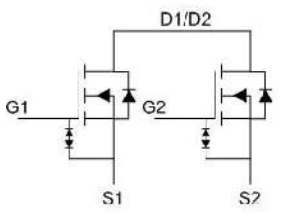
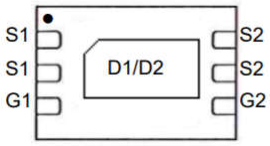
20V N+N-CHANNEL ENHANCEMENT MODE MOSFET

MAIN CHARACTERISTICS

I_D	12A
V_{DSS}	20V
R_{DSON}-typ(@V_{GS}=4.5V)	<7.2mΩ(Type:6 mΩ)
R_{DSON}-typ(@V_{GS}=2.5V)	<10.5mΩ(Type:8.2 mΩ)





DFN2*3-6L

Features

♦ESD=2KV HBM

Pb lead-free ROHS

Application

♦Battery protection
♦Load switch
♦Uninterruptible power supply

Product Specification Classification

Part Number	Package	Marking	Pack
YFW8808CF	DFN2*3-6L	YFW 8808E XXXXX	3000PCS/Tape

Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbols	Value	Units
Drain-Source Voltage	V_{DS}	20	V
Gate -Source Voltage	V_{GS}	±12	V
Continuous Drain Current, VGS @ 4.5V[1] @T_A=25℃	I_D	12	A
Continuous Drain Current, VGS @ 4.5V[1] @T_A=70℃	I_D	8.8	A
Pulsed Drain Current[2]	I_{DM}	70	A
Total Power Dissipation[1] @T_A=25℃	P_D	1.56	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](t ≤10s)	$R_{\Theta JA}$	80	°C/W

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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=250uA	**BV_{DSS}**	20	-	-	**V**
Static Drain-Source On-Resistance[2]	V_{GS}=4.5V , I_D=5.5A	**$R_{DS(ON)}$**	4.5	6	7.2	**mΩ**
	V_{GS}=4.0V , I_D=5.5A		4.8	6.2	7.5	
	V_{GS}=3.7V , I_D=5.5A		5.0	6.5	8.2	
	V_{GS}=3.1V , I_D=5.5A		5.3	7	9	
	V_{GS}=2.5V , I_D=5.5A		6	8.2	10.5	
Gate Threshold Voltage	V_{GS}=V_{DS} , ID =250uA	**$V_{GS(th)}$**	0.5	-	1.5	**V**
Drain-Source Leakage Current	V_{DS}=18V, V_{GS}=0V T_J= 25℃	**I_{DSS}**	-	-	1	**uA**
	V_{DS}=18V, V_{GS}=0V T_J= 55℃		-	-	5	
Gate - Source Leakage Current	V_{GS}=±12V , V_{DS}=0V	**I_{GSS}**	-	-	±10	**uA**
Forward Transconductance	V_{DS}= 5V, I_D= 5.5A	**G_{fs}**	-	38	-	**S**
Total Gate Charge (4.5V)	V_{DS}= 16V V_{GS}=4.5V I_D= 10A	**Q_g**	-	23	-	**nC**
Gate-Source Charge		**Q_{gs}**	-	3.5	-	
Gate-Drain Charge		**Q_{gd}**	-	8.4	-	
Turn-on delay time	V_{DD}=16V , V_{GS}=4.5V , R_G= 6 I_D= 5.5A	**Td(on)**	-	10.2	-	**nS**
Rise Time		**Tr**	-	41	-	
Turn-Off Delay Time		**td(OFF)**	-	67	-	
Fall Time		**tf**	-	31	-	
Input Capacitance	V_{DS}= 10V , V_{GS}=0V , f=1MHz	**C_{iss}**	-	1767	-	**pF**
Output Capacitance		**C_{oss}**	-	184	-	
Reverse Transfer Capacitance		**C_{rss}**	-	155	-	
Continuous Source Current[1]	V_G=V_D=0V , Force Current	**I_S**	-	-	11	**A**
Pulsed Source Current[2]		**I_{SM}**	-	-	70	**A**
Diode Forward Voltage[2]	V_{GS}=0V, I_S=11A T_J= 25℃	**V_{SD}**	-	-	1.2	**V**

Note:
1 .The data tested by surface mounted on a 1 inch2 FR-4 board with 2OZ copper, t ≤10s.
2.The data tested by pulsed , pulse width ≦ 10us , duty cycle ≦ 1%

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Ratings and Characteristic Curves

-

Typical Characteristics

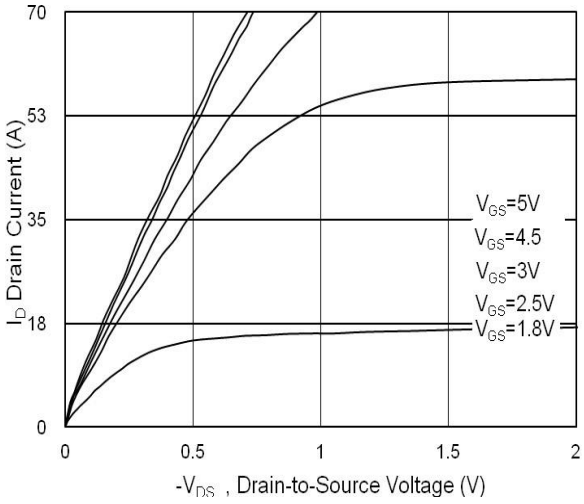


Fig.1 Typical Output Characteristics

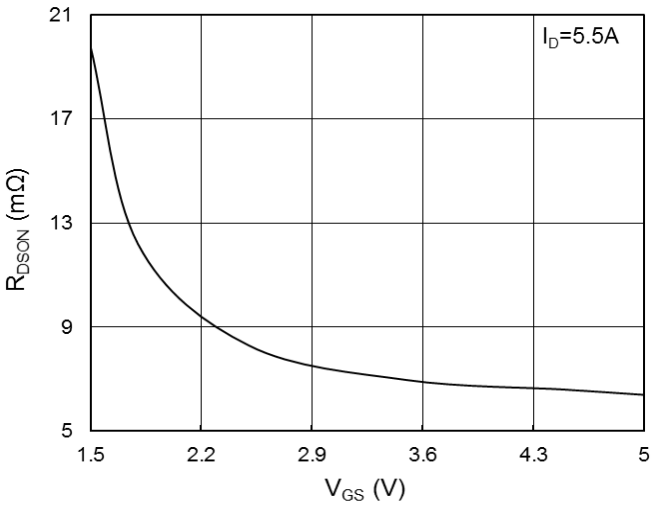


Fig.2 OResistance vs Gate Source

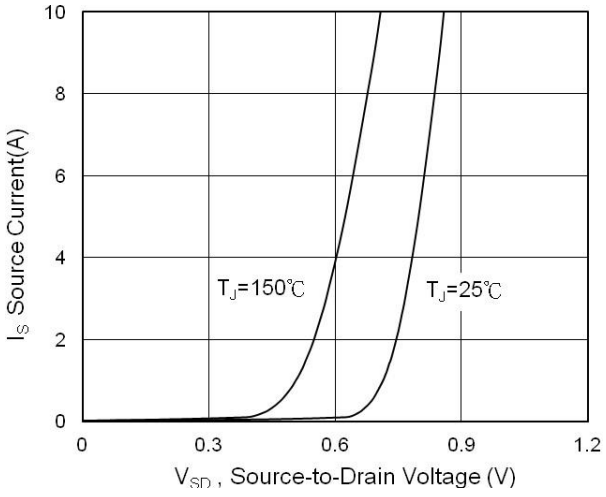


Fig.3Forward Characteristics of Reverse

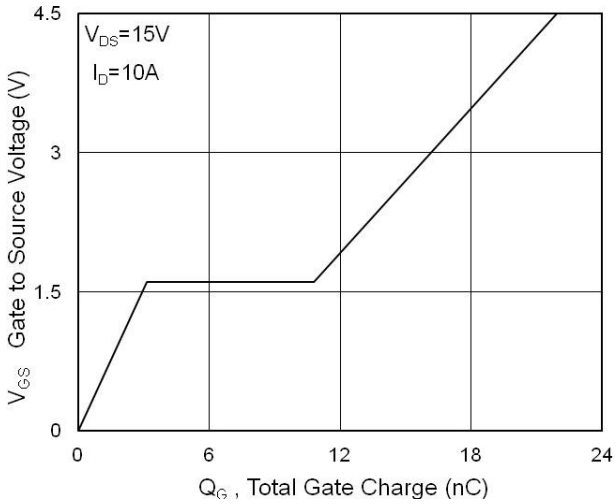


Fig.4 Gate-Charge Characteristics

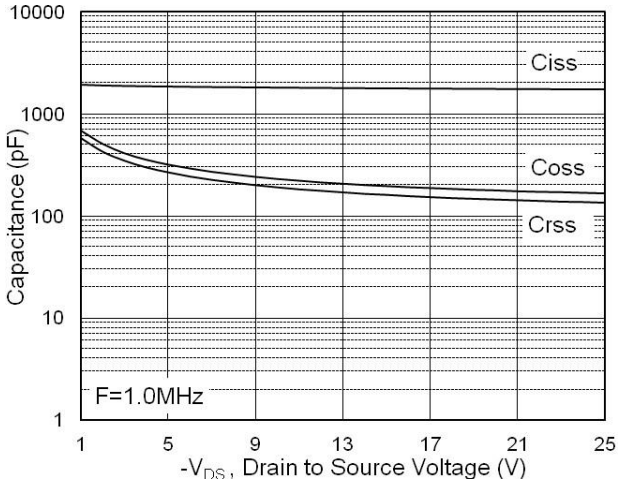


Fig.5VGS(th)vs. TJ

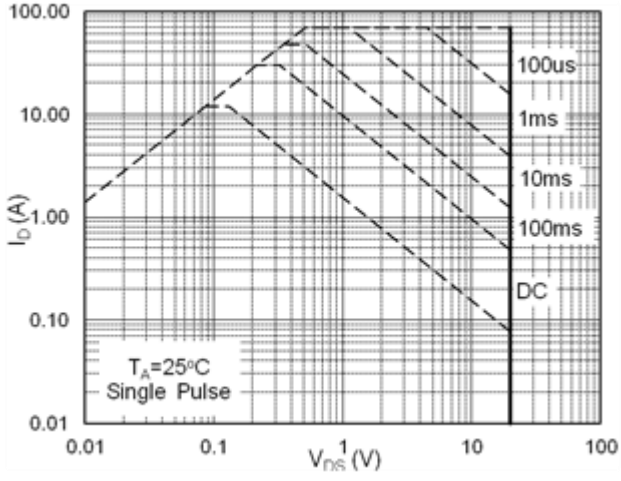


Fig.6Normalized RDSONvs. TJ

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Ratings and Characteristic Curves

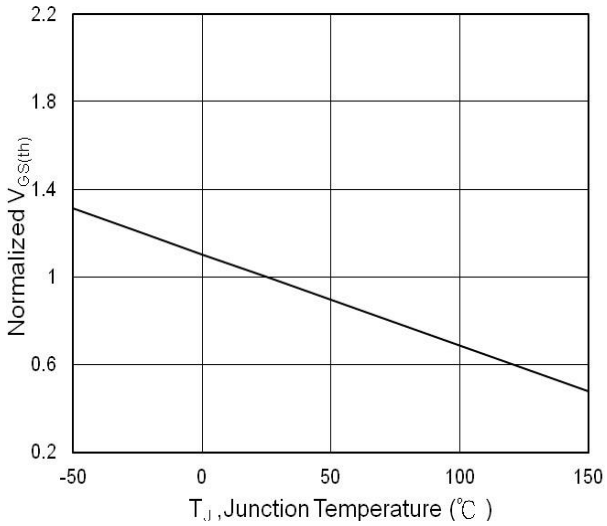


Fig.8Safe Operating Area

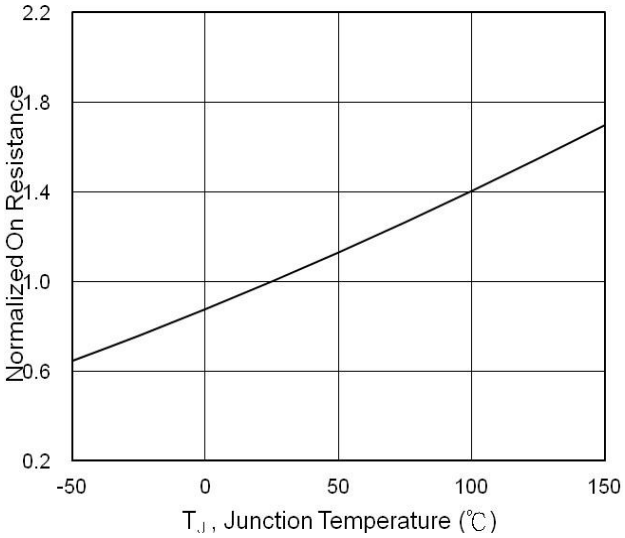


Fig.7Capacitance

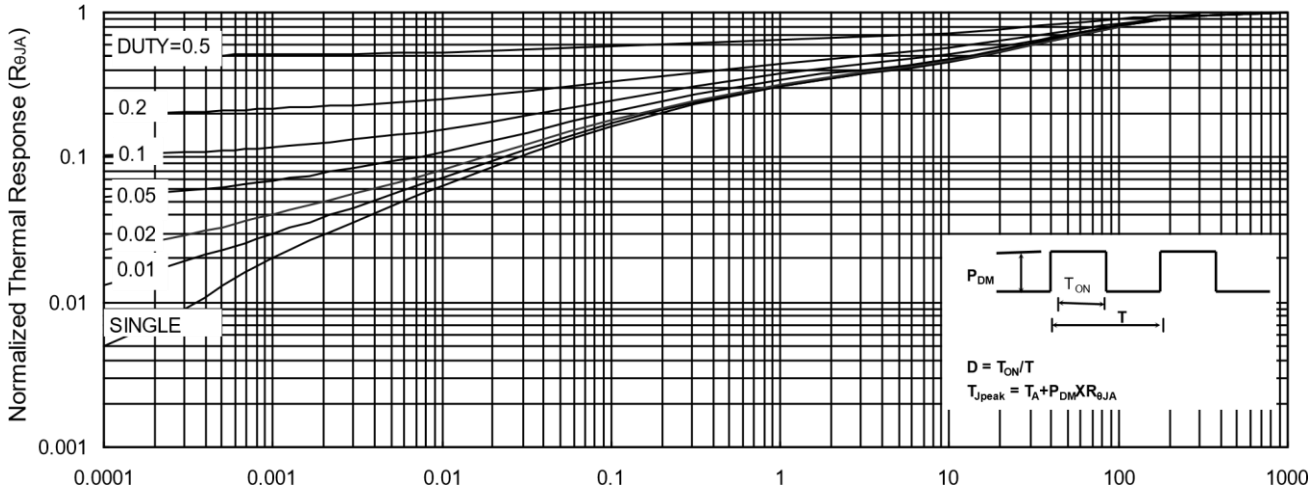


Fig.9 Normalized Maximum Transient Thermal Impedance

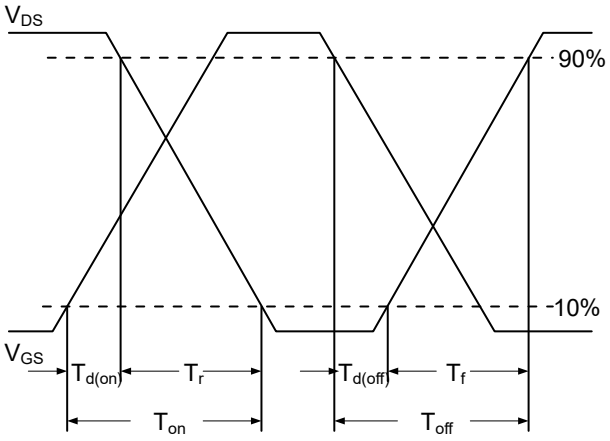


Fig.10Switching Time Waveform

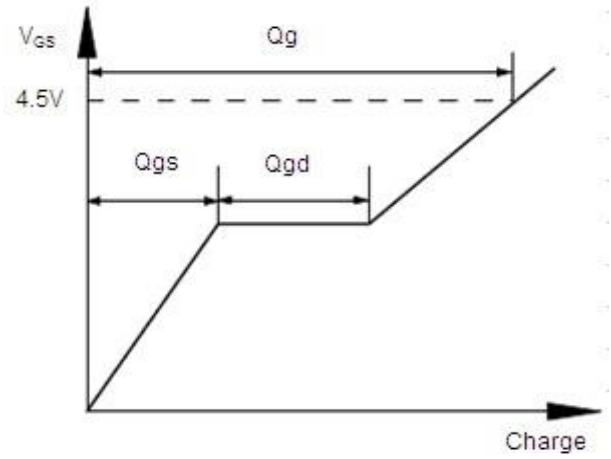
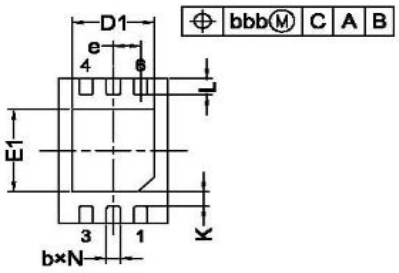


Fig.11Gate Charge Waveform

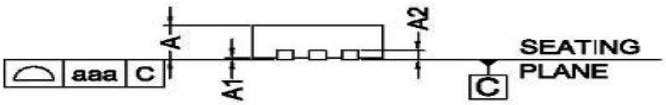
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Package Outline Dimensions Millimeters

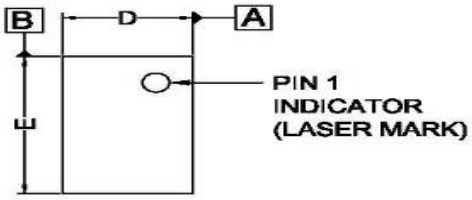
DFN2*3-6L



BOTTOM VIEW



SIDE VIEW



TOP VIEW

SYMBOL	MIN	TYP	MAX
A	0.70	0.75	0.80
A1	0.00	0.02	0.05
A2		0.203	
b	0.20	0.25	0.30
D	1.95	2.00	2.05
D1	1.45	1.50	1.55
E	2.95	3.00	3.05
E1	1.65	1.70	1.75
e		0.50BSC	
L	0.30	0.35	0.40
K		0.20MIN	
N		6	
aaa		0.08	
bbb		0.10	

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