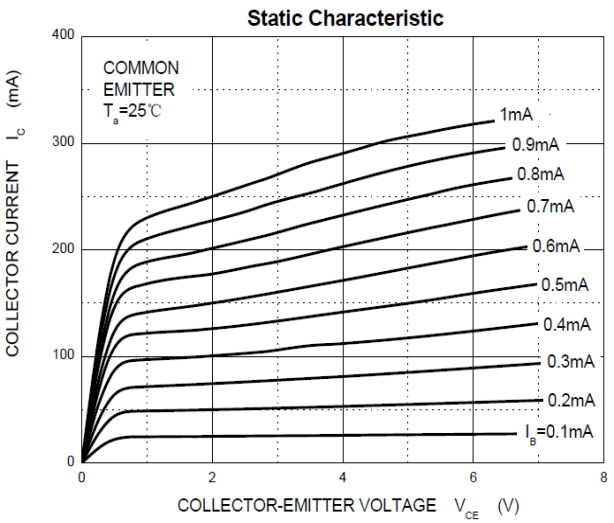
Ordering Information (Example)

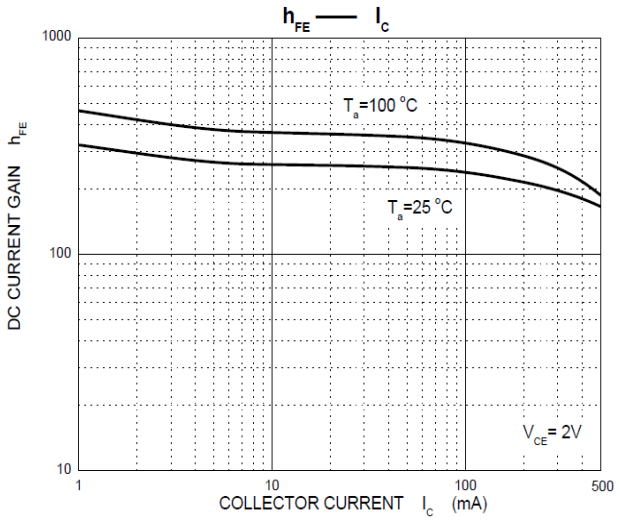
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
CJ2515	SOT-523	1Q	3,000	45,000	180,000	7"reel

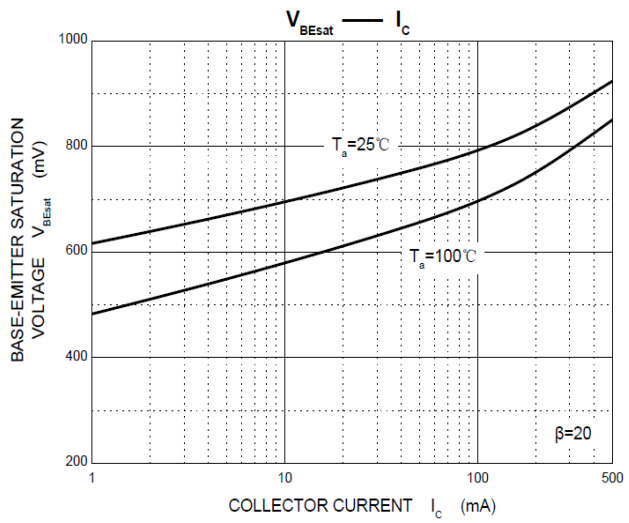
Electrical Characteristics (Ta=25℃ unless otherwise specified)

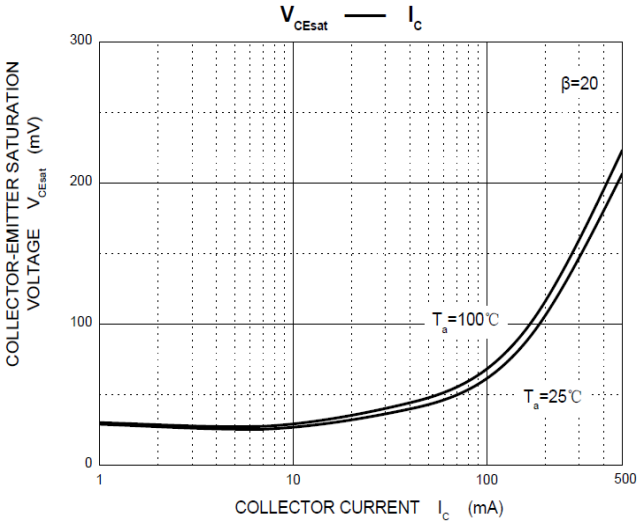
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=0.1mA,I_E=0	15	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA, I_B=0	15	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=0.1mA,I_C=0	6	--	--	V
I_{EBO}	Emitter cut-off current	V_{EB}=5V , I_C=0	--	--	100	nA
I_{CEO}	Collector cut-off current	V_{CE}=15V, I_B=0	--	--	100	nA
$H_{FE(1)}$*	DC current gain	V_{CE}=2V, I_C=10mA	200	--	500	--
$H_{FE(2)}$*		V_{CE}=2V, I_C=100mA	150	--	500	
$H_{FE(3)}$*		V_{CE}=2V, I_C=500mA	90	--	--	
$V_{CE(sat)1}$*	Collector-emitter saturation voltage	I_C=10mA,I_B=0.5mA	--	--	25	mV
$V_{CE(sat)2}$*		I_C=200mA,I_B=10mA	--	--	150	mV
$V_{CE(sat)3}$*		I_C=500mA,I_B=50mA			250	mV
$V_{BE(on)}$*	Base-emittervoltage	V_{CE}=2V,I_C=100mA			0.9	V
$V_{BE(sat)}$*	Base-emitter saturation voltage	I_C=500mA, I_B=50mA	--	--	1.1	V
f_T	Transition frequency	V_{CE}=5V,I_C=100mA, f=100MHz	250	--	--	MHz

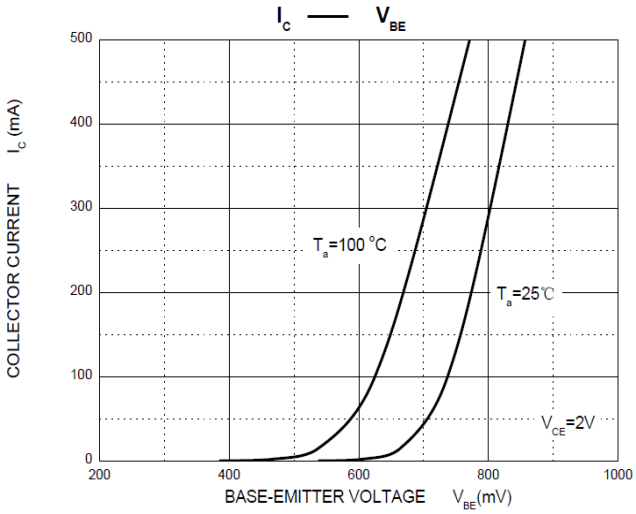
Typical Characteristics

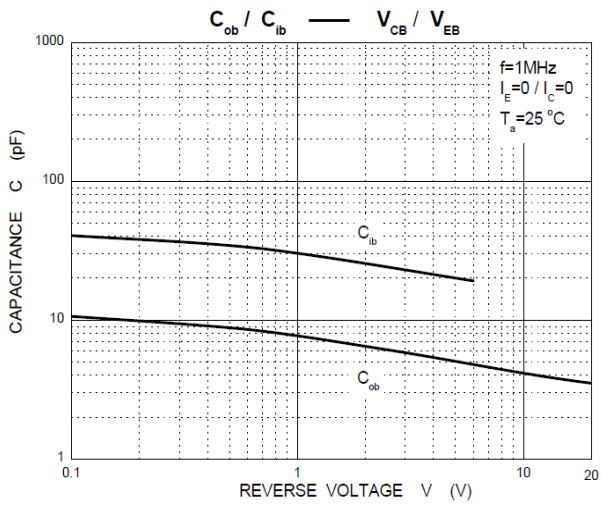


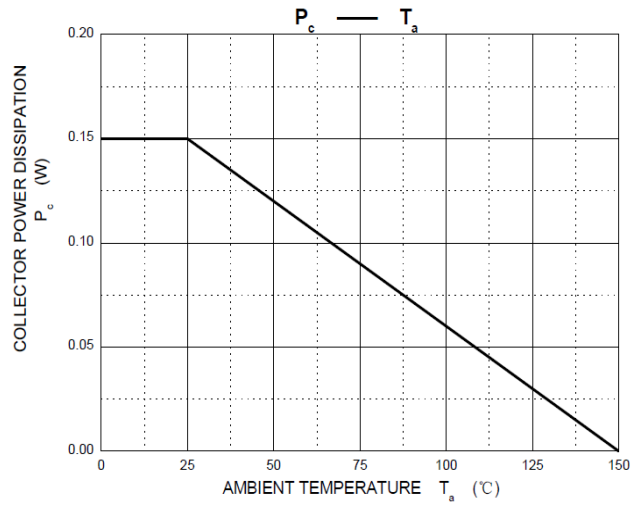




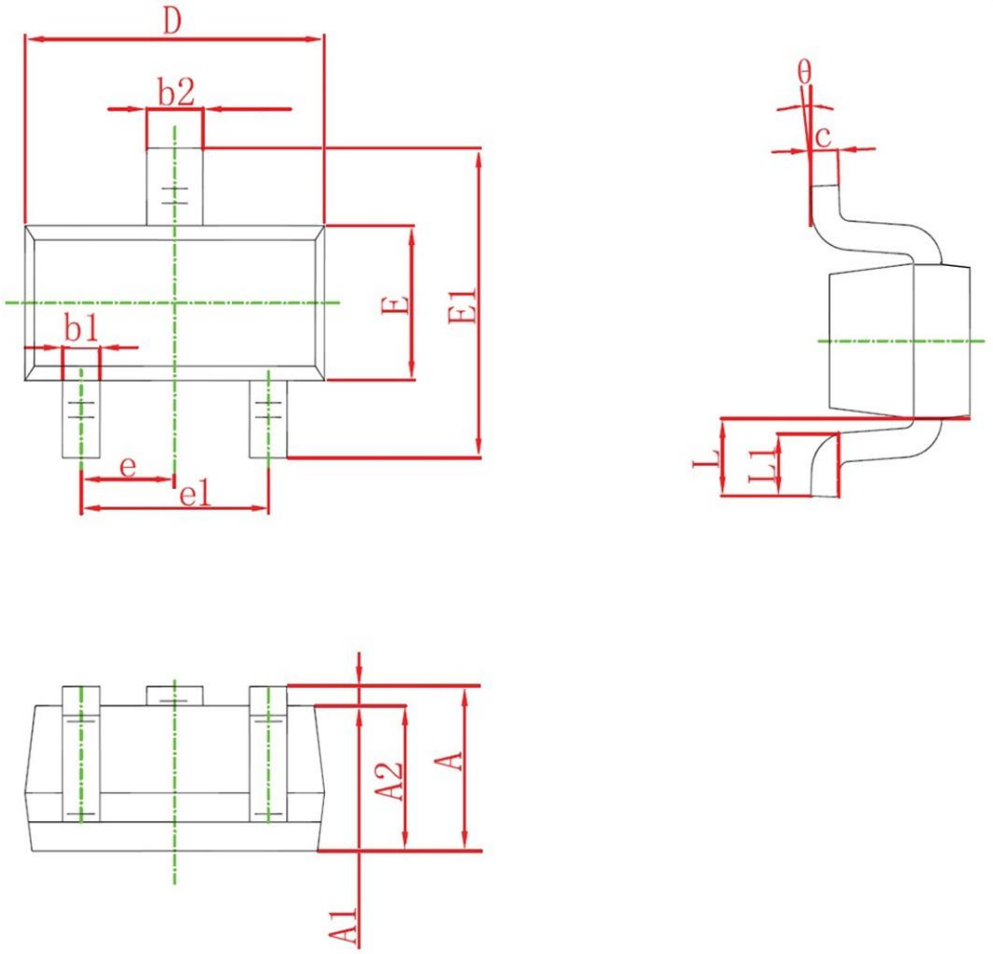








SOT-523 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°