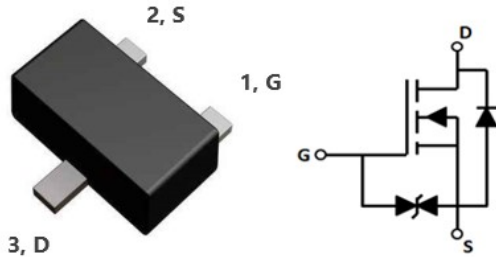


N-Channel Enhancement Mode Field Effect Transistor



SOT-723

Product Summary

- V_{DS} 20V
- I_D 0.75A
- $R_{DS(ON)}$ (at $V_{GS}=4.5V$) <260 mohm
- $R_{DS(ON)}$ (at $V_{GS}=2.5V$) <360 mohm
- ESD Protected Up to 4.0KV (HBM)

General Description

- Trench Power LV MOSFET technology
- High Power and current handling capability

Applications

- Load/Power Switching
- Interfacing Switching
- Logic Level Shift

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

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	20	V
Gate-source Voltage		V_{GS}	± 12	V
Drain Current	$T_A=25^\circ\text{C}$ @ Steady State	I_D	0.75	A
	$T_A=70^\circ\text{C}$ @ Steady State		0.6	
Pulsed Drain Current ^A		I_{DM}	3.5	A
Total Power Dissipation @ $T_A=25^\circ\text{C}$		P_D	0.18	W
Thermal Resistance Junction-to-Ambient @ Steady State		$R_{\theta JA}$	694	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range		T_J, T_{STG}	-55~+150	$^\circ\text{C}$

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL3134KT	F1	KF	8000	80000	320000	7" reel



YJL3134KT

■ 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	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} = ±10V, V _{DS} =0V		2.5	±10	μA
		V _{GS} = ±8V, V _{DS} =0V		500	±2000	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250μA	0.35	0.75	1.1	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = 4.5V, I _D =0.65A		125	260	mΩ
		V _{GS} = 2.5V, I _D =0.3A		175	360	
		V _{GS} = 1.8V, I _D =0.2A		275	580	
Diode Forward Voltage ^C	V _{SD}	I _S =0.75A, V _{GS} =0V			1.2	V
Maximum Body-Diode Continuous Current	I _S				0.75	A
Dynamic Parameters^B						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHZ		56		pF
Output Capacitance	C _{oss}			20		
Reverse Transfer Capacitance	C _{rss}			2.5		
Switching Parameters^B						
Total Gate Charge	Q _g	V _{GS} =4.5V, V _{DS} =10V, I _D =0.5A		1.0		nC
Gate Source Charge	Q _{gs}			0.28		
Gate Drain Charge	Q _{gd}			0.22		
Reverse Recovery Charge	Q _{rr}	I _F =0.5A, di/dt=20A/us		0.4		
Reverse Recovery Time	t _{rr}			14.4		
Turn-on Delay Time	t _{D(on)}	V _{GS} =4.5V, V _{DD} =10V, R _G =10Ω, I _D =0.5A		2		ns
Turn-on Rise Time	t _r			17		
Turn-off Delay Time	t _{D(off)}			10		
Turn-off Fall Time	t _f			22		

A. Repetitive Rating: Pulse width limited by maximum junction temperature.

B. These parameters have no way to verify.

C. Pulse Test: Pulse Width ≤ 300us, Duty Cycle ≤ 0.5%.



■ Typical Performance Characteristics

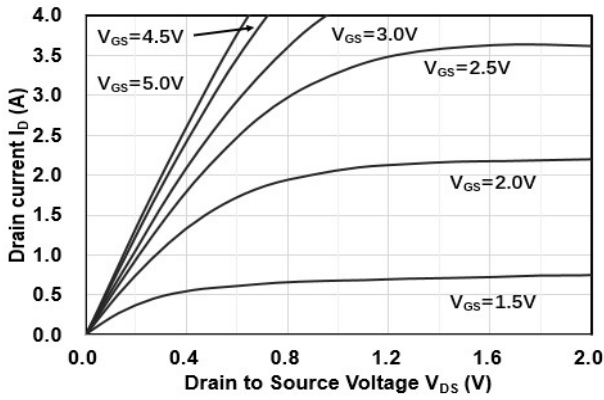


Figure1. Output Characteristics

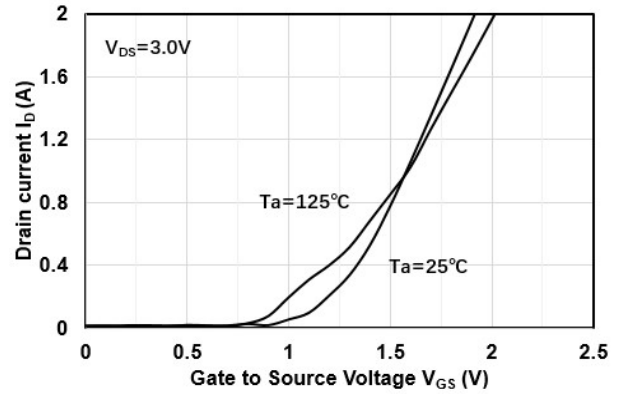


Figure2. Transfer Characteristics

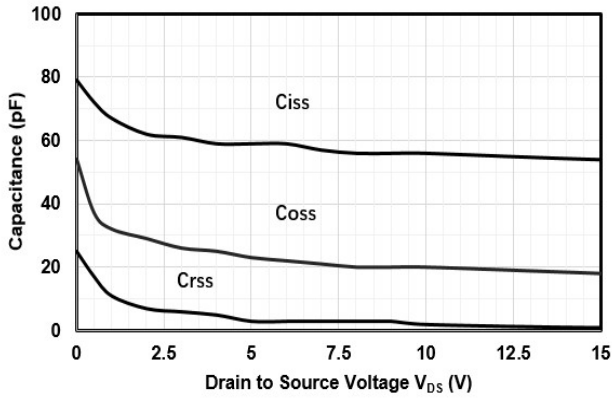


Figure3. Capacitance Characteristics

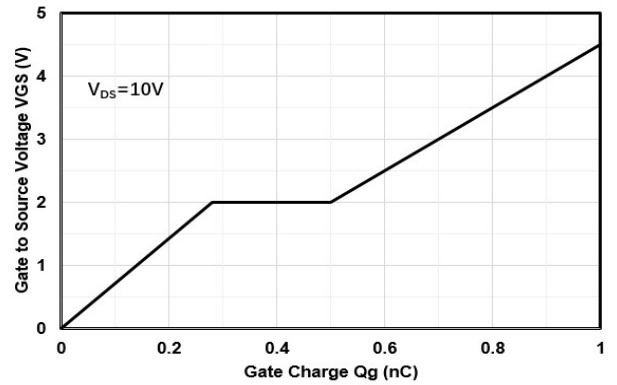


Figure4. Gate Charge

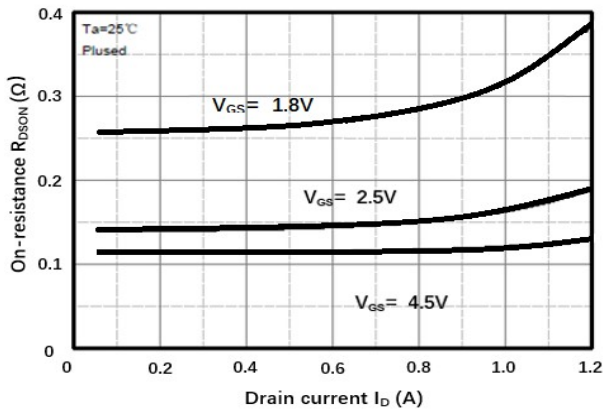


Figure5. Drain-Source on Resistance

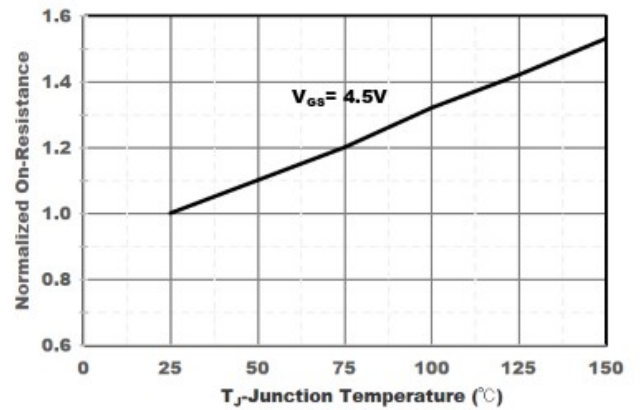


Figure6. Drain-Source on Resistance

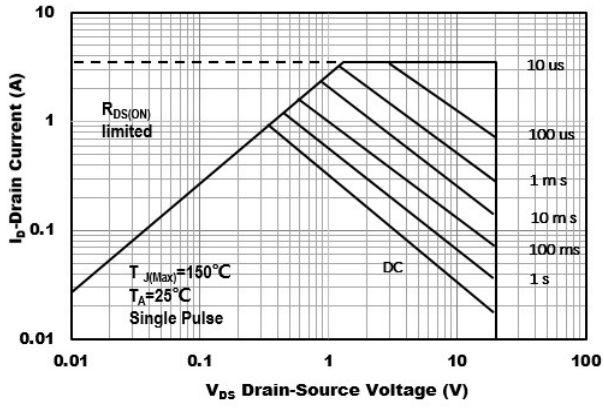


Figure7. Safe Operation Area

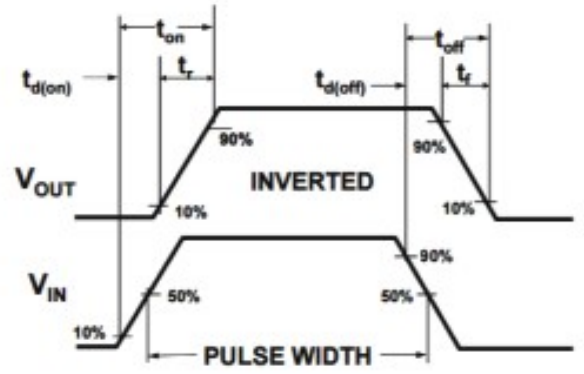
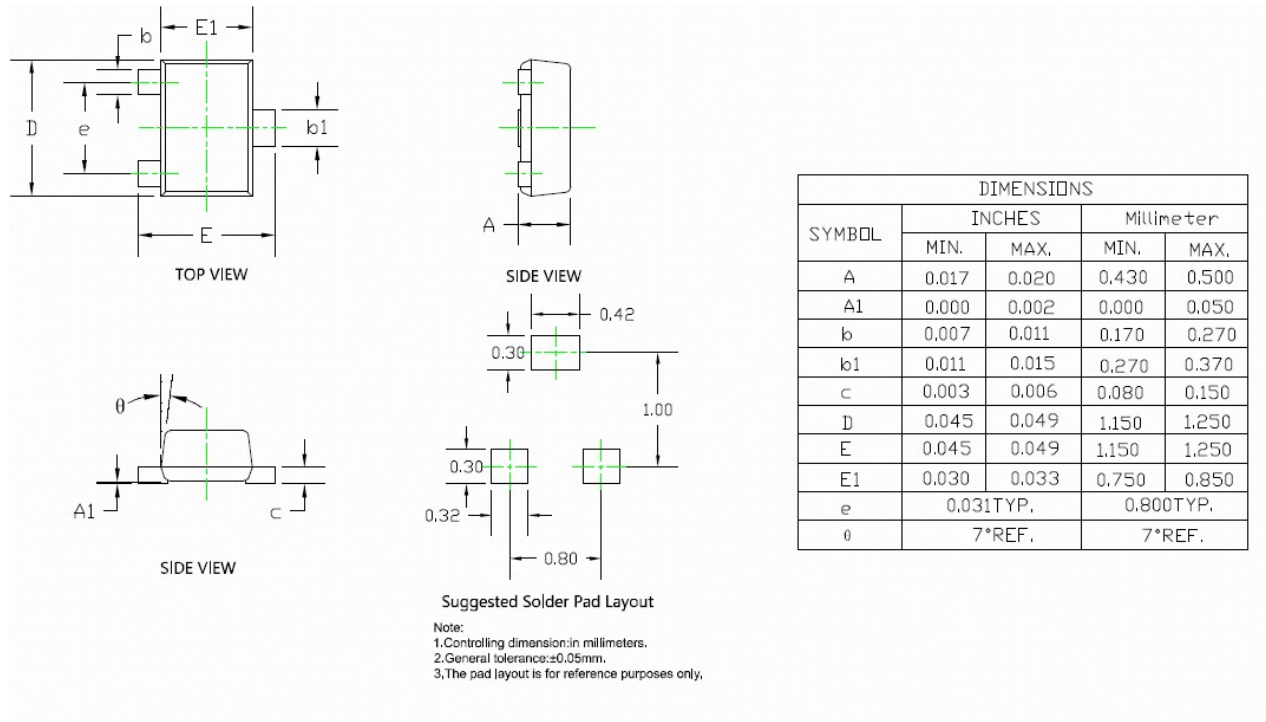


Figure8. Switching wave



YJL3134KT

■SOT-723 Package information





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.