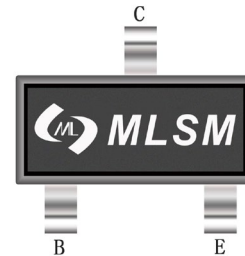


Features

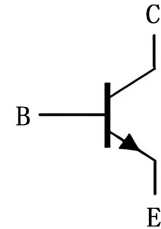
- High Collector Current Capability
- Low Collector-emitter Saturation Voltage
- High Efficiency Leading to Less Heat Generation
- Reduced PCB Requirements
- Alternated Effectively to MOSFETS in Specific Applications

APPLICATIONS

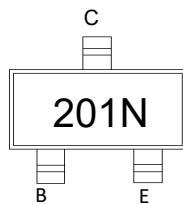
- Power Management
- Peripheral Driver



SOT-23 top view



Schematic diagram



Marking and pin assignment



Pb-Free



RoHS



Halogen-Free

Maximum Ratings($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	417	$^{\circ}\text{C/W}$
T_J, T_{STG}	Operating and Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C}$

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

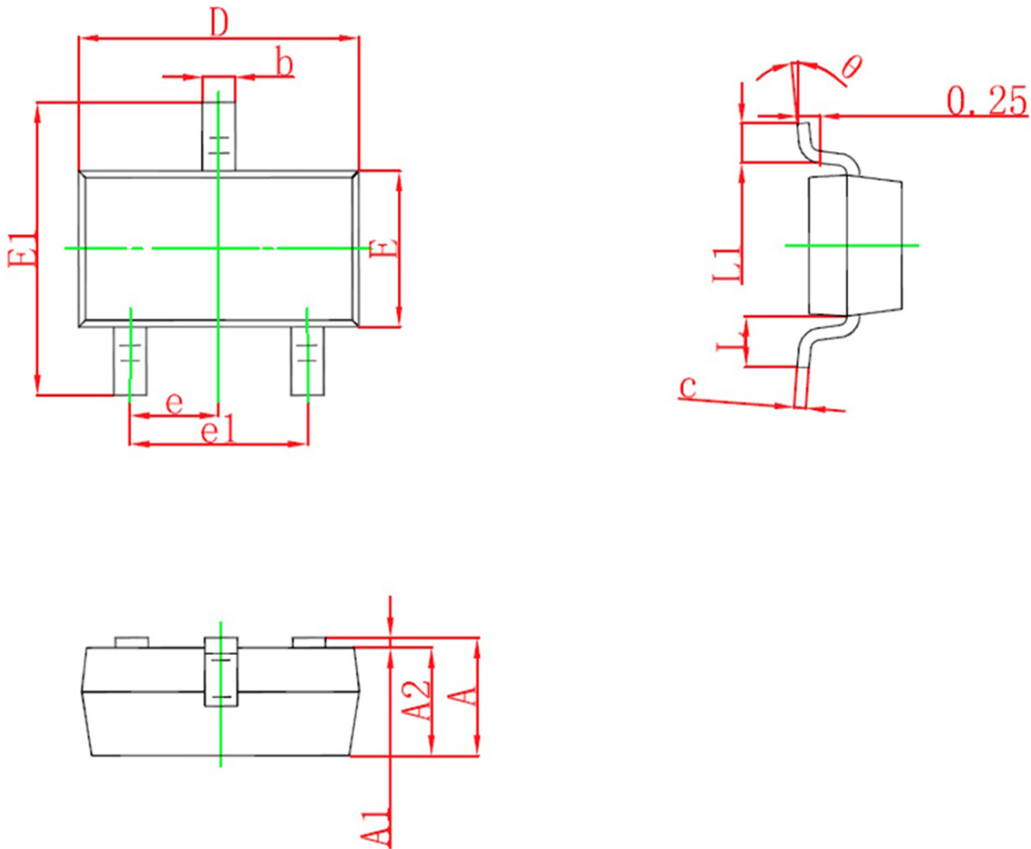
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	30	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	20	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=30V, I_E=0$	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V, I_C=0$	--	--	0.1	μA
h_{FE1}	DC current gain	$V_{CE}=2V, I_C=100mA$	350	--	--	
h_{FE2}		$V_{CE}=2V, I_C=500mA$	300	--	--	
h_{FE3}		$V_{CE}=2V, I_C=1A$	280	--	--	
$V_{CE(sat)1}$	Collector-emitter saturation voltage	$I_C=100mA, I_B=1mA$	--	--	80	mV
$V_{CE(sat)2}$		$I_C=500mA, I_B=50mA$	--	--	110	mV
$V_{CE(sat)3}$		$I_C=750mA, I_B=15mA$	--	--	200	mV
$V_{CE(sat)4*}$		$I_C=1A, I_B=50mA$	--	--	250	mV
$V_{BE(sat)*}$	Base-emitter saturation voltage	$I_C=1A, I_B=100mA$	--	--	1.1	V
$V_{BE(on)}$	Base-emitter turn-on voltage	$V_{CE}=2V, I_C=100mA$	--	--	0.75	V
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$	--	--	20	pF
f_T	Transition frequency	$V_{CE}=10V, I_C=100mA, f=100MHz$	100	--	--	MHz

*Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2.0\%$.

Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
CJ201NL	SOT-23	201N	3,000	45,000	180,000	7"reel

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°