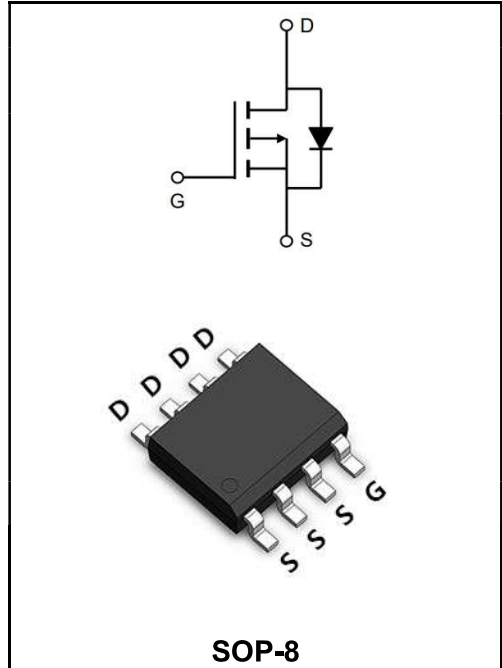


-100V P-CHANNEL ENHANCEMENT MODE MOSFET

MAIN CHARACTERISTICS

I_D	-8A
V_{DSS}	-100V
R_{DS(on)-typ(@V_{GS}=-10V)}	< 110mΩ (Type:83 mΩ)



Application

- ◆ Battery protection
- ◆ Load switch
- ◆ Uninterruptible power supply

Maximum Ratings at T_c=25°C unless otherwise specified

Characteristics	Symbols	Value	Units
Drain-Source Voltage	V_{DS}	-100	V
Gate - Source Voltage	V_{GS}	±20	V
Continuous Drain Current, V _{GS} @ -10V ¹ @T _c =25°C	I_D	-8	A
Continuous Drain Current, V _{GS} @ -10V ¹ @T _c =100°C	I_D	-3.85	A
Pulsed Drain Current ²	I_{DM}	-18	A
Single Pulse Avalanche Energy ³	E_{AS}	56	mJ
Avalanche Current	I_{AS}	3.1	A
Total Power Dissipation ⁴ @T _A =25°C	P_D	3.1	W
Storage Temperature Range	T_{STG}	-55 to +150	°C
Operating Junction Temperature Range	T_J	-55 to +150	°C
Thermal Resistance Junction-Ambient ¹	R_{θJA}	59	°C/W
Thermal Resistance Junction to Case ¹	R_{θJC}	16	°C/W

Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Test Condition	Symbols	Min	Typ	Max	Units
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	BV_{DSS}	-100	-110	-	V
Static Drain-Source On-Resistance ²	$V_{GS}=-10V, I_D=-6A$	$R_{DS(ON)}$	-	83	110	mΩ
	$V_{GS}=-4.5V, I_D=-3A$		-	95	120	
Gate -Threshold Voltage	$V_{DS}=V_{GS}, I_D=-250\mu A$	$V_{GS(th)}$	-1.2	-1.8	-2.5	V
Drain-Source Leakage Current	$V_{DS}=-100V, V_{GS}=0V, T_J=25^\circ C$	I_{DSS}	-	-	-50	μA
Gate -Source Leakage Current	$V_{GS}=\pm 20V, V_{DS}=0V$	I_{GSS}	-	-	±100	nA
Forward Transconductance	$V_{DS}=-10V, I_D=-10A$	g_{fs}	-	24	-	S
Total Gate Charge	$V_{DS}=-50V$ $V_{GS}=-10V$ $I_D=-20A$	Q_g	-	20.1	-	nC
Gate-Source Charge		Q_{gs}	-	3.9	-	
Gate-Drain Charge		Q_{gd}	-	4.3	-	
Turn-on delay time	$V_{DD}=-50V$ $V_{GS}=-10V$ $I_D=-10A$ $R_G=3.3$	$t_{d(on)}$	-	10	-	ns
Rise Time		T_r	-	30	-	
Turn-Off Delay Time		$t_{d(OFF)}$	-	77	-	
Fall Time		t_f	-	81	-	
Input Capacitance	$V_{DS}=-20V$ $V_{GS}=0V$ $f=1MHz$	C_{iss}	-	1051	-	pF
Output Capacitance		C_{oss}	-	119	-	
Reverse Transfer Capacitance		C_{rss}	-	25	-	
Continuous Source Current ^{1,5}	$V_G=V_D=0V, \text{ Force Current}$	I_S	-	-	-15	A
Diode Forward Voltage ²	$V_{GS}=0V, I_S=-1A, T_J=25^\circ C$	V_{SD}	-	-	-1.2	V
Reverse Recovery Time	$I_F=-8A, dI/dt=100A/\mu s, T_J=25^\circ C$	t_{rr}	-	81	-	ns
Reverse Recovery Charge		Q_{rr}	-	140	-	nC

Notes:

- 1、Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
- 2、The test condition is, $V_{DD}=80V, V_G=10V, R_G=25\Omega, L=0.1mH$.
- 3、The data tested by pulsed Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 0.5\%$
- 4、The power dissipation is limited by 150°C junction temperature

Ratings and Characteristic Curves

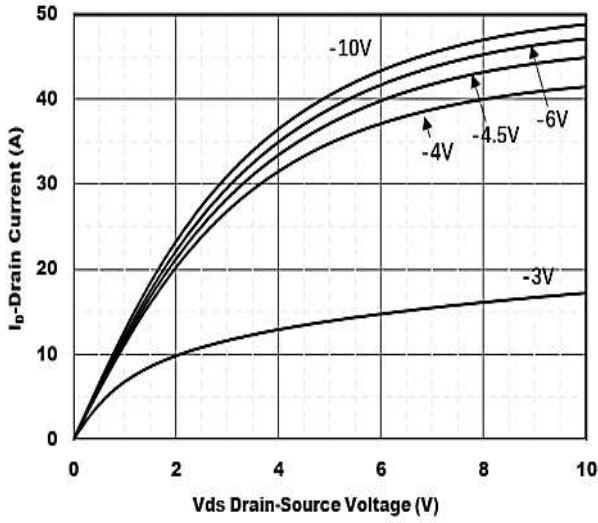


Figure1. Output Characteristics

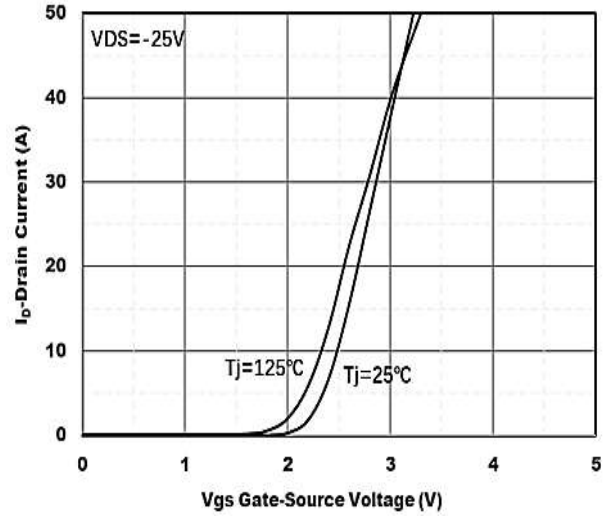


Figure2. Transfer Characteristics

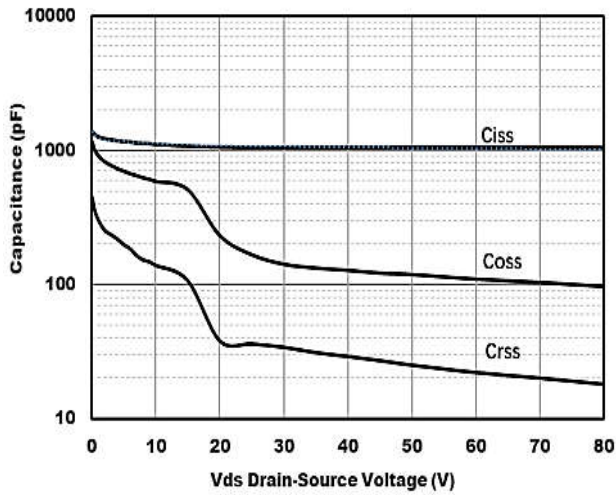


Figure3. Capacitance Characteristics

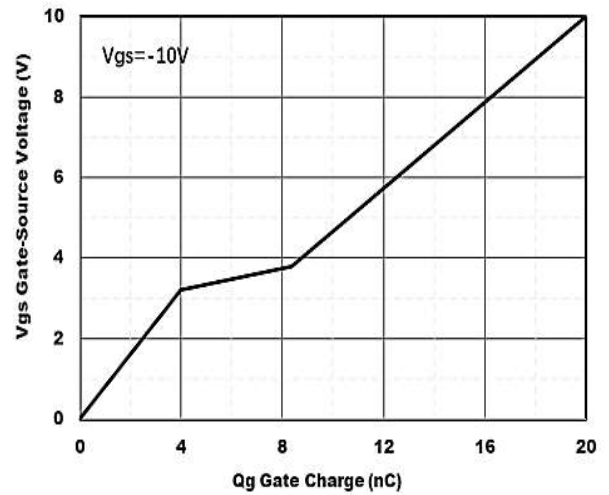


Figure4. Gate Charge

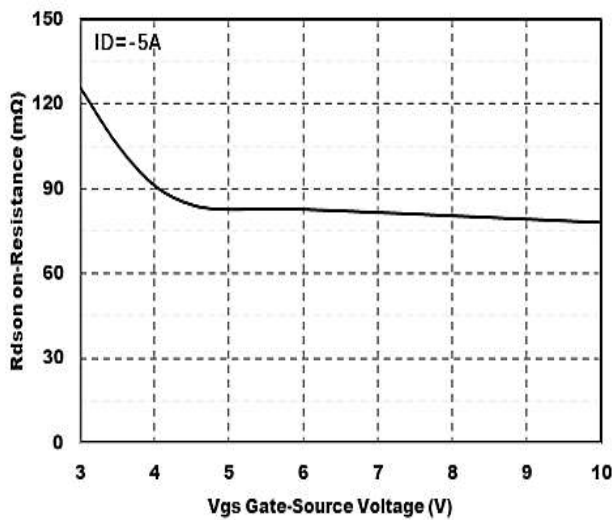


Figure5. : On-Resistance vs. Gate to Source Voltage

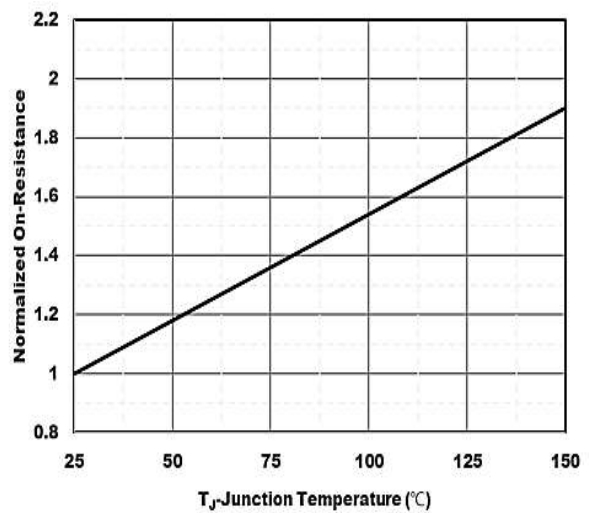


Figure6. Normalized On-Resistance

Ratings and Characteristic Curves

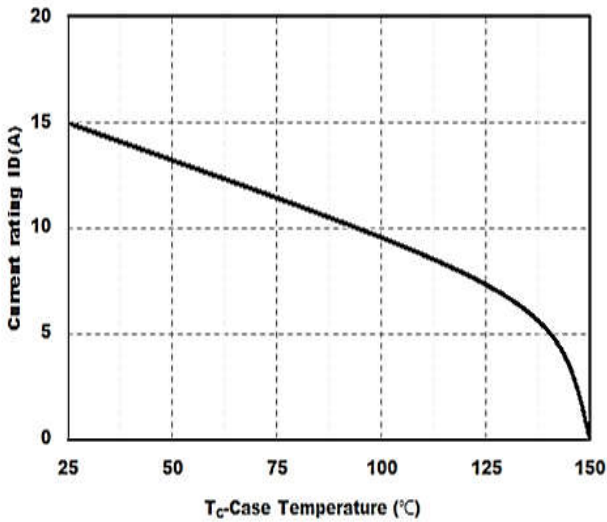


Figure7. Drain current

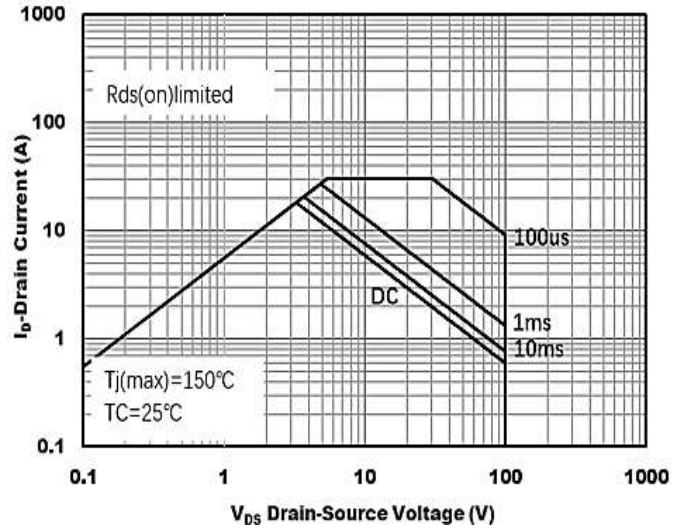


Figure8.Safe Operation Area

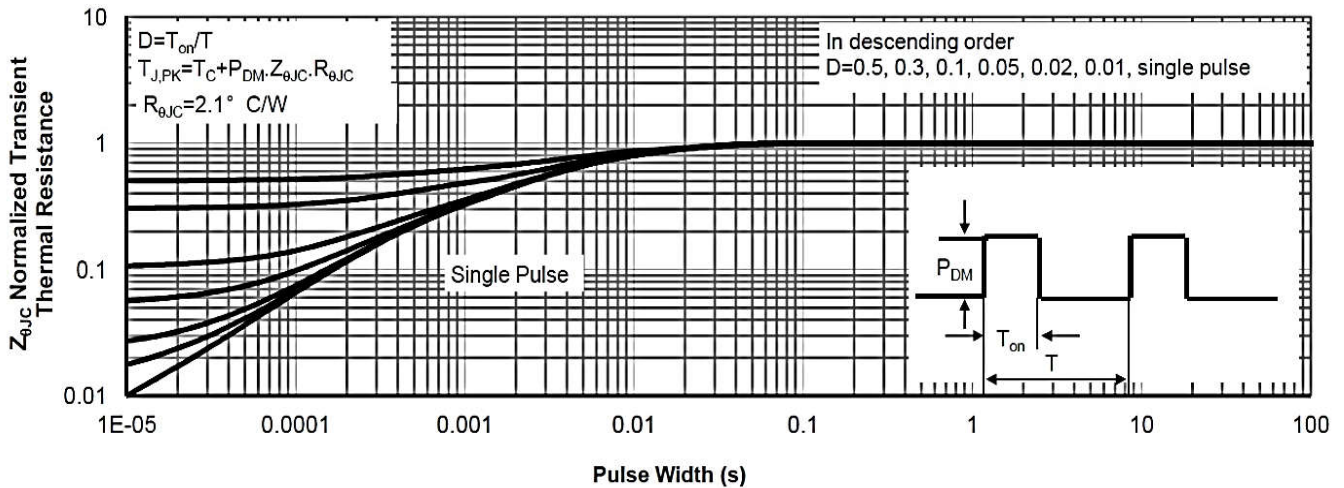


Figure9.Normalized Maximum Transient thermal impedance

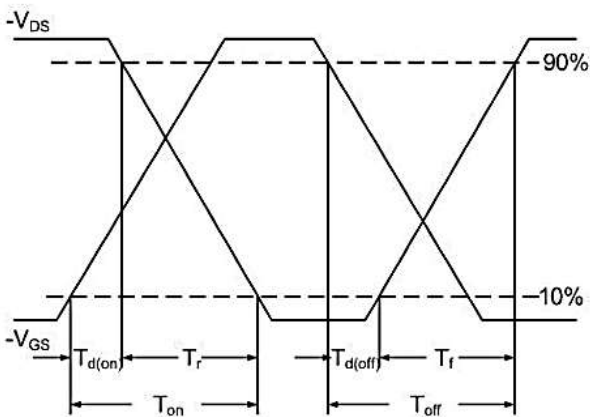


Figure10 Switching Time Waveform

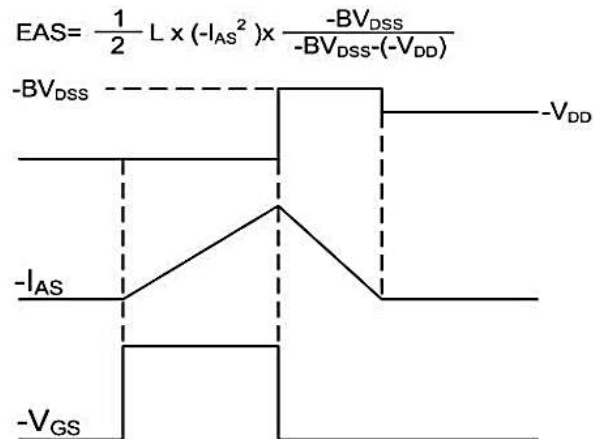
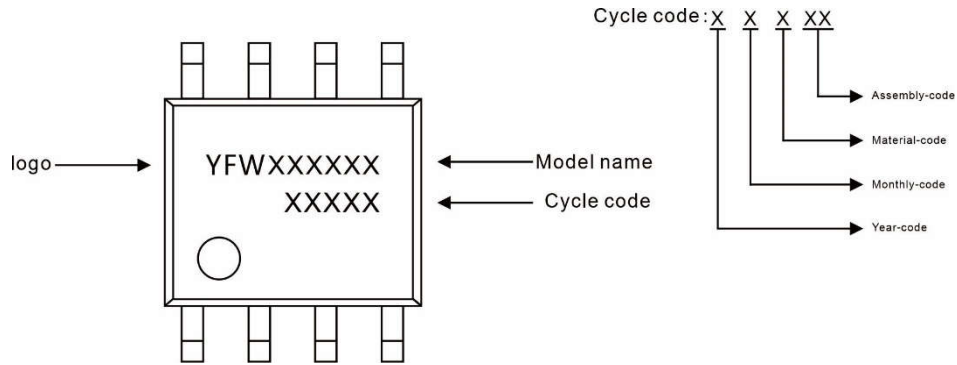


Figure11 Unclamped Inductive Waveform

Marking Diagram



Ordering information

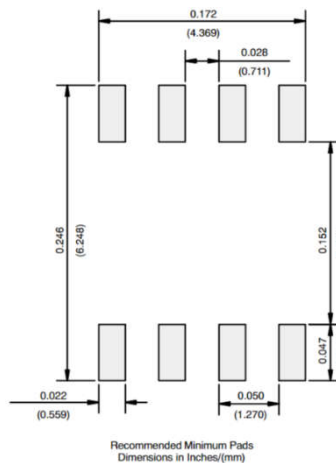
Package	Packing Description	Packing Quantity
SOP-8	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

Package Dimensions

SOP-8

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.35	1.75	0.053	0.069
A1	0.10	0.25	0.004	0.010
A2	1.35	1.50	0.053	0.059
b	0.35	0.55	0.014	0.022
c	0.15	0.25	0.006	0.010
D	4.80	5.00	0.189	0.197
D1	3.10	3.50	0.122	0.138
E	5.80	6.20	0.228	0.244
E1	3.80	4.00	0.150	0.157
E2	2.20	2.60	0.087	0.102
e	1.27 (BSC)		0.050 (BSC)	
L	0.40	1.27	0.016	0.050
θ	0°	8°	0°	8°

The recommended mounting pad size



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