P-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	-30 V
I_D	-5.5 A
$R_{DS(ON)}$(at V_{GS}=-10V)	41 m
$R_{DS(ON)}$(at V_{GS}=-4.5V)	59 m

General Description

Trench Power LV MOSFET technology
High density cell design for Low RDS(ON)
High Speed switching

Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Battery protection
Load switch
Power management

Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	-30	V
Gate-source Voltage		V_{GS}	±20	V
Drain Current	T_A=25	I_D	-5.5	A
	T_A=100		-3.5	
Pulsed Drain Current [A]		I_{DM}	-30	A
	T_A=25		2.5	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	

Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient [C]	Steady-State	R	40	50	/W

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJS9435B	F2	Q9435B	4000	8000	64000	

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=-	-30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V, V_{GS}=0V	-	-	-1	
		V_{DS}=-30V, V_{GS}=0V, Tj=150	-	-	-100	
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=-	-1.0	-1.5	-2.4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-10V, I_D=-5.5A	-	30	41	
		V_{GS}=-4.5V, I_D=-3.5A	-	46	59	

Diode

Figure 7. RDS(on) VS Drain Current

Figure 8. Forward characteristics of reverse diode

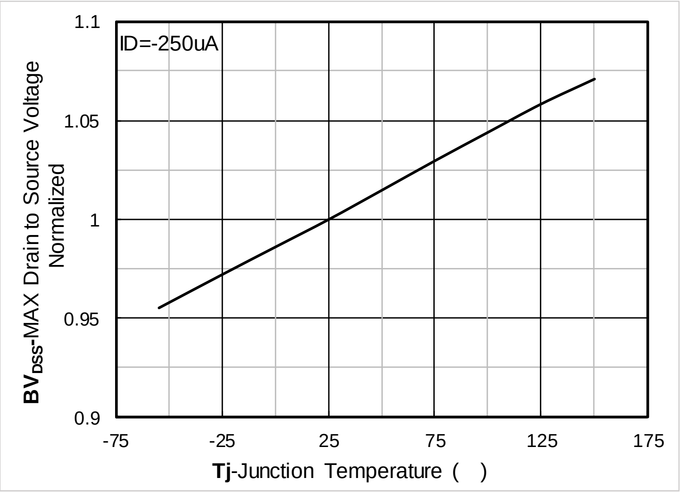


Figure 9. Normalized breakdown voltage

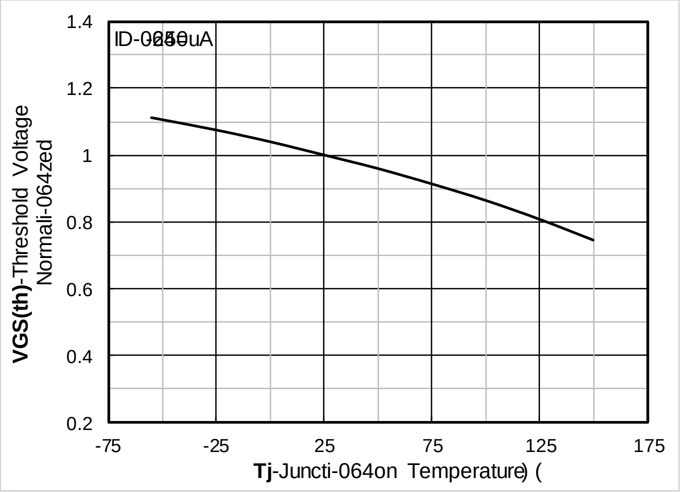


Figure 10. Normalized Threshold voltage

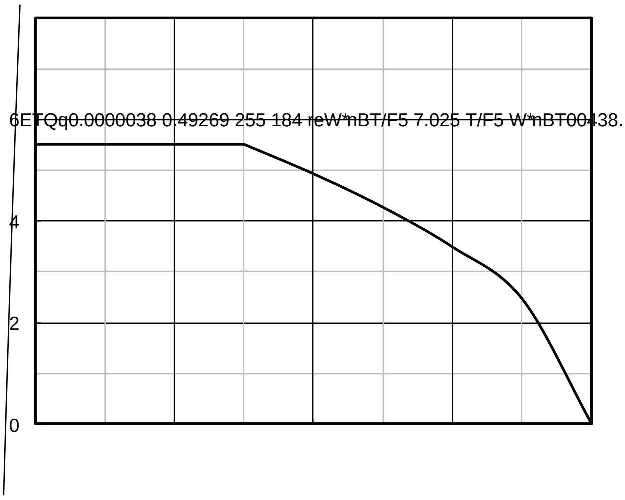
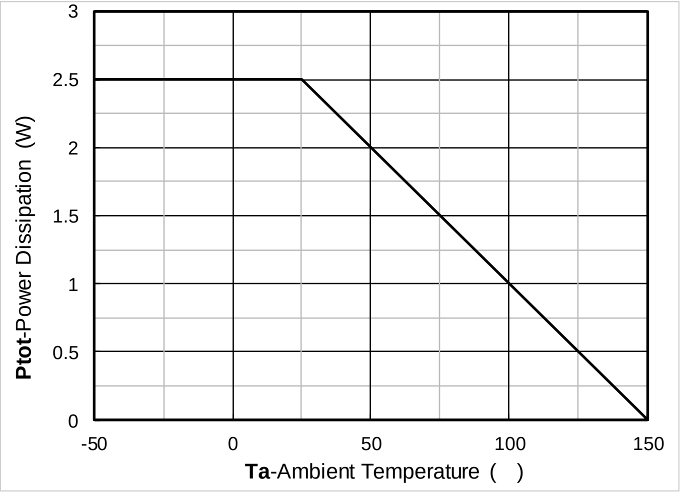


Figure 11. Current dissipation



Figure

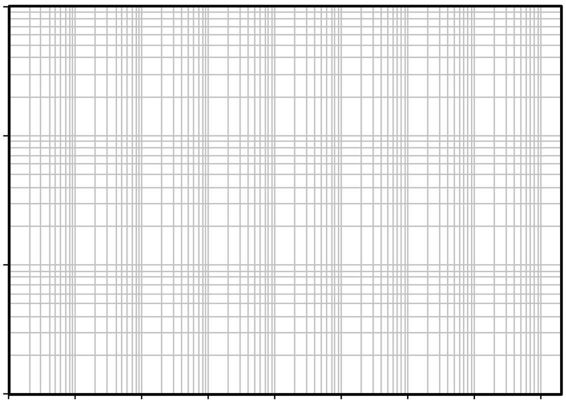


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area

SOP-8 Package information

SYMBOL	MIN.		
	0.053	0.069	
B	0.004	0.010	
		0.061	
D		0.020	
E			
F			
G	0.050BSC		1.270BSC
H			
J			
K			

Disclaimer

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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-