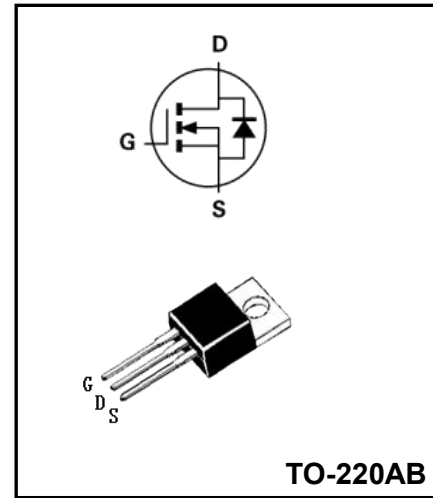


**60V N- Channel Advanced Power MOSFET**

**MAIN CHARACTERISTICS**

<b>I<sub>D</sub></b>	60A
<b>V<sub>DSS</sub></b>	60V
<b>R<sub>DS(on)-typ(@V<sub>GS</sub>=10V)</sub></b>	<17mΩ( <b>Type:12 mΩ</b> )



**FEATURES**

- ◆Fast Switching
- ◆Low ON Resistance
- ◆Low Gate Charge
- ◆100% Single Pulse avalanche energy Test

**APPLICATIONS**

- ◆Load Switch
- ◆PWM Application
- ◆Power management

**MECHANICAL DATA**

- ◆Case: Molded plastic
- ◆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°C maximum,10s per JESD 22-B106

**Product specification classification**

Part Number	Package	Marking	Pack
YFW60N06AT	TO-220AB	YFW 60N06AT XXXXX	50PCS/Tube/1000pcs/box

**Maximum Ratings at Tc=25°C unless otherwise specified**

Characteristics	Symbol	Value	Unit
Drain-Source Voltage	V <sub>DS</sub>	60	V
Gate-Source Voltage	V <sub>GS</sub>	±20	V
Continue Drain Current	I <sub>D</sub>	60	A
Pulsed Drain Current (Note1)	I <sub>DM</sub>	200	A
Power Dissipation	P <sub>D</sub>	75	W
Single Pulse Avalanche Energy (Note5)	E <sub>AS</sub>	80	mJ
Operating Temperature Range	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C
Thermal Resistance, Junction to Case(Note 2)	R <sub>θJC</sub>	2	°C/W
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	62	°C/W

Note 1:Pulse test: 300 μs pulse width, 2 % duty cycle

**Electrical Characteristics at Tc=25°C unless otherwise specified**

Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS} = 0\text{ V}, I_D = 250\ \mu\text{A}$	$BV_{DSS}$	60	-	-	V
Drain-Source Leakage Current	$V_{DS} = 60\text{ V}, V_{GS} = 0\text{ V}$	$I_{DSS}$	-	-	1	$\mu\text{A}$
Gate Leakage Current	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$	$I_{GSS}$	-	-	$\pm 100$	nA
Gate-Source Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250\ \mu\text{A}$	$V_{GS(th)}$	1	-	2.5	V
Drain-Source On-State Resistance (Note 3)	$V_{GS} = 10\text{ V}, I_D = 30\text{ A}$	$R_{DS(on)}$	-	12	17	m $\Omega$
	$V_{GS} = 4.5\text{ V}, I_D = 20\text{ A}$	$R_{DS(on)}$	-	16	25	m $\Omega$
Input Capacitance	$V_{GS} = 0\text{ V}, V_{DS} = 25\text{ V},$ $f = 1\text{ MHz}$	$C_{iss}$	-	2030	-	pF
Output Capacitance		$C_{oss}$	-	130	-	pF
Reverse Transfer Capacitance		$C_{rss}$	-	115	-	pF
Turn-on Delay Time		$t_{d(ON)}$	-	11	-	ns
Rise Time	$V_{DD}=30\text{V}, V_{GS}=10\text{V},$ $RG=1.8\Omega, I_D=30\text{A}$	$t_r$	-	79	-	ns
Turn-Off Delay Time		$t_{d(OFF)}$	-	33	-	ns
Fall Time		$t_f$	-	105	-	ns
Total Gate Charge	$V_{DS}=30\text{V}, V_{GS}=10\text{V}, I_D=30\text{A}$	$Q_G$	-	45	-	nC
Gate to Source Charge		$Q_{GS}$	-	8	-	nC
Gate to Drain Charge		$Q_{GD}$	-	11	-	nC

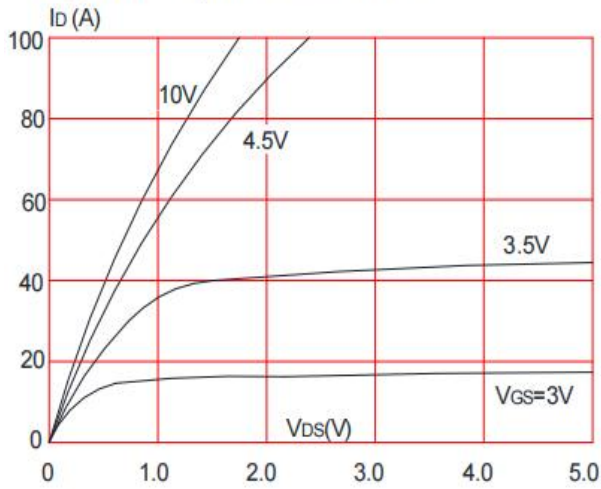
**Source-Drain Diode Characteristics at Ta=25°C unless otherwise specified**

Characteristics	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Maximun Body-Diode Continuous Current (Note 2)		$I_S$	-	-	60	A
Maximun Body-Diode Pulsed Current		$I_{SM}$	-	-	200	A
Drain-Source Diode Forward Voltage (Note 3)	$I_{SD} = 30\text{ A}$	$V_{SD}$	-	-	1.2	V
Reverse Recovery Time	$I_S = I_F, I_{SD}=30\text{A}, V_{GS} = 0\text{ V},$ $dI / dt = 100\text{ A}/\mu\text{s}$ (Note3)	$t_{rr}$	-	14	-	ns
Reverse Recovery Charge		$Q_{rr}$	-	10	-	$\mu\text{C}$

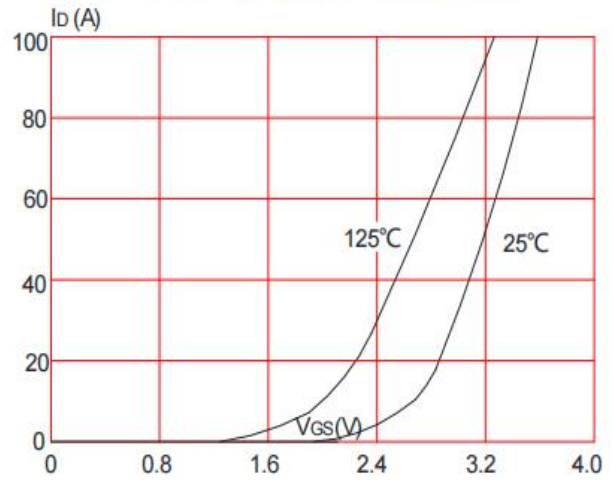
Note2:Pulse test: 300  $\mu\text{s}$  pulse width, 2 % duty cycle

**RATINGS AND CHARACTERISTIC CURVES**

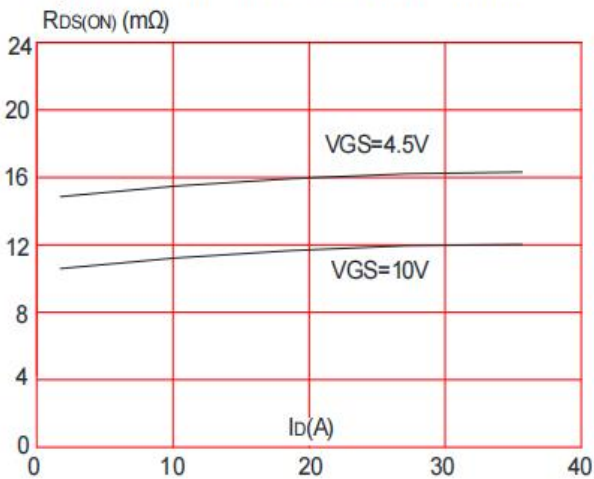
**Figure1: Output Characteristics**



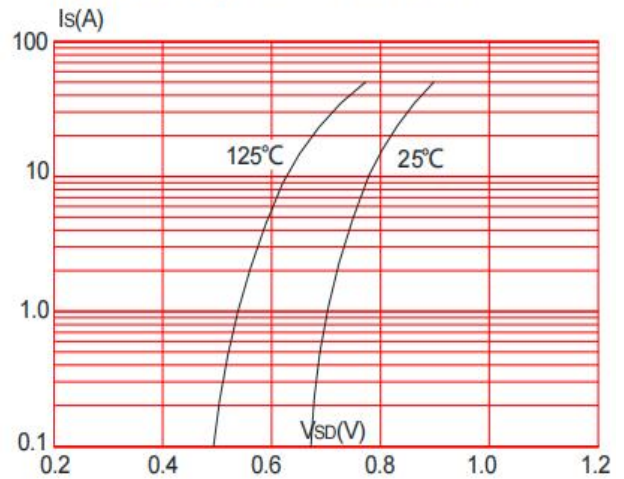
**Figure 2: Typical Transfer Characteristics**



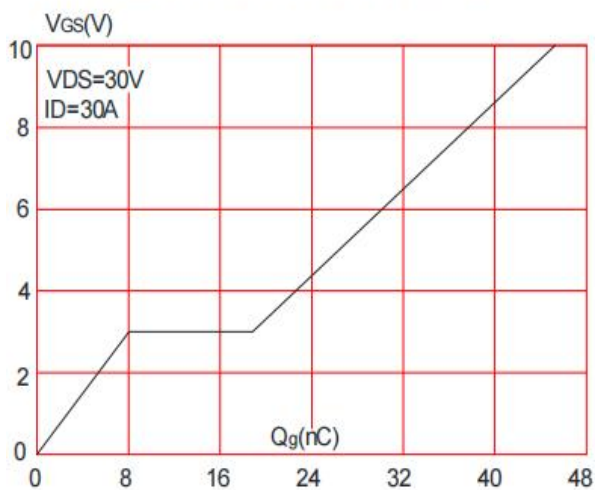
**Figure 3: On-resistance vs. Drain Current**



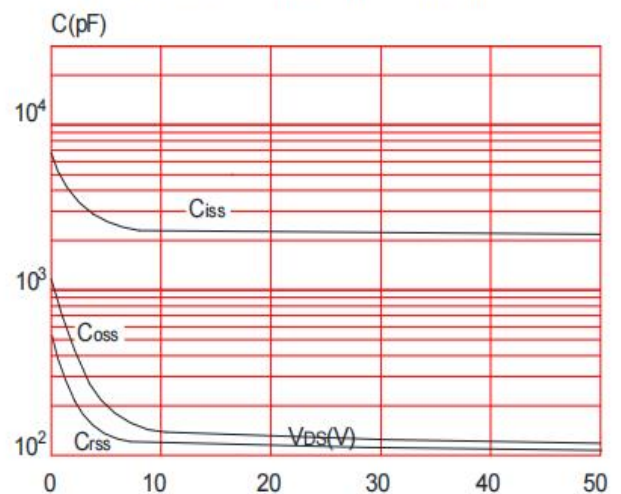
**Figure 4: Body Diode Characteristics**



**Figure 5: Gate Charge Characteristics**

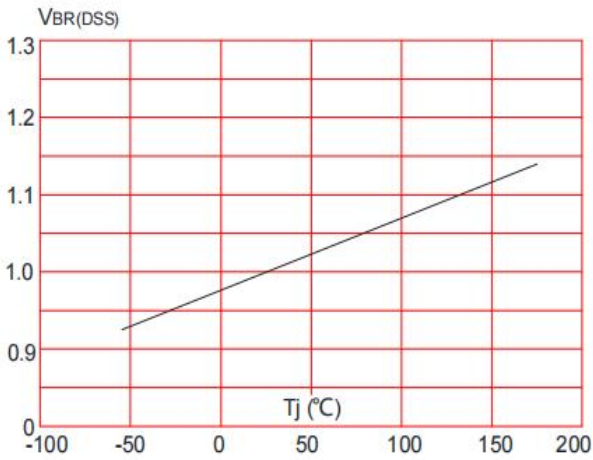


**Figure 6: Capacitance Characteristics**

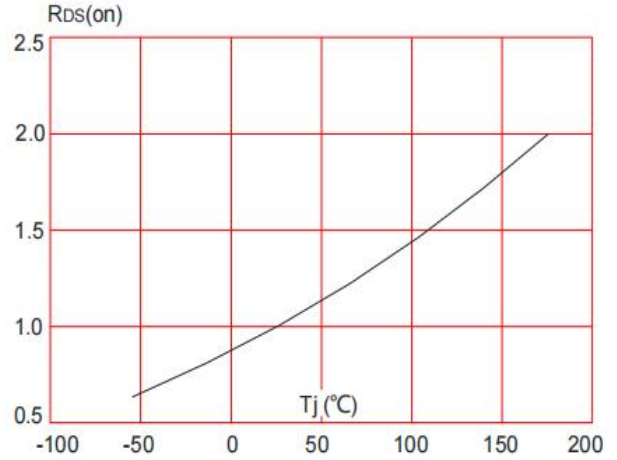


**RATINGS AND CHARACTERISTIC CURVES**

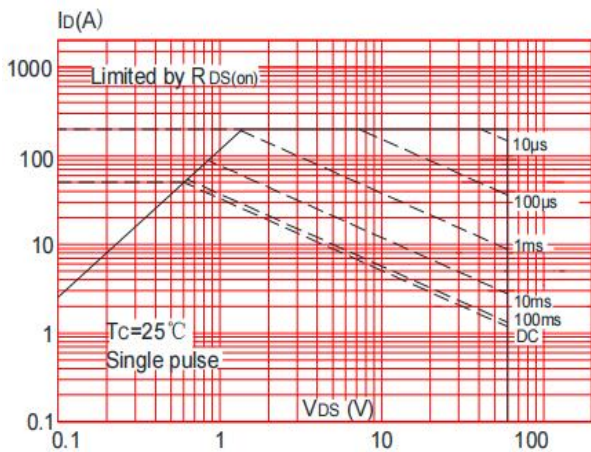
**Figure 7: Normalized Breakdown Voltage vs. Junction Temperature**



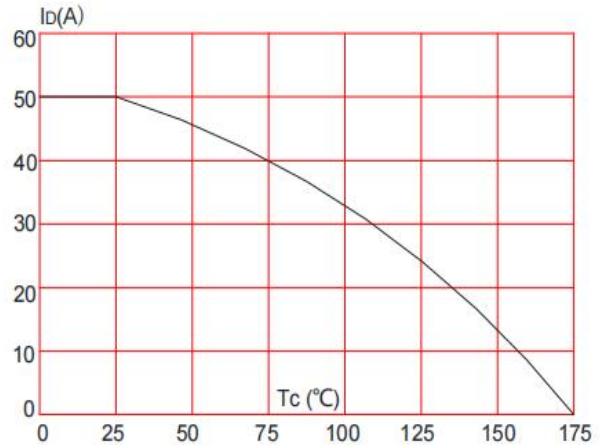
**Figure 8: Normalized on Resistance vs. Junction Temperature**



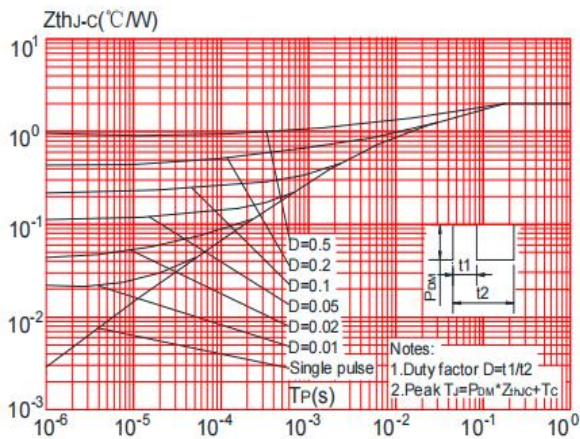
**Figure 9: Maximum Safe Operating Area**



**Figure 10: Maximum Continuous Drain Current vs. Case Temperature**

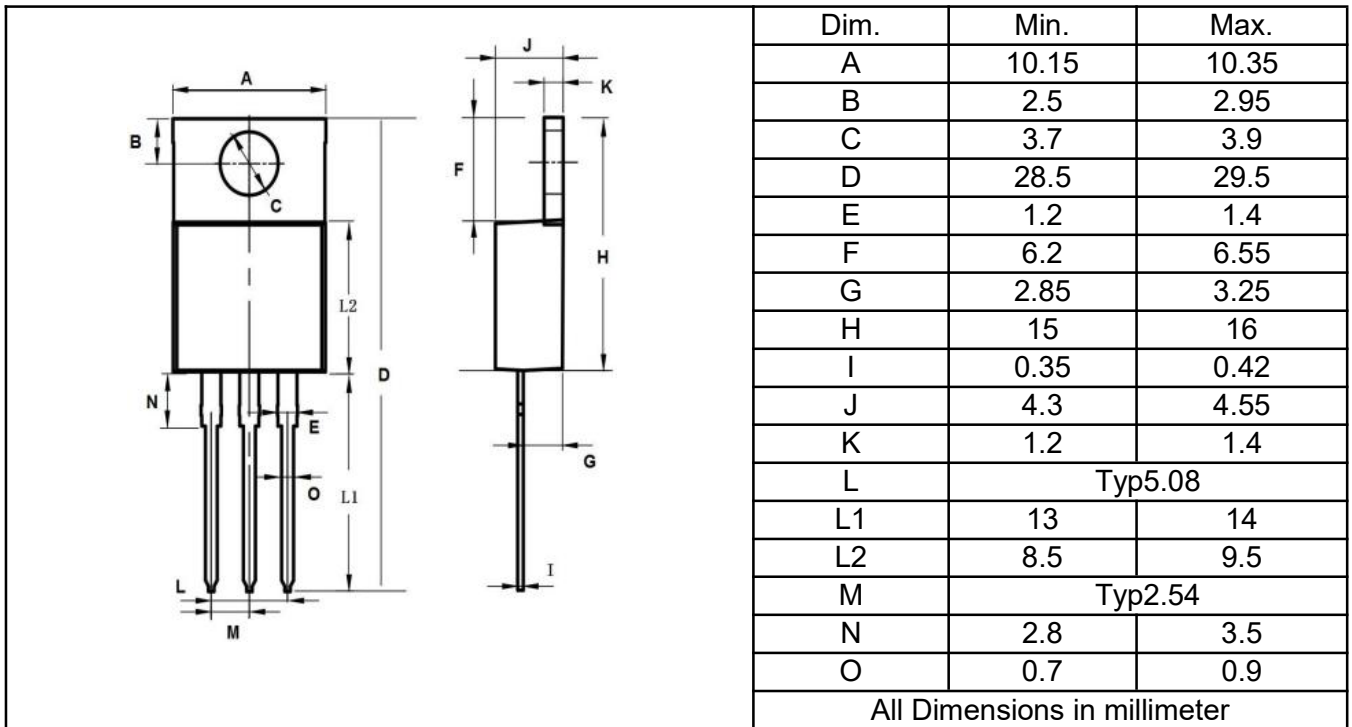


**Figure.11: Maximum Effective Transient Thermal Impedance, Junction-to-Case**



Package Outline Dimensions millimeters

TO-220AB



单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)