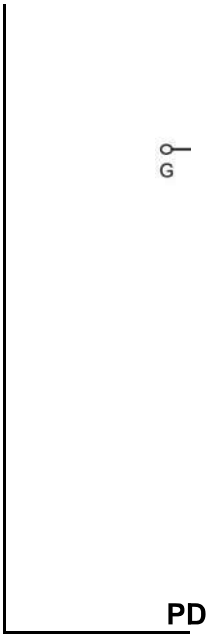
MAIN CHARACTERISTICS

I_D	20A
V_{DSS}	30V
R_{DSON}-typ(@V_{GS}=10V)	25mΩ(Typ:18mΩ)
R_{DSON}-typ(@V_{GS}=4.5V)	40mΩ(Typ:28mΩ)



FEATURES

- Advanced Trench Technology
- Excellent RDS(ON) and Low Gate Charge

APPLICATIONS

- Load Switch
- PWM Application
- Power Management

MECHANICAL DATA

- Case: PDFN5x6-8L/NF
- Mounting Position: Any
- Molded Plastic: UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275 maximum,10s per JESD 22-B106

Maximum Ratings at Tc=25°C unless otherwise specified

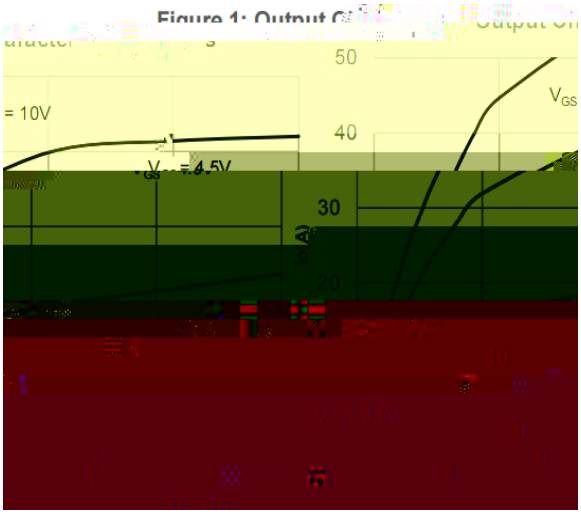
Characteristics	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continue Drain Current	I_D	20	A
Pulsed Drain Current (Note1)	I_{DM}	57	A
Power Dissipation	P_D	1.1	W
Single Pulse Avalanche Energy(Note1)	E_{AS}	24	mJ
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	5.1	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	113	°C/W

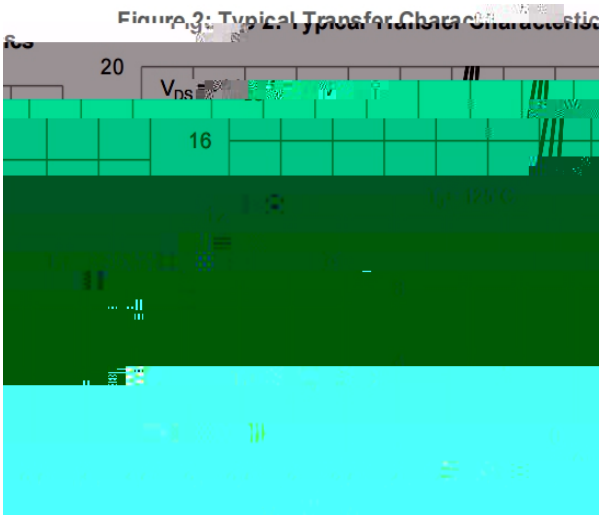
Note1:Pulse test: 300 μs pulse width, 2 % duty cycle s

Maximum Ratings at Tc=25°C unless otherwise specified

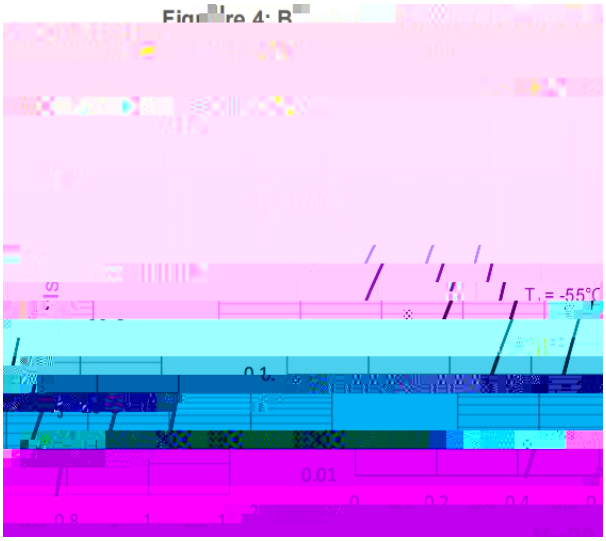
Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{GS} = 0 V,I_D = 250 μA	BV_{DSS}	30	-	-	V
Drain-Source Leakage Current	V_{DS} = 30 V, V_{GS} = 0 V	I_{DSS}	-	-	1	μA
Gate Leakage Current	V_{GS} = ± 20 V, V_{DS} = 0 V	I_{GSS}	-	-	±100	nA
Gate-Source Threshold Voltage	V_{DS} = V_{GS} , I_D = 250 μA	$V_{GS(th)}$	1	-	2.5	V
Drain-Source On-State Resistance	V_{GS} = 10 V, I_D = 5.5A	$R_{DS(ON)}$	-	18	25	mΩ
	V_{GS} = 4.5 V, I_D = 4.5 A		-	28	40	mΩ
Input Capacitance	V_{GS} = 0 V, V_{DS} = 15 V, f = 1 MHz	C_{iss}	-	485	-	pF
Output Capacitance		C_{oss}	-	69	-	
Reverse Transfer Capacitance		C_{rss}	-	53	-	
Turn-on Delay Time(Note2)	V_{GS}=10V V_{DD} =15 V R_G= 3 Ω I_D = 5 A	$t_{d(on)}$	-	4	-	ns
Rise Time(Note2)		T_r	-	11	-	
Turn-Off Delay Time(Note2)		$t_{d(OFF)}$	-	14	-	
Fall Time(Note2)		t_f	-	2	-	
Total Gate Charge(Note2)	I_D = 5 A V_{DD} = 15 V V_{GS} = 10 V	Q_g	-	10	-	nC
Gate to Source Charge(Note2)		Q_{gs}	-	2	-	
Gate to Drain Charge(Note2)		Q_{gd}	-	2	-	
Maximun Body-Diode Continu oDל					n	

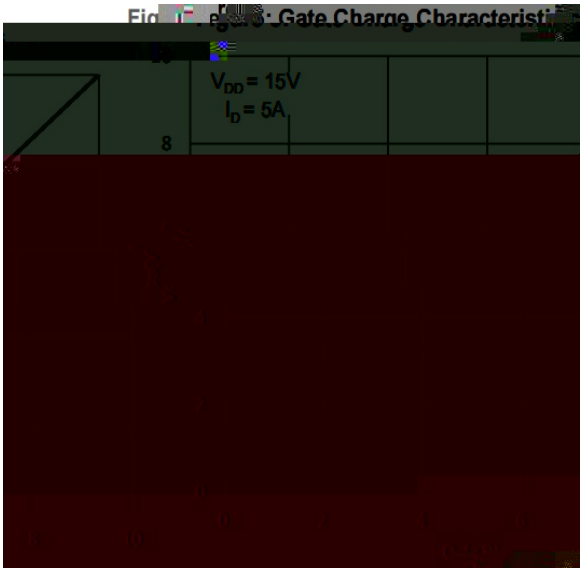
RATINGS AND CHARACTERISTIC CURVES

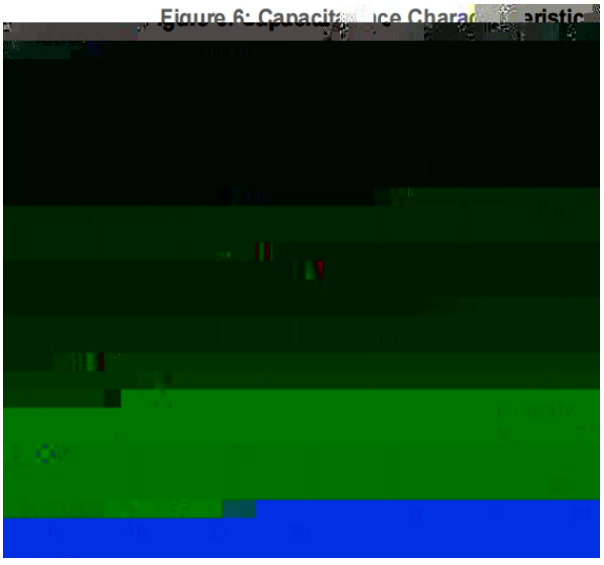




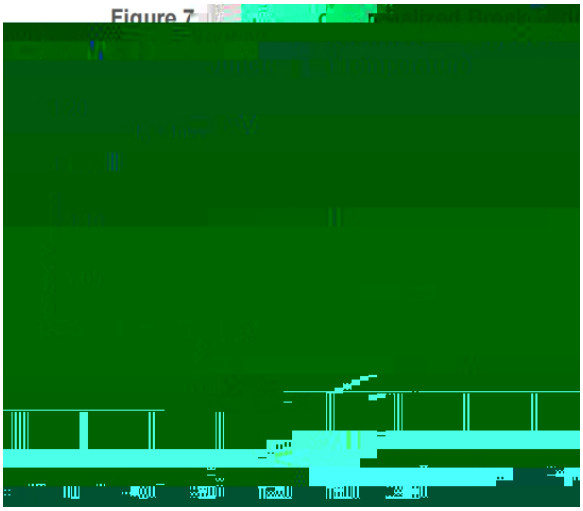


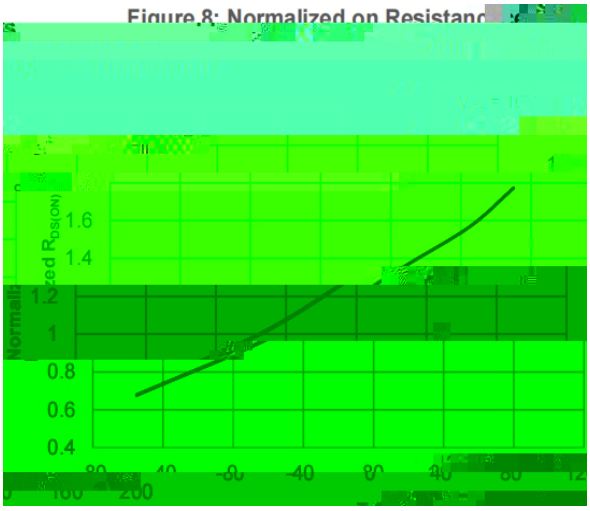


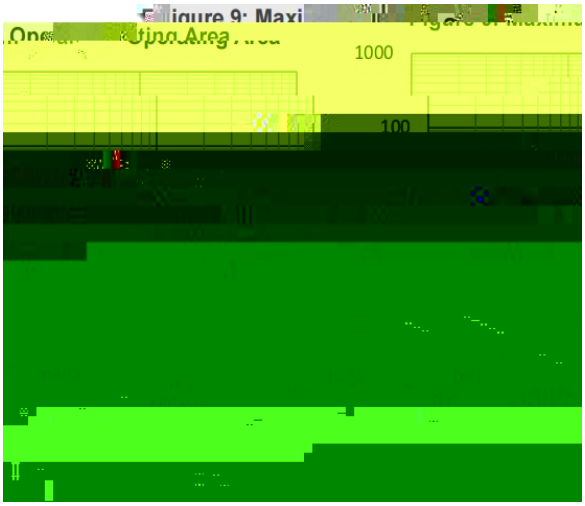


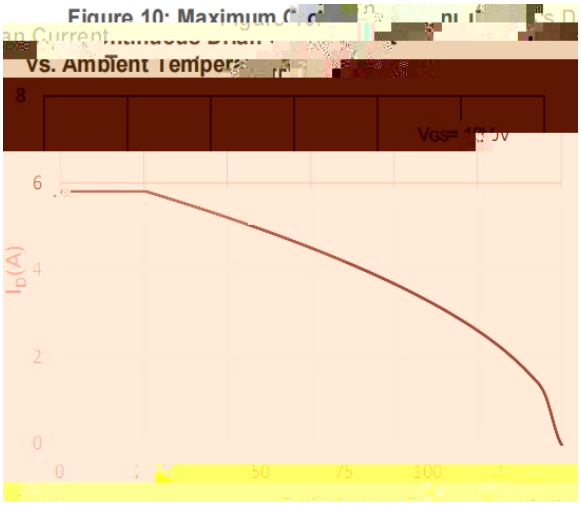


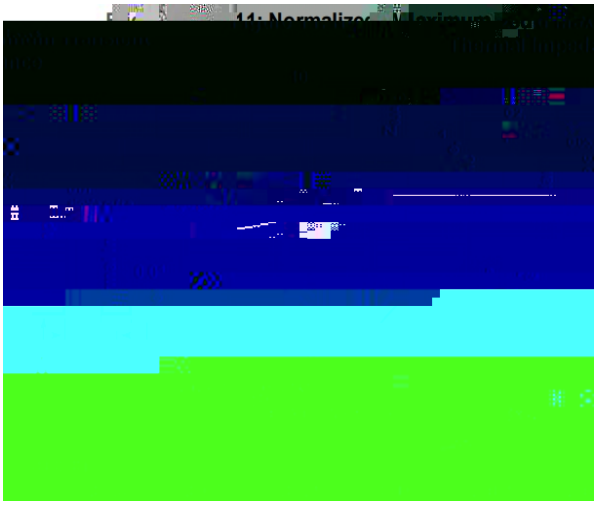
RATINGS AND CHARACTERISTIC CURVES

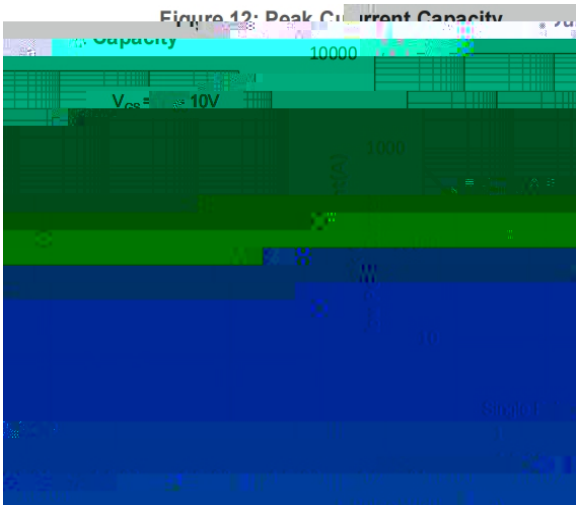












M g g

g f o o

M o	P c g	W g h		P c g
YFW20N03NF				

P c g o

P

		M			
	M	M	M	M	

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. 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-reactor controllers, fuel controllers and other safety devices),YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website https://www.yfwdiode.com, or consult YFW sales office for further assistance.