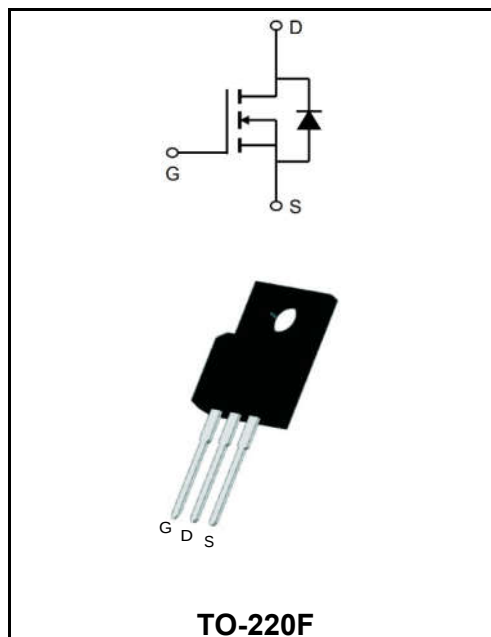


80V N-CHANNEL ENHANCEMENT MODE MOSFET
MAIN CHARACTERISTICS

I_D	100A
V_{DSS}	80V
$R_{DS(on)-typ}(@V_{GS}=10V)$	< 6.5m Ω (Type: 5.8 m Ω)


Applications

◆Power switch circuit of adaptor and charger.

Product Specification Classification

Part Number	Package	Marking	Pack
YFW100N08AF	TO-220F	YFW 100N08AF XXXXX	1000PCS/Tape

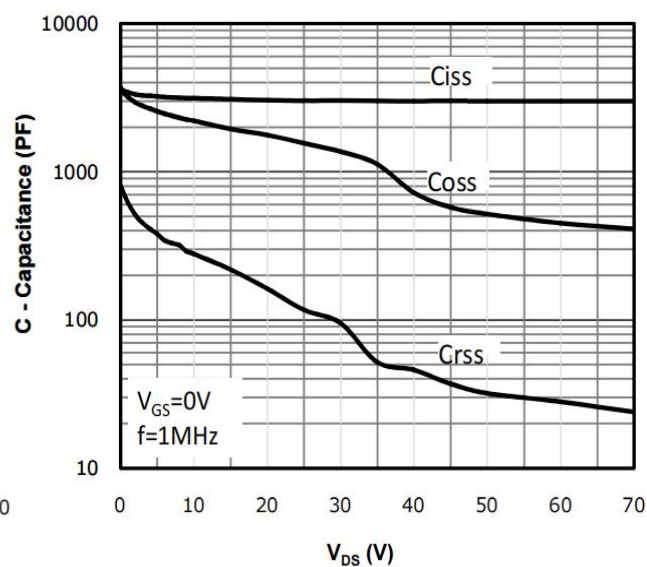
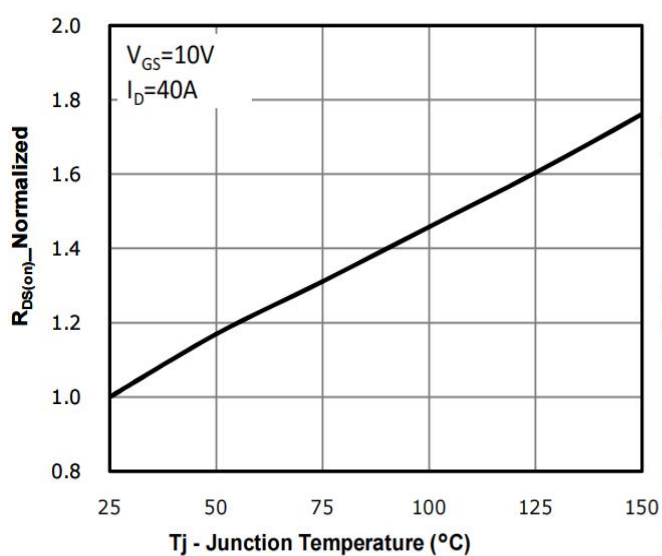
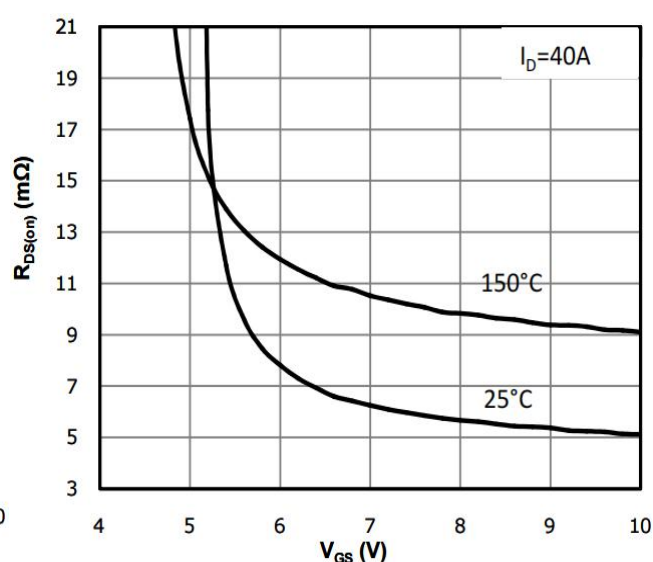
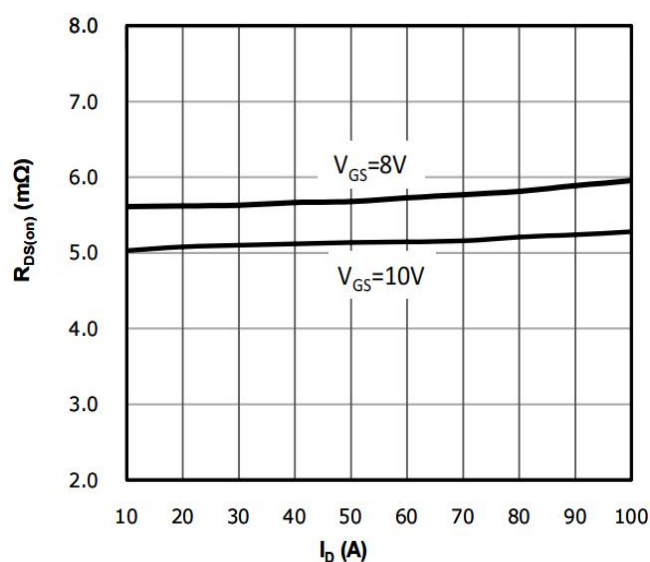
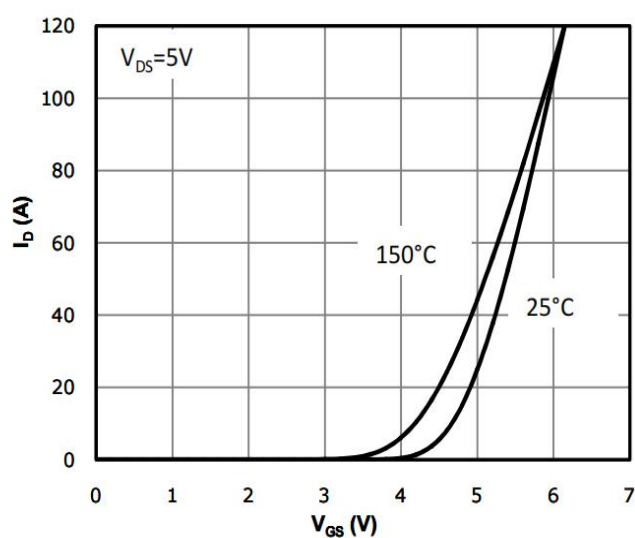
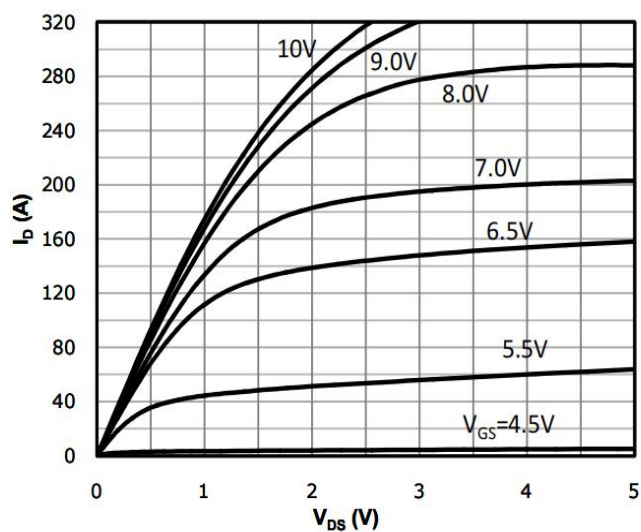
Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbols	Value	Units
Drain-Source Voltage	V_{DS}	80	V
Gate - Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	100	A
Pulsed Drain Current	I_{DM}	400	A
Single Pulse Avalanche Energy	E_{AS}	506	mJ
Power Dissipation	P_D	158	W
Storage Temperature Range	T_{STG}	-55 to +150	°C
Operating and Storage Temperature Range	T_J	150	°C
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	92	°C/W
Thermal Resistance Junction-Case	$R_{\theta JC}$	0.73	°C/W

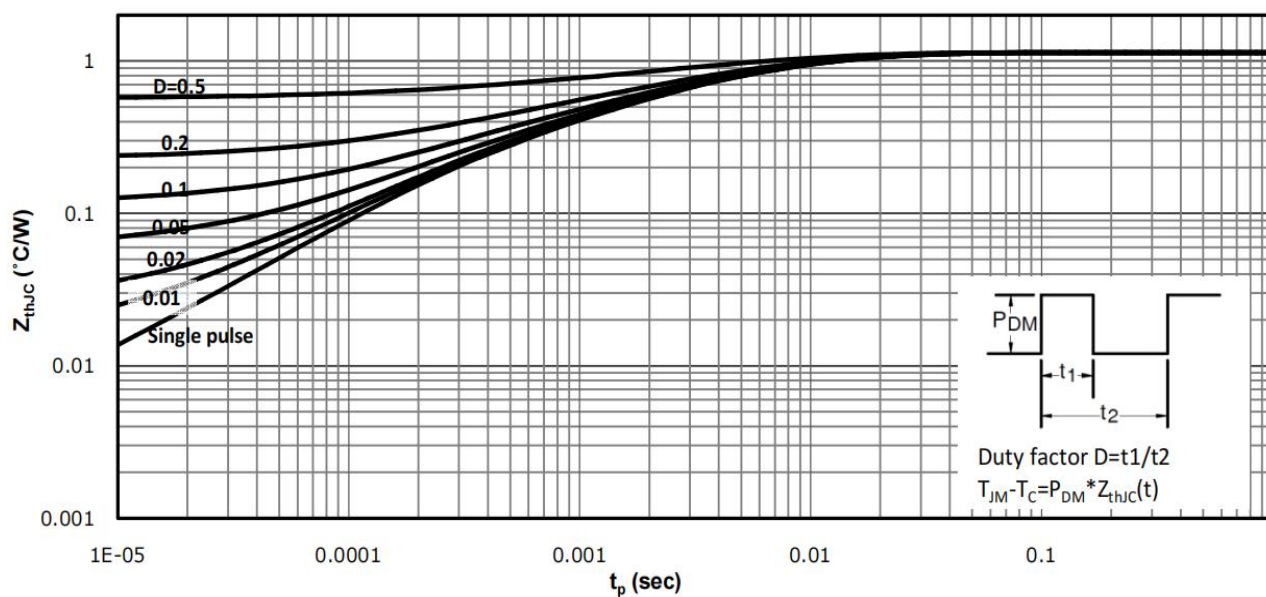
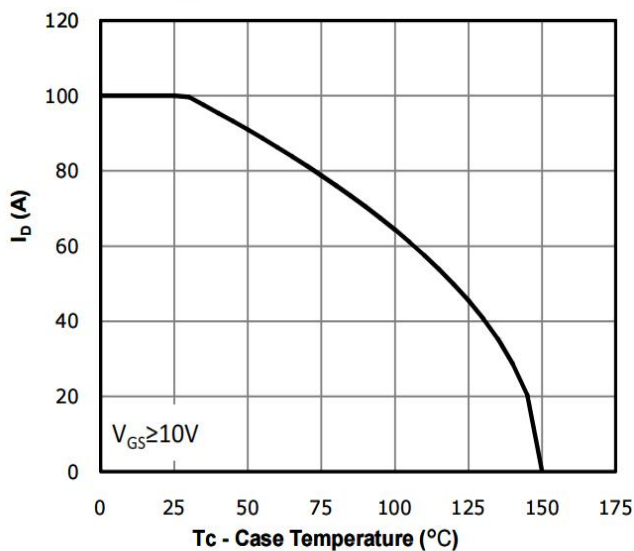
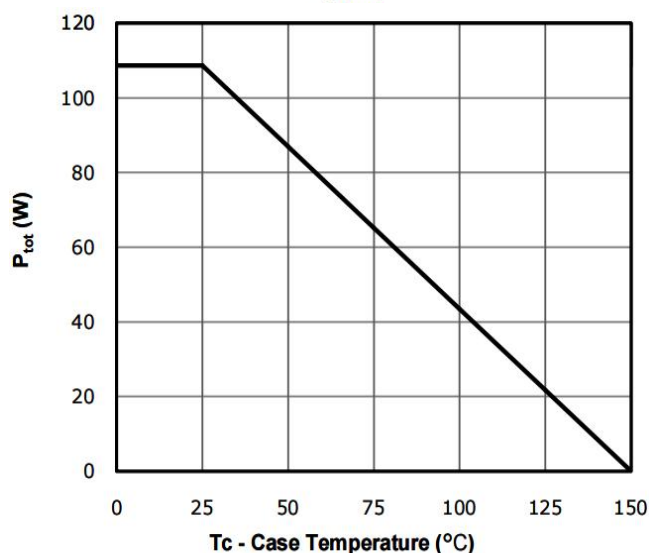
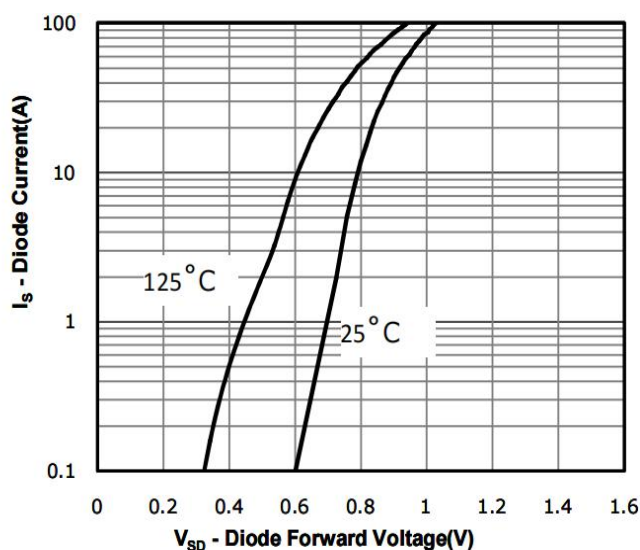
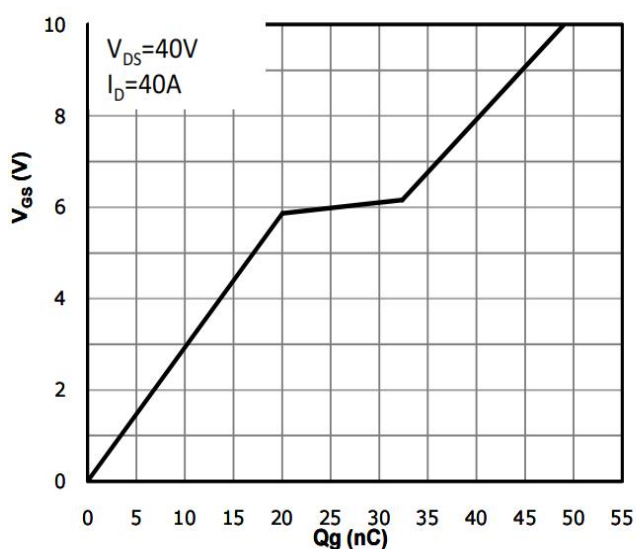
Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Test Condition	Symbols	Min	Typ	Max	Units
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	BV_{DSS}	80	-	-	V
Static Drain-Source On-Resistance	$V_{GS}=10V, I_D=40A$	$R_{DS(ON)}$	-	5.8	6.5	mΩ
Gate -Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	$V_{GS(th)}$	2.0	-	4.0	V
Drain-Source Leakage Current	$V_{DS}=80V, V_{GS}=0V$	I_{DSS}	-	-	1	μA
	$V_{DS}=80V, V_{GS}=0V, T_J=55^{\circ}C$		-	-	100	
Gate- Source Leakage Current	$V_{GS}=\pm 20V, V_{DS}=0V$	I_{GSS}	-	-	±100	nA
Forward Transconductance	$V_{DS}=5V, I_D=40A$	g_{fs}	-	90	-	S
Total Gate Charge	$V_{DS}=40V$ $V_{GS}=10V$ $I_D=40A$	Q_g	-	46.6	-	nC
Gate-Source Charge		Q_{gs}	-	19.4	-	
Gate-Drain Charge		Q_{gd}	-	10.2	-	
Turn-on delay time	$V_{DD}=40V$ $V_{GS}=10V$ $R_G=2.7\Omega$	$t_{d(on)}$	-	15.2	-	nS
Rise Time		T_r	-	35	-	
Turn-Off Delay Time		$t_{d(OFF)}$	-	36.7	-	
Fall Time		t_f	-	18.1	-	
Input Capacitance	$V_{DS}=40V$ $V_{GS}=0V$ $f=1MHz$	C_{iss}	-	3400	-	pF
Output Capacitance		C_{oss}	-	770	-	
Reverse Transfer Capacitance		C_{rss}	-	25	-	
Continuous Source Current		I_S	-	-	100	A
Diode Forward Voltage	$I_{SD}=40A$	V_{SD}	-	-	1.3	V
Reverse Recovery Time	$I_F=40A, I_S=I_F$ $di/dt=100A/\mu s, T_J=25^{\circ}C$	t_{rr}	-	46.3	-	nS
Reverse Recovery Charge		Q_{rr}	-	59.1	-	nC

Ratings and Characteristic Curves

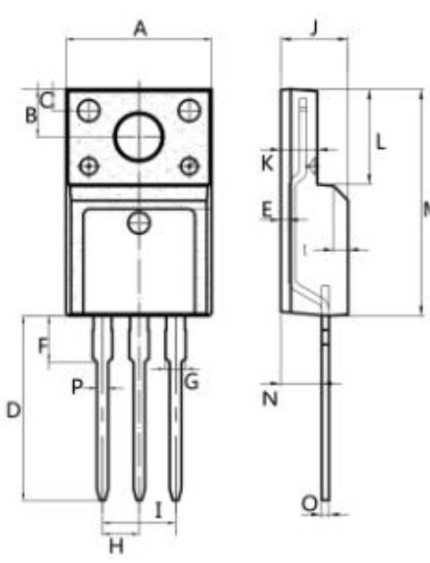


Ratings and Characteristic Curves



Package Outline Dimensions Millimeters

TO-220F

	Dim.	Min.	Max.
	A	9.95	10.25
	B	2.95	3.25
	C	1.25	1.45
	D	12.95	13.25
	E	0.50	0.65
	F	3.1	3.3
	G	1.30	1.45
	H	Typ 2.54	
	I	Typ 5.08	
	J	4.60	4.75
	K	2.50	2.65
	L	6.35	6.55
	M	15.4	16.0
	N	2.75	3.05
	O	0.48	0.52
	P	0.76	0.84
All Dimensions in millimeter			