

TO252-2L Plastic-Encapsulate

型号 : SLS50N06

N-Channel Hannel MOSFET TO-252 Plastic Package.

主要特性/Features

Advance high cell density Trench technology

Low  $R_{DS(ON)}$  to minimize conductive loss

Low Gate Charge for fast switching

Low Thermal resistance

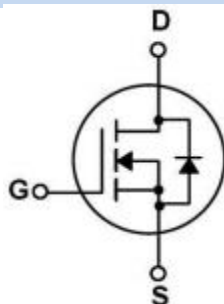
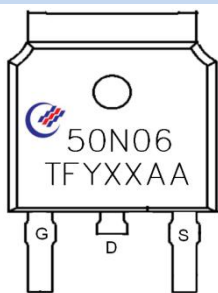
应用/Application

MB/VGA Vcore

SMPS 2<sup>nd</sup> Synchronous Rectifier POL application

BLDC Motor driver

印字/MARKING等效电路/Equivalent Circuit



极限参数/Absolute Maximum Ratings( $T_c=25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	60	V
Gate-Source Voltage	$V_{GS}$	20	V
Continuous Drain Current	$I_{D@TC=25^\circ\text{C}}$	50	A
	$I_{D@TC=75^\circ\text{C}}$	35	A
	$I_{D@TC=100^\circ\text{C}}$	30	A
Pulsed Drain Current <sup>①</sup>	$I_{DM}$	104	A
Total Power Dissipation( $TC=25^\circ\text{C}$ )	$P_D@TC=25^\circ\text{C}$	70	W
Total Power Dissipation( $TA=25^\circ\text{C}$ )	$P_D@TA=25^\circ\text{C}$	2.8	W
Operating Junction Temperature	$T_J$	-55 to 150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to 150	$^\circ\text{C}$
Avalanche Current	$I_{AS}I_{AR}$	40	A

**电性能参数/Electrical Characteristics (TA=25°C unless otherwise noted)**

• Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R <sub>thJC</sub>	-	-	2.8	°C/W
Thermal resistance, junction - ambient	R <sub>thJA</sub>	-	-	55	°C/W
Soldering temperature, wavesoldering for 10s	T <sub>sold</sub>	-	-	265	°C

• Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA	60			V
Gate Threshold Voltage	V <sub>GS(TH)</sub>	V <sub>GS</sub> = V <sub>DS</sub> , I <sub>D</sub> = 250μA	1.0	1.5	2.2	V
Drain-Source Leakage Current	I <sub>DSS</sub>	V <sub>DS</sub> = 60V, V <sub>GS</sub> = 0V			1.0	μA
Gate- Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0V			±100	nA
Static Drain-source On Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> = 10V, I <sub>D</sub> = 20A		14	21	mΩ
		V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 15A		18	25	mΩ
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> = 25V, I <sub>D</sub> = 10A		20		S
Source-drain voltage	V <sub>SD</sub>	I <sub>S</sub> = 20A			1.20	V

• Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 25V V <sub>GS</sub> = 0V f = 1MHz	-	1000	-	pF
Output capacitance	C <sub>oss</sub>		-	108.5	-	
Reverse transfer capacitance	C <sub>riss</sub>		-	96.9	-	

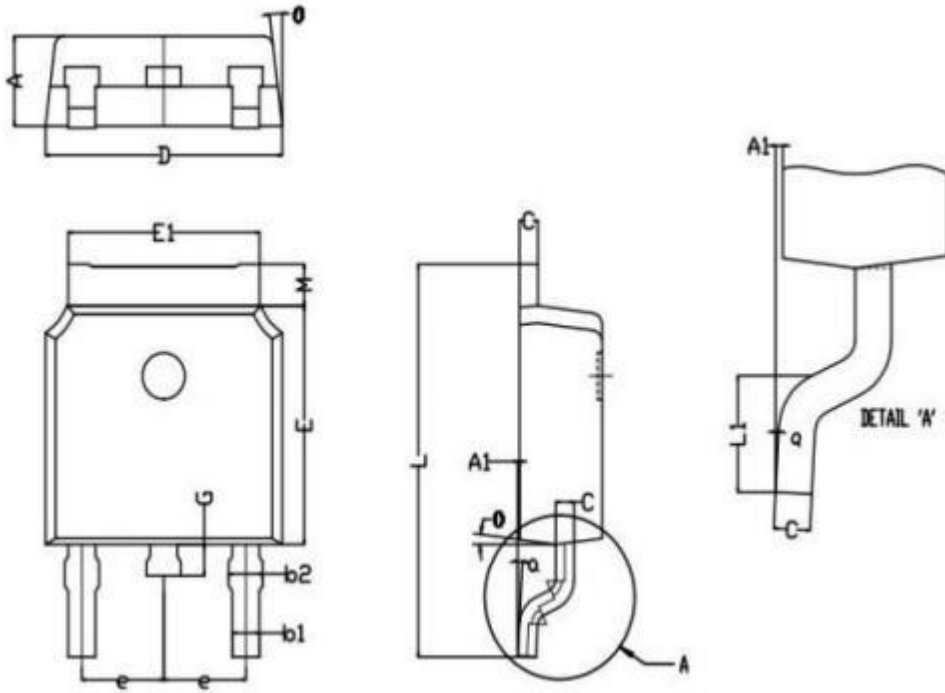
• Gate Charge characteristics (Ta= 25°C)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	Q <sub>g</sub>	V <sub>DD</sub> = 25V	-	15	-	nC
Gate - Source charge	Q <sub>gs</sub>	I <sub>D</sub> = 10A	-	4.5	-	
Gate - Drain charge	Q <sub>gd</sub>	V <sub>GS</sub> = 10V	-	7.5	-	

Note: ① Pulse Test : Pulse width ≤ 300μs, Duty cycle ≤ 2%



成品外观尺寸/TO252-2L Package Information



Symbol	Dim in mm		
	Min	Nor	Max
A	2.25	2.30	2.35
L1	2.90	3.00	3.10
b1	0.71	0.76	0.81
b2	0.91	0.96	1.01
C	0.46	0.51	0.56
D	6.55	6.60	6.65
e	2.29 (BSC)		
E	6.05	6.10	6.15
E1	5.23	5.33	5.43
L	9.84	10.04	10.24
A1	0.00	0.05	0.10
M	1.01	1.06	1.11
G	0.70	0.80	0.90
O	0°	5°	10°
Q	0°	3°	6°