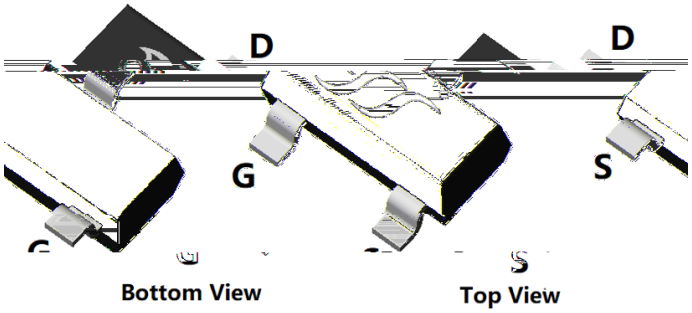
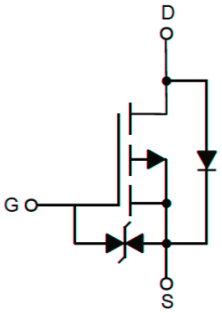
P-Channel Enhancement Mode Field Effect Transistor





SOT-23

Product Summary

V_{DS}	-20 V
I_D	-5 A
$R_{DS(ON)}$(at V_{GS}=-4.5V)	40 m
$R_{DS(ON)}$(at V_{GS}=-2.5V)	70 m

ESD Protected Up to 2.0KV (HBM)

General Description

Split gate trench MOSFET technology
Low $R_{DS(on)}$ & FOM
Extremely low switching loss
Excellent stability and uniformity
B d hi j gZ HZch i k in AZkZa&
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Edl Zgb VcV Zb Zci
EdgjVWdZ Zf j eb Zci

Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	-20	V
Gate-source Voltage		V_{GS}	±10	V
Drain Current	T_A=25	I_D	-5	A
	T_A=100		-3.2	
Pulsed Drain Current [A]		I_{DM}	-30	A
Total Power Dissipation [C]	T_A=25	P_D	1	W
	T_A=100		0.4	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	

Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient [D]	Steady-State	R 6	100	120	/W

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL3415KC	F2	3415C	3000	30000	120000	, reel

Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=-' 6	-20	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V, V_{GS}=0V	-	-	-1	6
		V_{DS}=-20V, V_{GS}=0V, Tj=150	-	-	-100	
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±10V, V_{DS}=0V	-	-	±10	
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=-' 6	-0.55	-0.85	-1.25	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-4.5V, I_D=-5A	-	28	40	b
		V_{GS}=-2.5V, I_D=-4A	-	50	70	
Diode Forward Voltage	V_{SD}	I_S=-5A, V_{GS}=0V	-	-0.9	-1.2	V
Gate resistance	R_G	f=1MHz, Open drain	-	16	-	
Maximum Body-Diode Continuous Current	I_S		-	-	-5	A
Dynamic Parameters						
Input Capacitance	C_{iss}		-	540	-	
Output Capacitance	C_{oss}	V_{DS}=-10V, V_{GS}=0V, f=1MHz	-	120	-	pF

Typical Electrical and Thermal Characteristics Diagrams

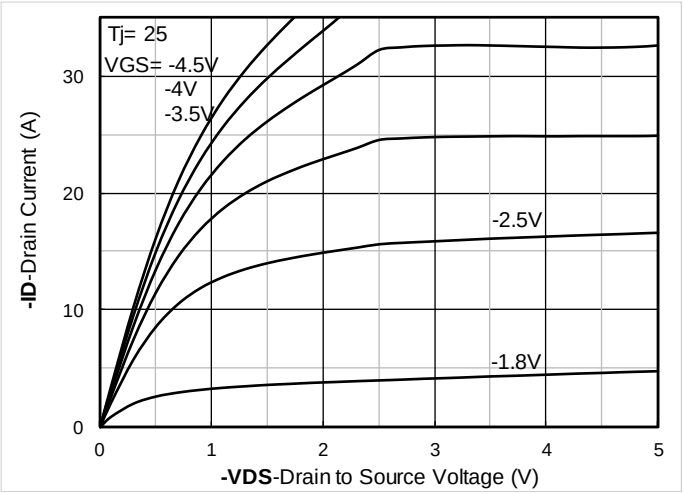


Figure 1. Output Characteristics

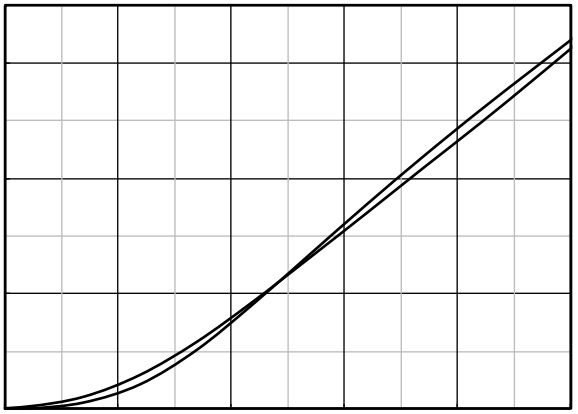


Figure 2. Transfer Characteristics

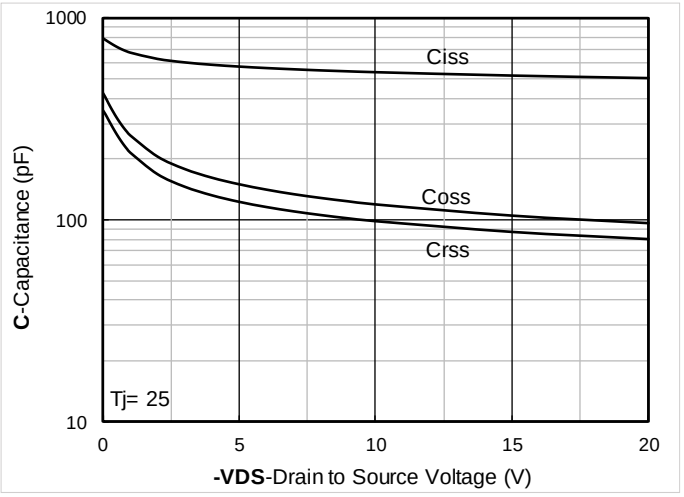


Figure 3. Capacitance Characteristics

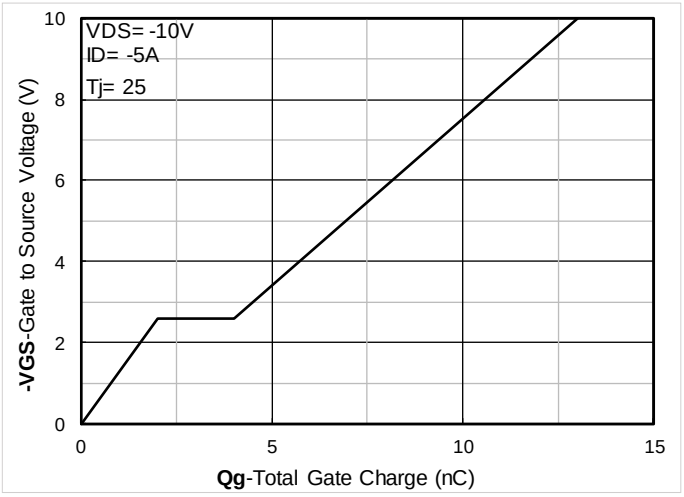


Figure 4. Gate Charge

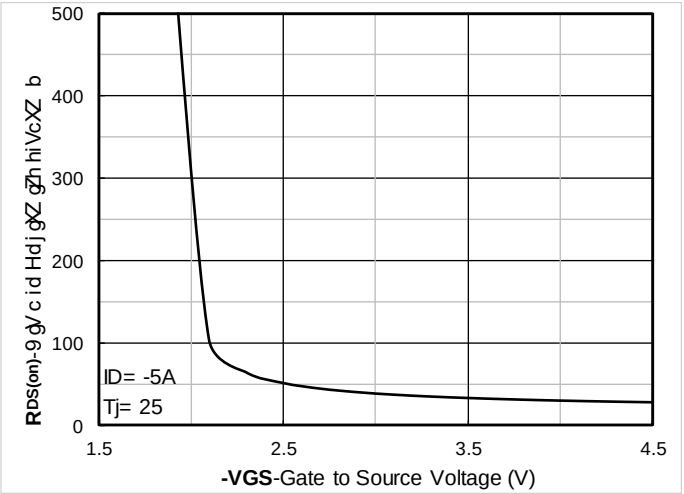


Figure 5. On-Resistance vs Gate to Source Voltage

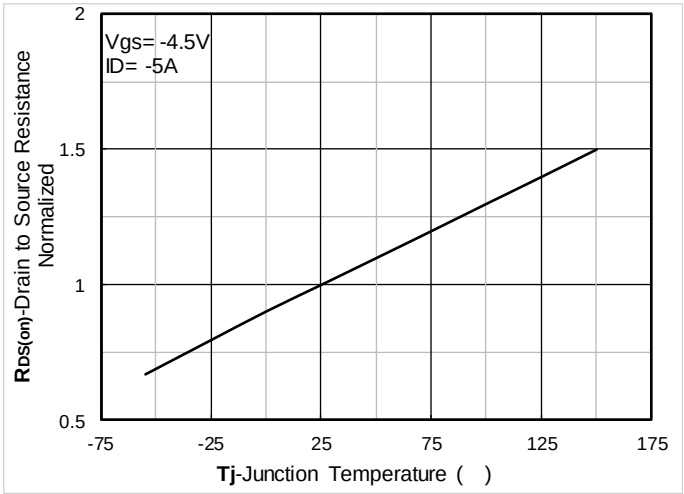


Figure 6. Normalized On-Resistance

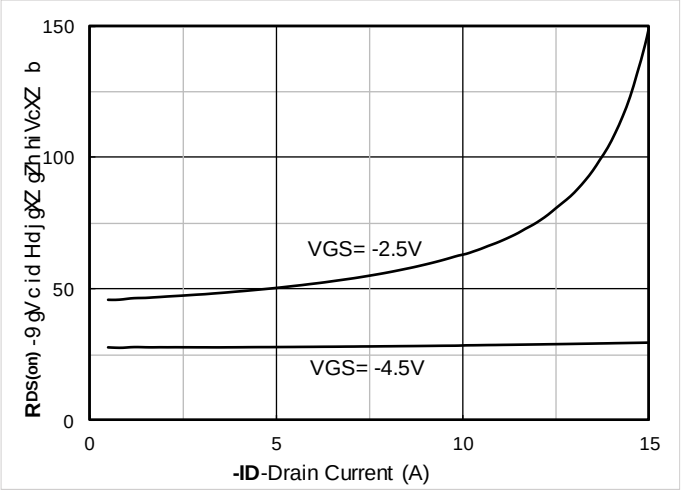


Figure 7. $R_{DS(on)}$ VS Drain Current

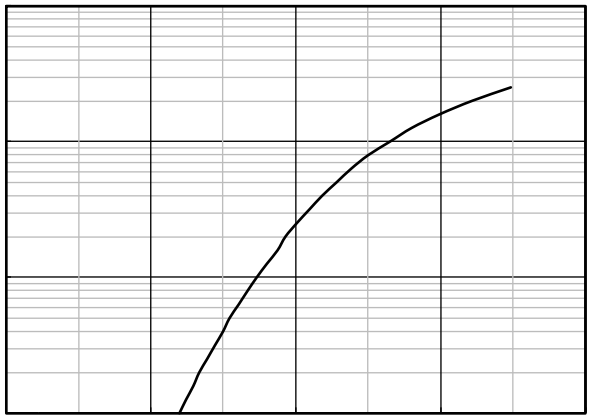


Figure 8. Forward characteristics of reverse diode

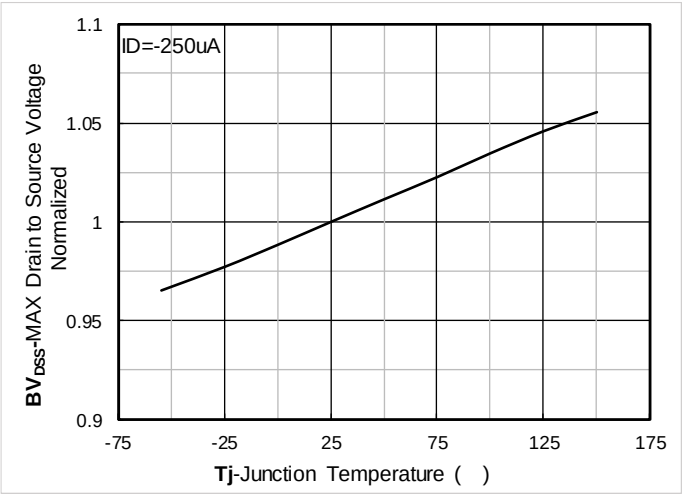


Figure 9. Normalized breakdown voltage

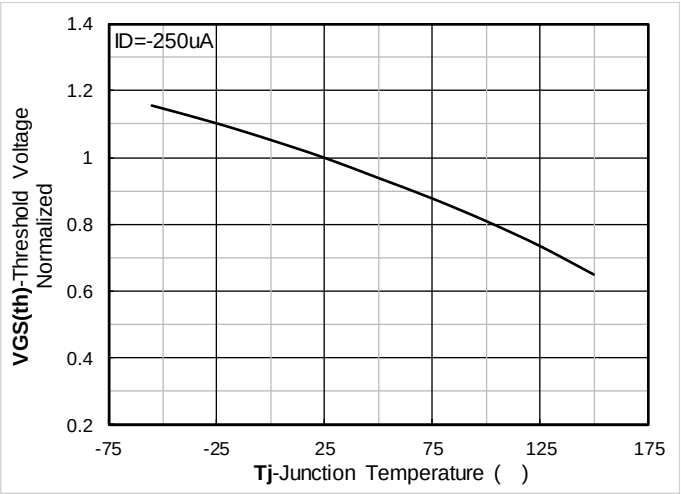


Figure 10. Normalized Threshold voltage

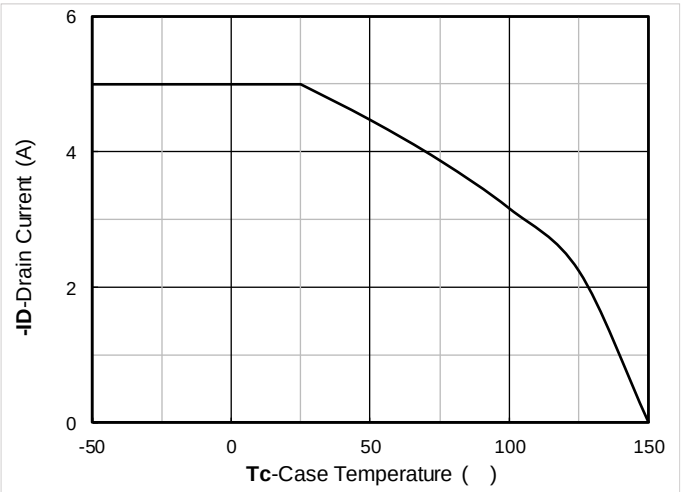


Figure 11. Current dissipation

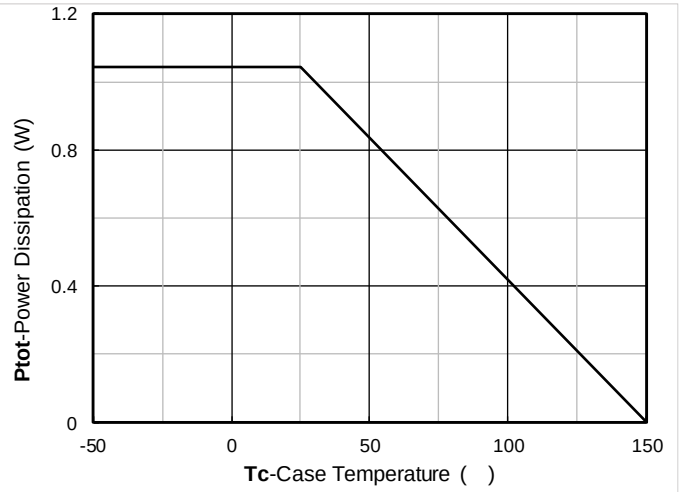


Figure 12. Power dissipation

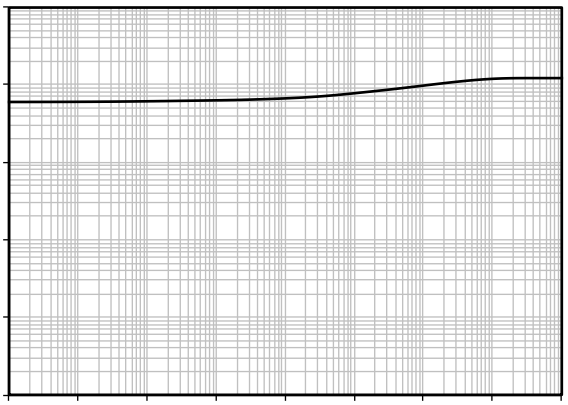


Figure 13. Maximum Transient Thermal Impedance

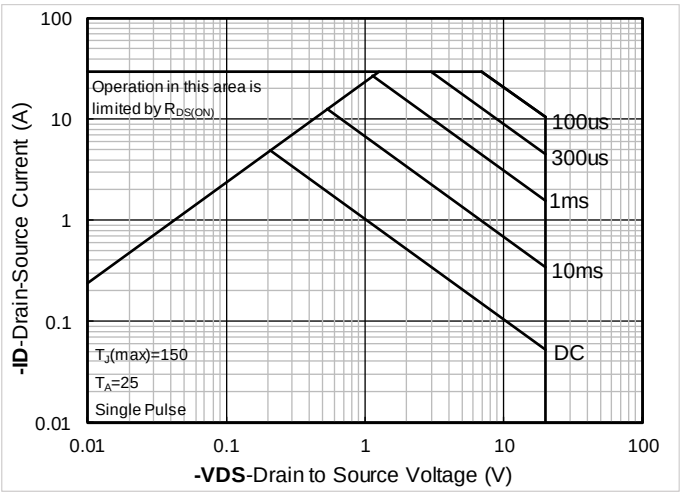
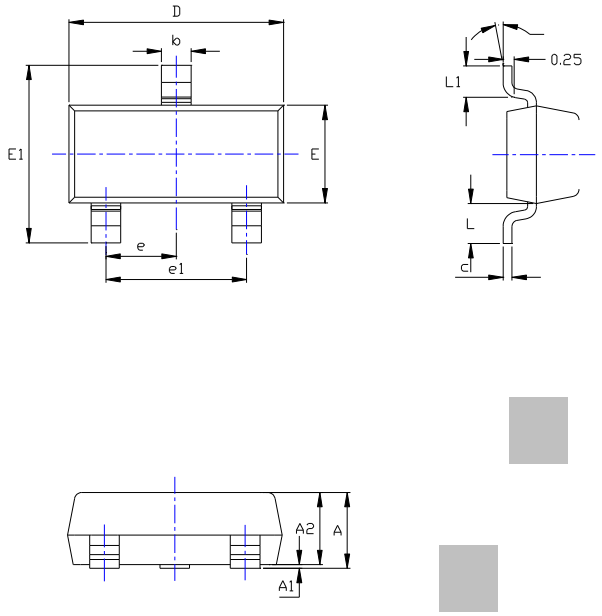


Figure 14. Safe Operation Area

SOT-23 Package information



UNIT mm

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 with 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 dgXdchjandjgcZVgZhi NVc ZhhVaZhd XZ dg jgj ZgVhhhiVcXZ