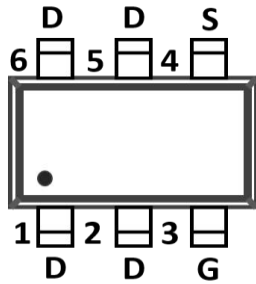
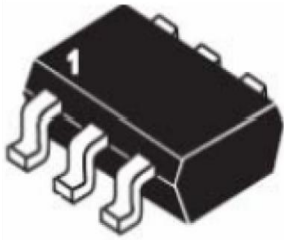
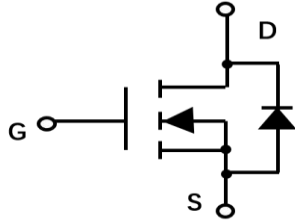


N-Channel Enhancement Mode Field Effect Transistor



SOT-23-6L



Product Summary

- V_{DS} 100V
- I_D 3A
- $R_{DS(ON)}$ (at $V_{GS}=10V$) < 120 mohm
- $R_{DS(ON)}$ (at $V_{GS}=4.5V$) < 140 mohm
- 100% UIS Tested
- 100% ∇V_{DS} Tested

General Description

- Trench Power HV MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$

Applications

- DC-DC Converters
- Power management functions

■ Absolute Maximum Ratings ($T_A=25^\circ C$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	100	V
Gate-source Voltage	V_{GS}	± 20	V
Drain Current	I_D	$T_A=25^\circ C$	3
		$T_A=70^\circ C$	2.4
Pulsed Drain Current ^A	I_{DM}	12	A
Single Pulse Avalanche Energy	E_{AS}	8	mJ
Total Power Dissipation @ $T_A=25^\circ C$	P_D	1.5	W
Thermal Resistance Junction-to-Ambient ^B	$R_{\theta JA}$	83	$^\circ C/W$
Thermal Resistance From Junction To Lead	R_{thJL}	36	$^\circ C/W$
Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ C$

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJS03N10A	F2	1003	3000	30000	120000	7"



YJS03N10A

■ Electrical Characteristics (T_J=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D =250μA	100			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =100V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} = ±20V, V _{DS} =0V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250μA	1.1	1.8	3.0	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = 10V, I _D =3A		95	120	mΩ
		V _{GS} = 4.5V, I _D =2.4A		100	140	
Diode Forward Voltage	V _{SD}	I _S =3A, V _{GS} =0V		0.8	1.2	V
Maximum Body-Diode Continuous Current	I _S				3	A
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =50V, V _{GS} =0V, f=1MHZ		800		pF
Output Capacitance	C _{oss}			40		
Reverse Transfer Capacitance	C _{rss}			32		
Switching Parameters						
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =80V, I _D =2.5A		16		nC
Gate-Source Charge	Q _{gs}			2.5		
Gate-Drain Charge	Q _{gd}			2.6		
Turn-on Delay Time	t _{D(on)}	V _{GS} =10V, V _{DD} =50V, R _L =6.4Ω R _{GEN} =3Ω		15		ns
Turn-on Rise Time	t _r			5		
Turn-off Delay Time	t _{D(off)}			30		
Turn-off fall Time	t _f			5		

A. Pulse Test: Pulse Width ≤ 300us, Duty cycle ≤ 2%.

B. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.



■ Typical Performance Characteristics

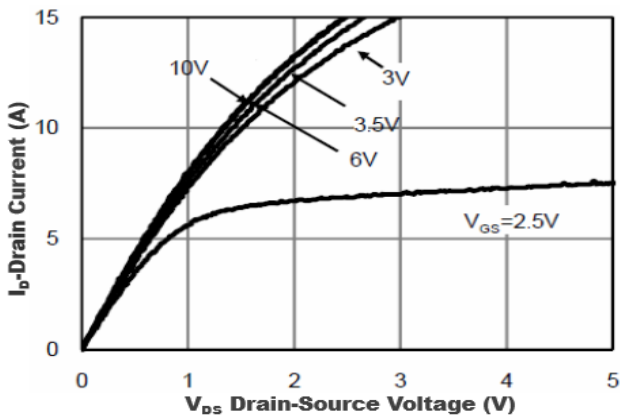


Figure1. Output Characteristics

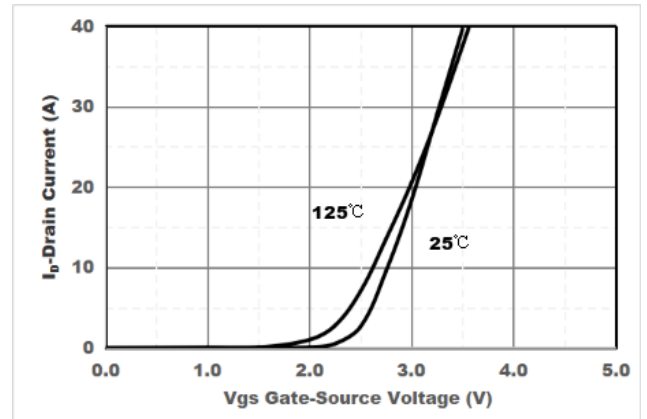


Figure2. Transfer Characteristics

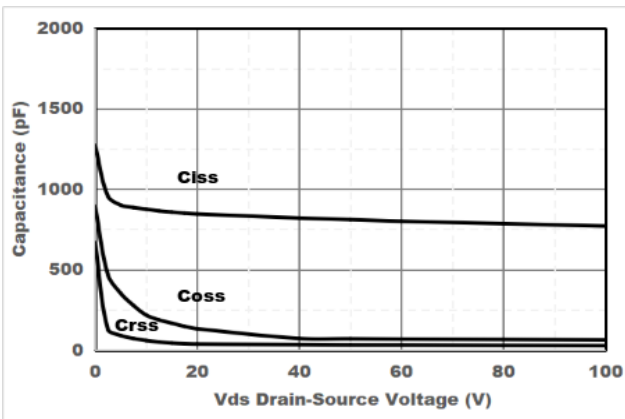


Figure3. Capacitance Characteristics

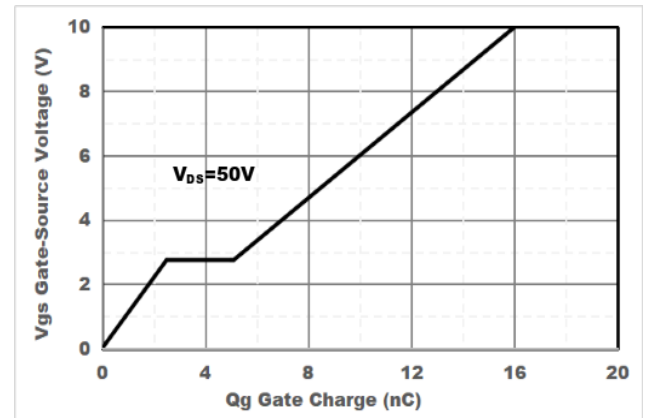


Figure4. Gate Charge

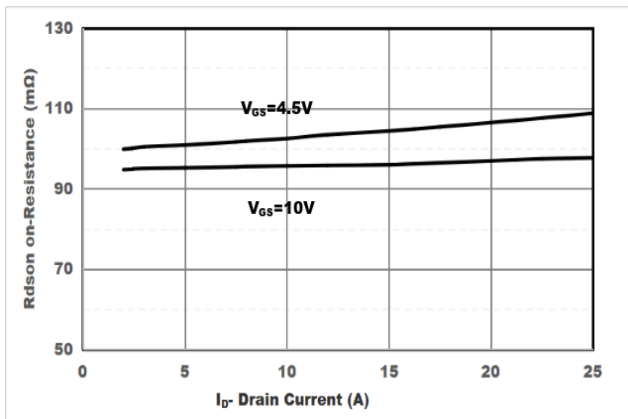


Figure5. Drain-Source on Resistance

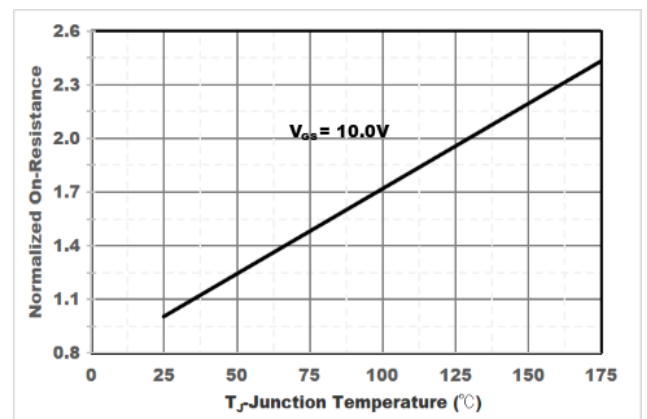


Figure6. Drain-Source on Resistance



YJS03N10A

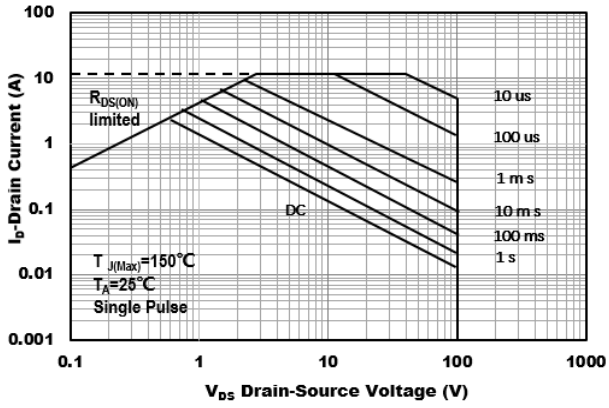


Figure 7. Safe Operation Area

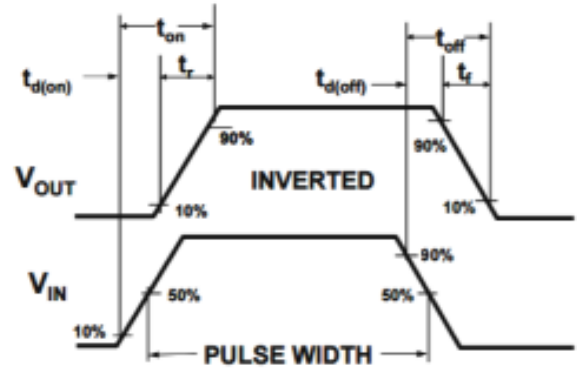
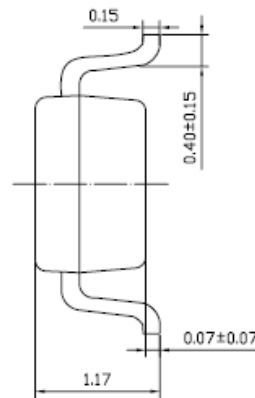
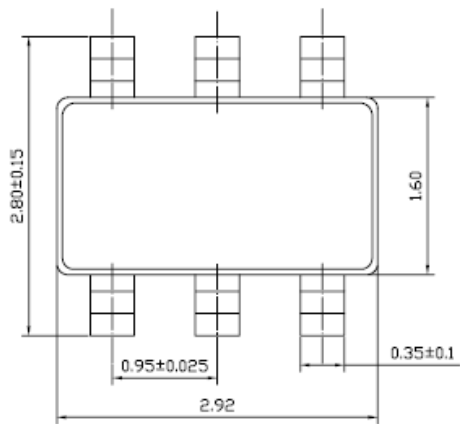


Figure 8. Switching wave



■ SOT-23-6L Package information



技术要求:

- 1.树脂体不应有崩裂、缺损等缺陷;
- 2.未注公差: ± 0.050 ;
- 3.树脂上下部X、Y方向偏差不得超过 0.08MAX ;
- 4.胶体两端留胶总和宽度不超过 0.30 ;
- 5.所有单位为mm;



YJS03N10A

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.