General Description

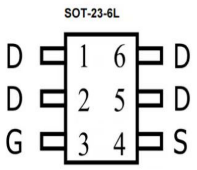
The MY027CNB6 use Trench Power MV MOSFET technology,have Excellent package for heat dissipation,use High density cell design for low $R_{DS(ON)}$

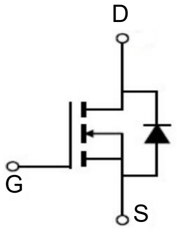
Features

V_{DSS}	20	V
I_D	11	A
$R_{DS(ON)}$(atV_{GS}=4.5V)	< 27	mΩ
$R_{DS(ON)}$(atV_{GS}=2.5V)	< 45	mΩ

Application

- Battery protection
- Load switch
- Power management





Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MY027CNB6	SOT-23-6	027CN	3000

Absolute Maximum Ratings (T_C=25℃unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	20	V
Gate-source Voltage	V_{GS}	±10	V
Drain Current-Continuous	I_D	11	A
Pulsed Drain Current ^{A}	I_{DM}	14	A
Total Power Dissipation @ T_A=25℃	P_D	0.7	W
Thermal Resistance Junction-to-Ambient @ Steady State ^{B}	$R_{\theta JA}$	178	℃/ W
Junction and Storage Temperature Range	T_J ,T_{STG}	-55～ +150	℃

Electrical Characteristics at T_j=25 ℃ unless otherwise specified

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,T_C=25℃			1	μA
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±10V, V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA	0.45	0.7	0.9	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}= 4.5V, I_D=2.5A		22	27	mΩ
		V_{GS}= 2.5V, I_D=2.0A		30	45	
Diode Forward Voltage	V_{SD}	I_S=2.5A,V_{GS}=0V			1.2	V
Maximum Body-Diode Continuous Current	I_S				2.8	A
Dynamic Parameters						
Input Capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0V,f=1MHZ		280		pF
Output Capacitance	C_{oss}			46		
Reverse Transfer Capacitance	C_{rss}			29		
Switching Parameters						
Total Gate Charge	Q_g	V_{GS}=4.5V,V_{DS}=10V,I_D=2.5A		2.9		nC
Gate Source Charge	Q_{gs}			0.4		
Gate Drain Charge	Q_{gd}			0.6		
Turn-on Delay Time	$t_{D(on)}$	V_{GS}=4.5V,V_{DD}=10V, R_L=1.5Ω, R_{GEN}=3Ω		13		ns
Turn-on Rise Time	t_r			54		
Turn-off Delay Time	$t_{D(off)}$			18		
Turn-off Fall Time	t_f			11		

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 Characteristics

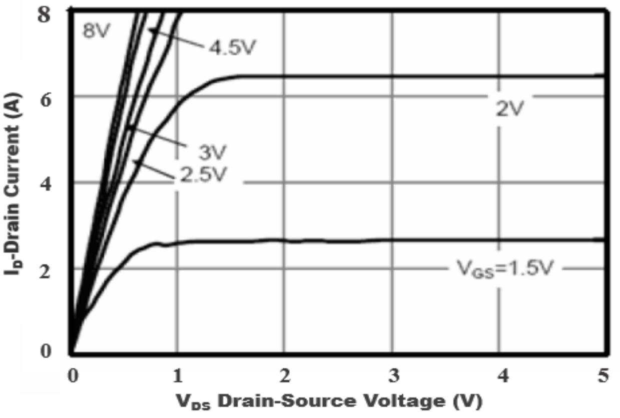


Figure1. Output Characteristics

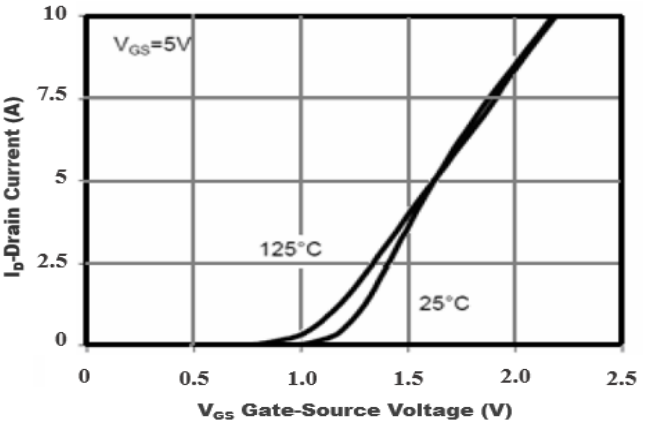


Figure2. Transfer Characteristics

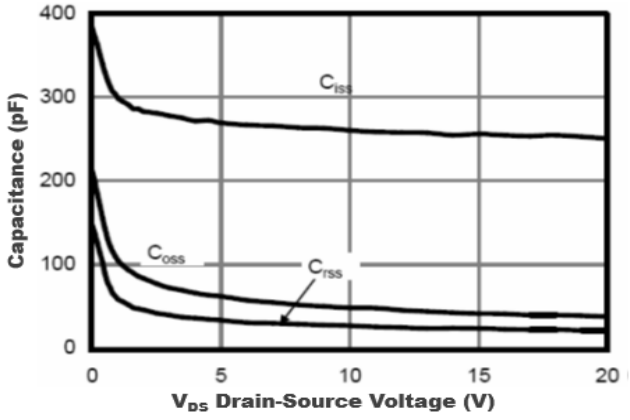


Figure3. Capacitance Characteristics

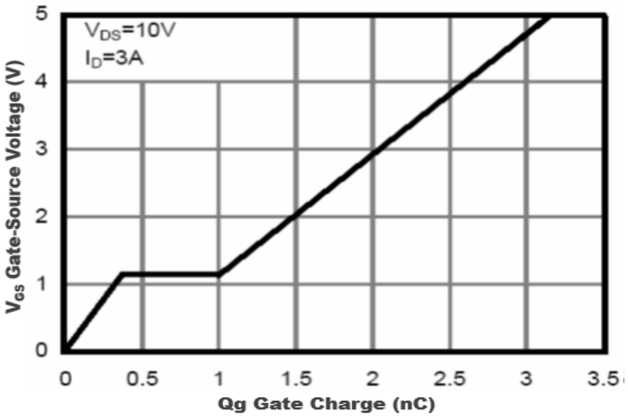


Figure4. Gate Charge

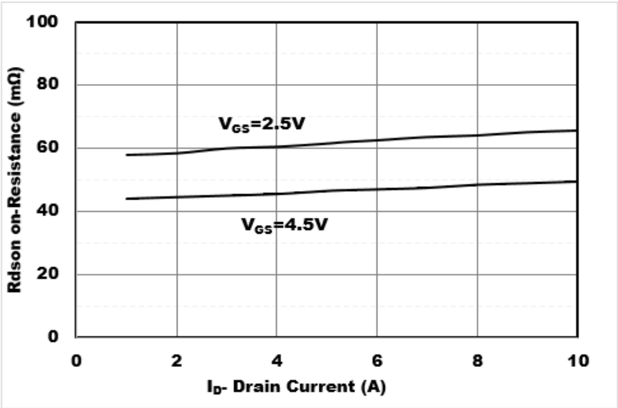


Figure5. Drain-Source on Resistance

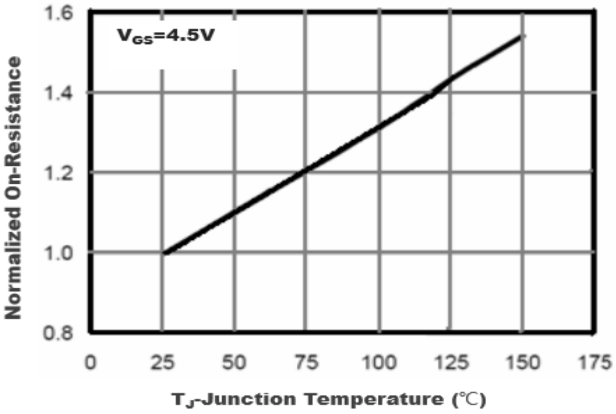


Figure6. Drain-Source on Resistance

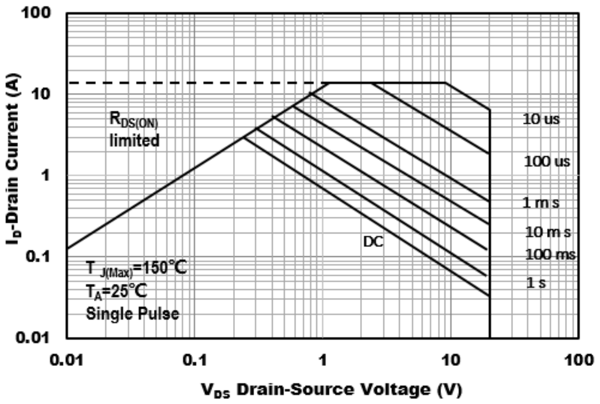


Figure7. Safe Operation Area

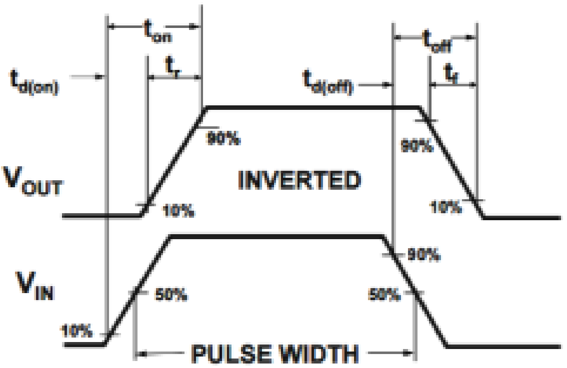


Figure8. Switching wave

Package Mechanical Data-SOT23-6 Single