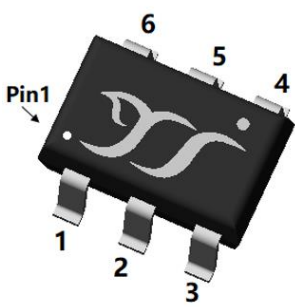
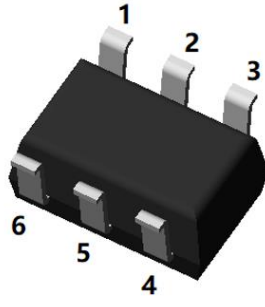


N-Channel Enhancement Mode Field Effect Transistor

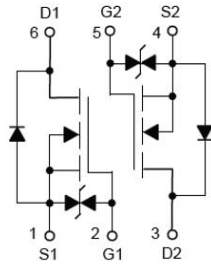


Top View



Bottom View

SOT-363



Product Summary

V_{DS}	20 V
I_D	0.8 A
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	<300 mohm
$R_{DS(ON)}$ (at $V_{GS}=2.5V$)	<400 mohm
$R_{DS(ON)}$ (at $V_{GS}=1.8V$)	<700 mohm
ESD Protected Up to 2.0KV (HBM)	

General Description

Trench Power LV MOSFET technology
High Power and current handling capability

Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

PWM application
Load switch

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

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	20	V
Gate-source Voltage	V_{GS}	± 12	V
Drain Current	I_D	$T_A=25^\circ C$ @ Steady State	0.8
		$T_A=70^\circ C$ @ Steady State	0.6
Pulsed Drain Current ^A	I_{DM}	3.3	A
Total Power Dissipation @ $T_A=25^\circ C$	P_D	0.29	W
Thermal Resistance Junction-to-Ambient @ Steady State	R_{JA}	420	$^\circ C/W$
Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ C$

Ordering Information

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL3134KADW	F2	34KA	3000	30000	120000	reel



YJL3134KADW

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 =250	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	
Gate-Body Leakage Current	I _{GSS}	V _{GS} = ±10V, V _{DS} =0V		2.5	±10	
		V _{GS} = ±8V, V _{DS} =0V		500	±2000	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250	0.35	0.75	1.1	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = 4.5V, I _D =0.5A		220	300	
		V _{GS} = 2.5V, I _D =0.45A		290	400	
		V _{GS} = 1.8V, I _D =0.2A		420	700	
Diode Forward Voltage ^C	V _{SD}	I _S =0.5A, V _{GS} =0V		0.85	1.2	V
Maximum Body-Diode Continuous Current	I _S				0.5	A
Gate Resistance	R _g	f=1 MHz		50		
Dynamic Parameters^B						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHZ		33		pF
Output Capacitance	C _{oss}			20		
Reverse Transfer Capacitance	C _{rss}			10		
Switching Parameters^B						
Total Gate Charge	Q _g	V _{GS} =4.5V, V _{DS} =10V, I _D =0.5A		0.8		nC
Gate Source Charge	Q _{gs}			0.3		
Gate Drain Charge	Q _{gd}			0.15		
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 =500mA		4		ns
Turn-on Rise Time	t _r			18.8		
Turn-off Delay Time	t _{D(off)}			10		
Turn-off Fall Time	t _f			23		

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

B. These parameters have no way to verify.

C.



Typical Performance Characteristics

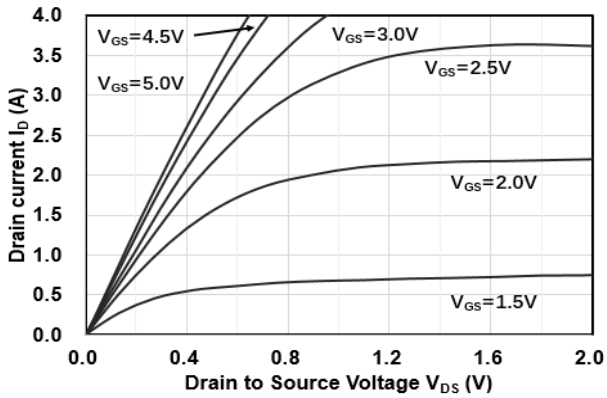


Figure1. Output Characteristics

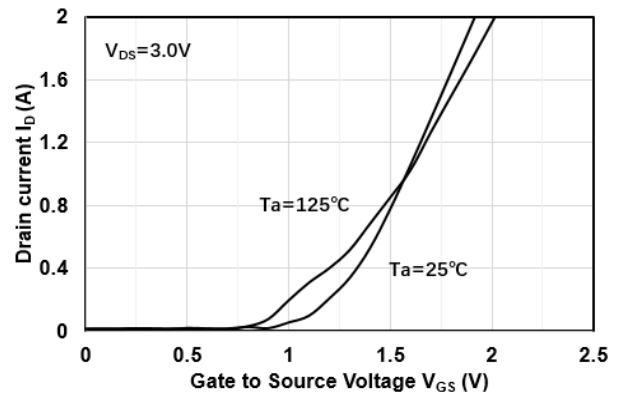


Figure2. Transfer Characteristics

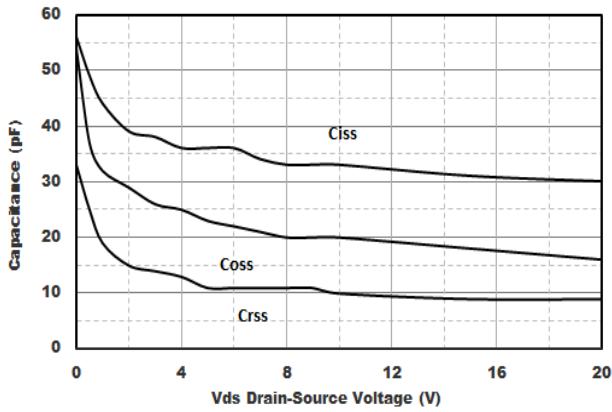


Figure3. Capacitance Characteristics

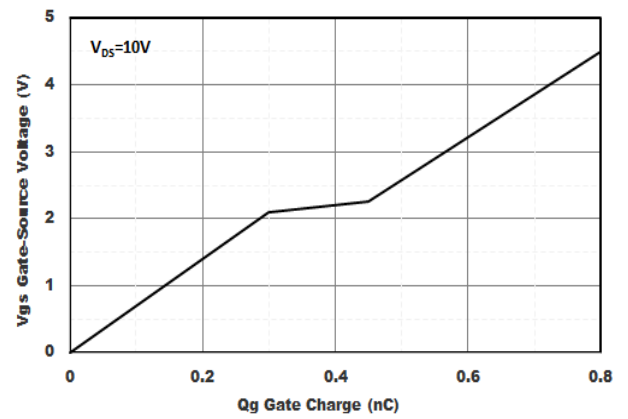


Figure4. Gate Charge

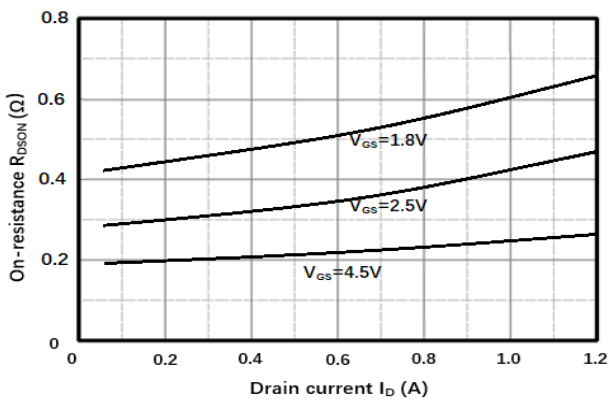


Figure5. Drain-Source on Resistance

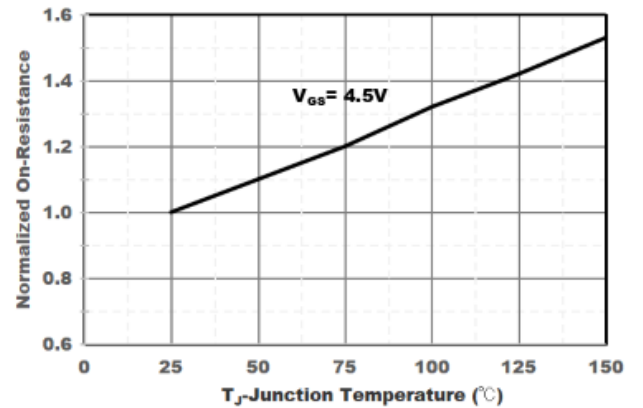


Figure6. Drain-Source on Resistance



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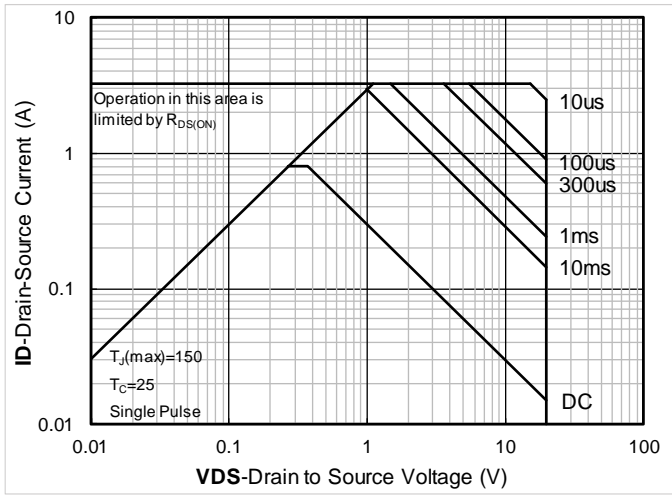


Figure7. Safe Operation Area

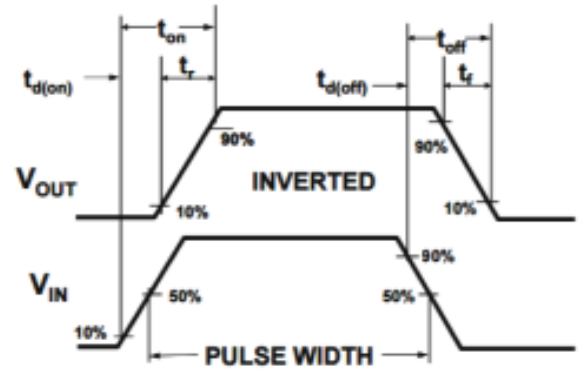
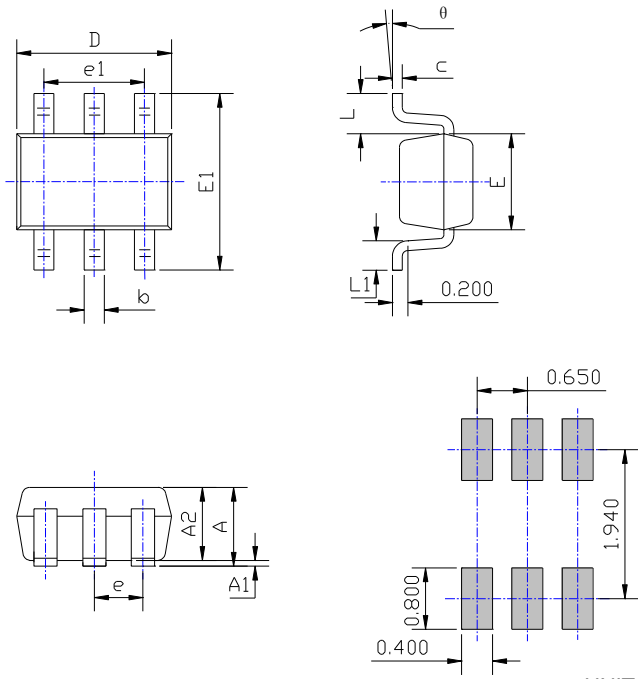


Figure8. Switching wave



YJL3134KADW

SOT-363 Package information



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.014	0.150	0.350
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026TYP		0.650TYP	
e1	0.047	0.055	1.200	1.400
L	0.021REF		0.525REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

NOTE:
 1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
 2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
 3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



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