

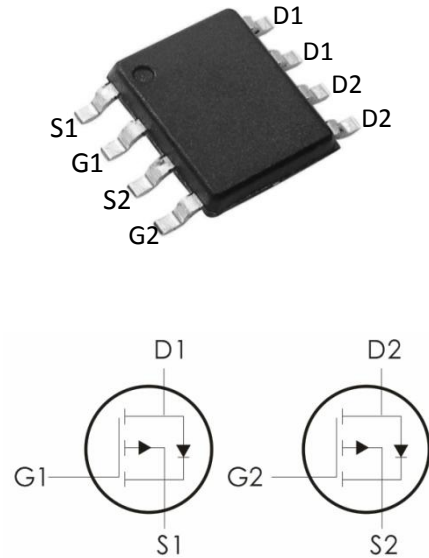
Description:

This Dual P-Channel MOSFET uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge.

It can be used in a wide variety of applications.

Features:

- 1) $V_{DS}=-60V, I_D=-2.5A, R_{DS(on)} < 180m\Omega @ V_{GS}=-10V$ (Typ : $155m\Omega$)
- 2) Low gate charge.
- 3) Green device available.
- 4) Advanced high cell density trench technology for ultra low $R_{DS(on)}$.
- 5) Excellent package for good heat dissipation.



Package Marking and Ordering Information:

Part NO.	Marking	Package	Packing
DOS2DP06	2DP06	SOP-8D	3000 pcs/Reel

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

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	-60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current - $T_A=25^\circ C$	-2.5	A
	Continuous Drain Current - $T_A=70^\circ C$	-1.8	
I_{DM}	Pulsed Drain Current ¹	-10	
P_D	Power Dissipation	1.55	W
E_{AS}	Single pulse avalanche energy	13	mJ
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55-+150	$^\circ C$

Thermal Characteristics:

Symbol	Parameter	Max	Units
$R_{\theta JC}$	Thermal Resistance, Junction to Case	8.3	$^\circ C/W$

R_{θJA}	Thermal Resistance, Junction to Ambient	80	°C/W
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Electrical Characteristics: (T_A=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Sourctce Breakdown Voltage	V _{GS} =0V,I _D =250 μ A	-60	---	---	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} =0V, V _{DS} =-60V	---	---	-1	μ A
I _{GSS}	Gate-Source Leakage Current	V _{GS} =± 20V, V _{DS} =0A	---	---	± 100	nA
On Characteristics						
V _{GS(th)}	GATE-Source Threshold Voltage	V _{GS} =V _{DS} , I _D =250 μ A	-1	-1.6	-2.5	V
R _{DS(ON)}	Drain-Source On Resistance ³	V _{GS} =-10V,I _D =-4A	---	155	180	m Ω
		V _{GS} =-4.5V,I _D =-2A	---	173	210	m Ω
Dynamic Characteristics						
C _{iss}	Input Capacitance ⁴	V _{DS} =-30V, V _{GS} =0V, f=1MHz	---	496	---	pF
C _{OSS}	Output Capacitance ⁴		---	27	--	
C _{rss}	Reverse Transfer Capacitance ⁴		---	20	---	
Switching Characteristics						
t _{d(on)}	Turn-On Delay Time ⁴	V _{DS} =-30V, I _D =-1.5A, R _{ENG} =3 Ω ,V _{GS} =-10V	---	18	---	ns
t _r	Rise Time ⁴		---	36.7	---	ns
t _{d(off)}	Turn-Off Delay Time ⁴		---	5.3	---	ns
t _f	Fall Time ⁴		---	3.4	---	ns
Q _g	Total Gate Charge ⁴	V _{GS} =-10V, V _{DS} =-30V, I _D =-1.5A	---	15.7	---	nc
Q _{gs}	Gate-Source Charge ⁴		---	2.7	---	nc
Q _{gd}	Gate-Drain “Miller” Charge ⁴		---	1	---	nc
Drain-Source Diode Characteristics						
V _{SD}	Diode Forward Voltage ³	V _{GS} =0V, I _{SD} =-1A	---	---	-1.2	V
I _S	Continuous Drain Curren	VD=VG=0V	---	---	-2.5	A
I _{SM}	Pulsed Drain Current		---	---	-10	A

Notes:

1. Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}=150^{\circ}\text{C}$.
2. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper, The value in any given application depends on the user's specific board design.
3. Pulse Test: Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.
4. This value is guaranteed by design hence it is not included in the production test.

Typical Characteristics: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

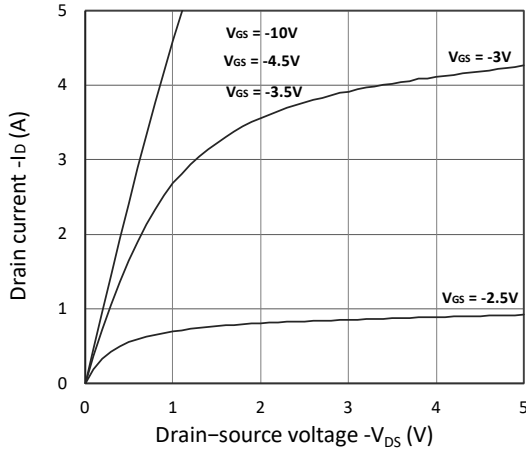


Figure 1. Output Characteristics

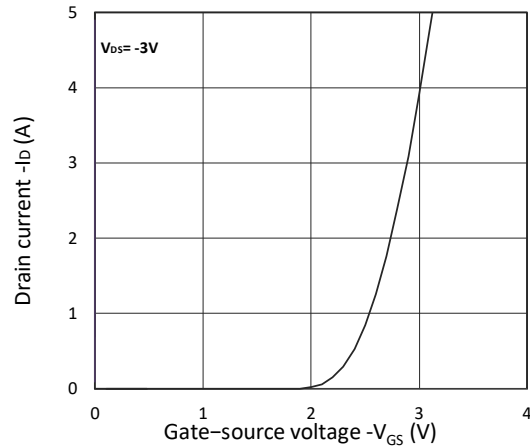


Figure 2. Transfer Characteristics

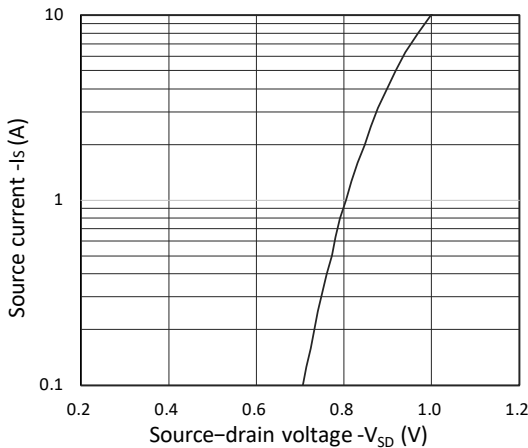


Figure 3. Forward Characteristics of Reverse

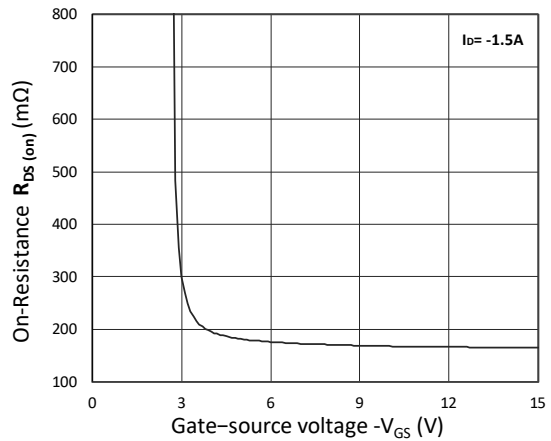


Figure 4. $R_{DS(ON)}$ vs. V_{GS}

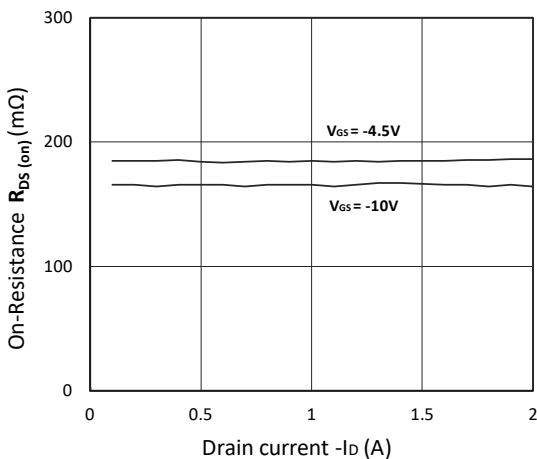


Figure 5. $R_{DS(ON)}$ vs. I_D

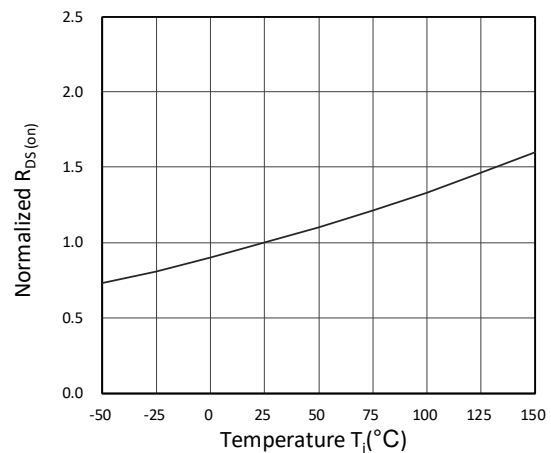


Figure 6. Normalized $R_{DS(ON)}$ vs. Temperature

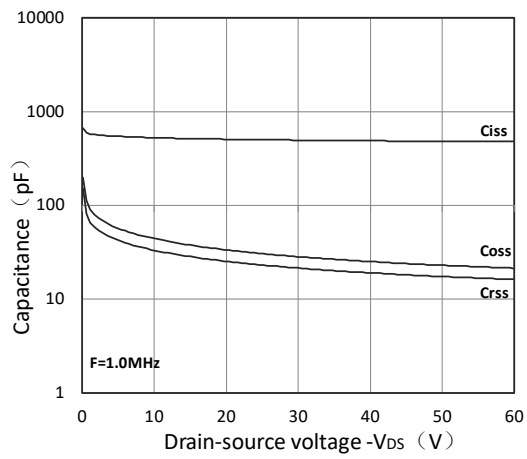


Figure 7. Capacitance Characteristics

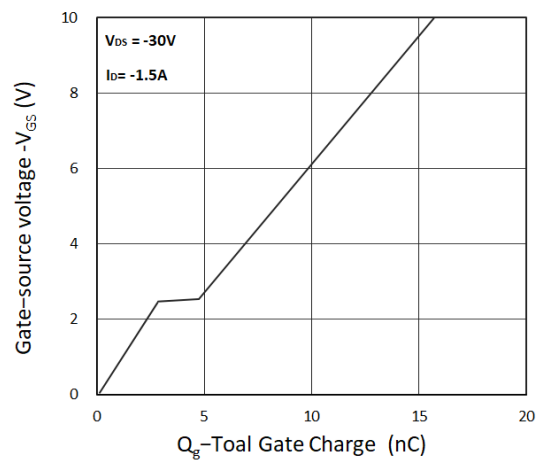
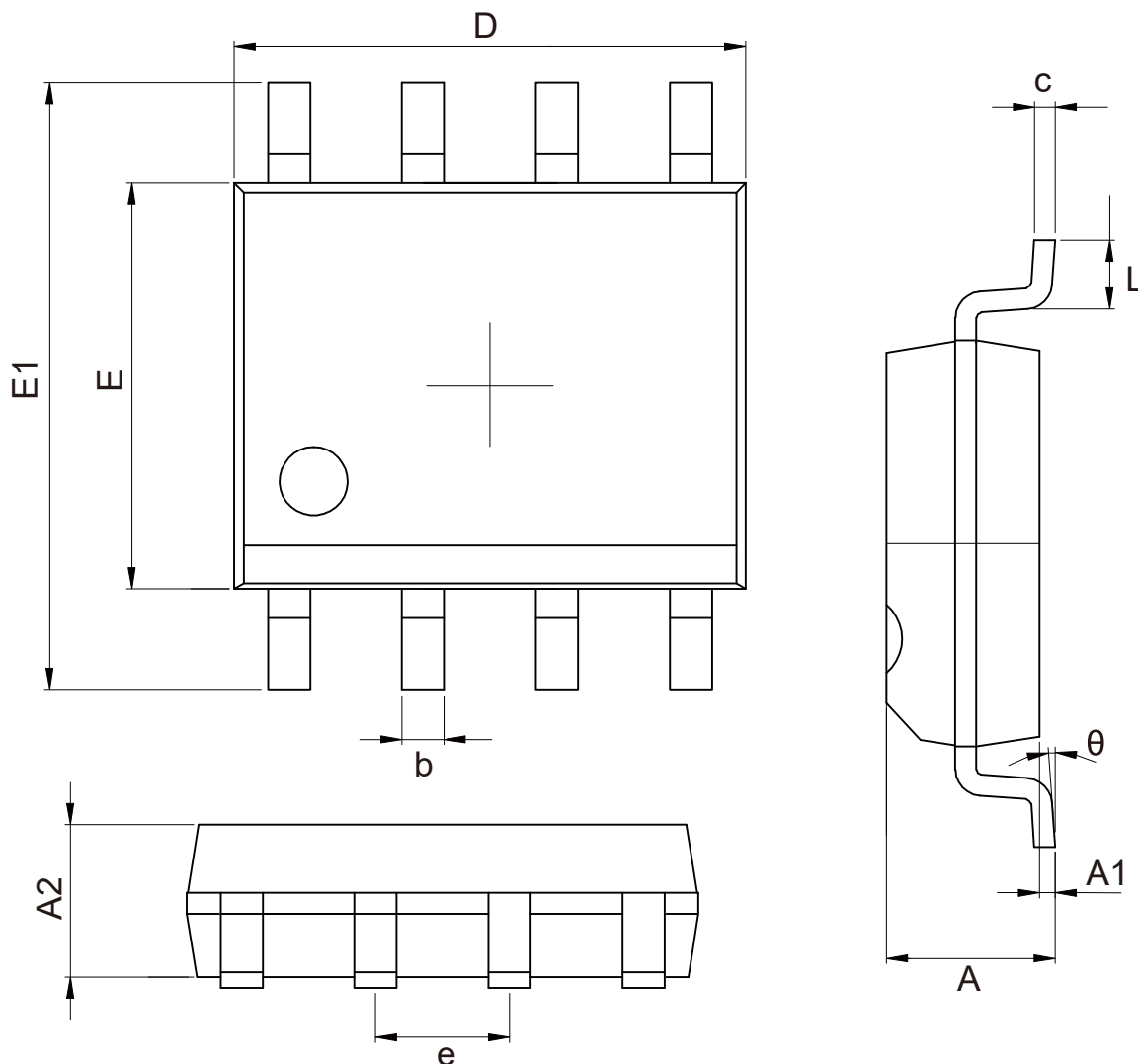


Figure 8. Gate Charge Characteristics

SOP-8DPackage Information:



COMMON DIMENSIONS			
CUNITS MEASURE=MILLIMETER			
SYMBOL	MIN	NOM	MAX
A	1.350	—	1.750
A1	0.100	—	0.250
A2	1.350	—	1.550
b	0.330	—	0.510
c	0.170	—	0.250
D	4.700	—	5.100
E	3.800	3.900	4.000
E1	5.800	—	6.200
e	1.270BSC		
L	0.400	—	1.270
θ	0°	—	8°

Unit:mm

Marking Information:

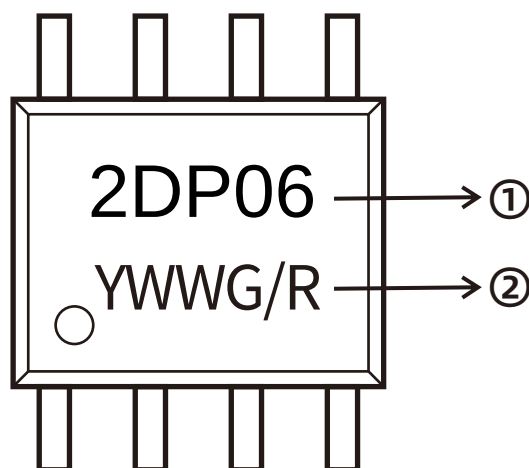
①. Part NO.

②. Date Code(YWWG / R)

Y : Year Code , last digit of the year

WW : Week Code(01-53)

G/R : G(Green) /R(Lead Free)

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