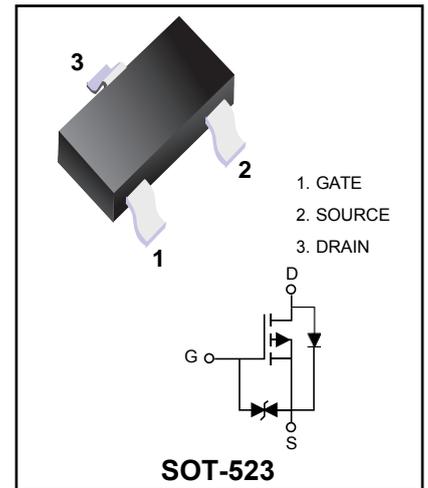


**-30V P-Channel Enhancement Mode MOSFET**

**MAIN CHARACTERISTICS**

$I_D$	-0.6A
$V_{DS}$	-30V
$R_{DS(on)-typ}(@V_{GS}=-10V)$	<900mΩ(Typ:560mΩ)
$R_{DS(on)-typ}(@V_{GS}=-4.5V)$	<1150mΩ(Typ:730mΩ)
$R_{DS(on)-typ}(@V_{GS}=-2.5V)$	<1450mΩ(Typ:1000mΩ)



<b>Marking Code</b>	
YFW06P03T	K84

**DESCRIPTION**

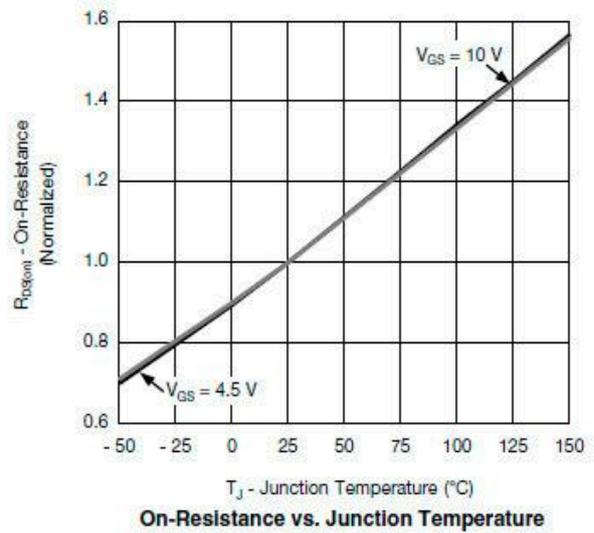
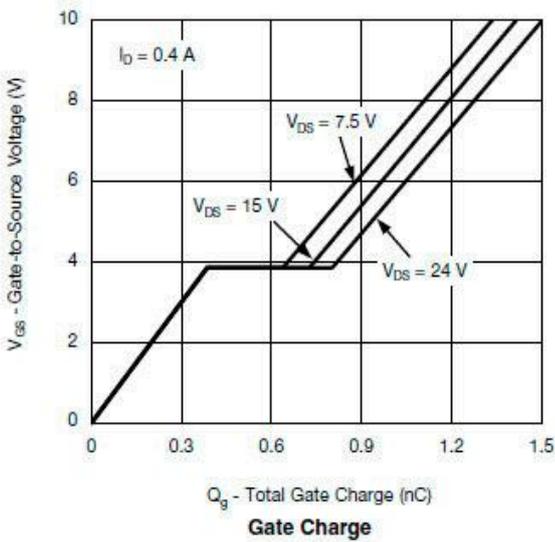
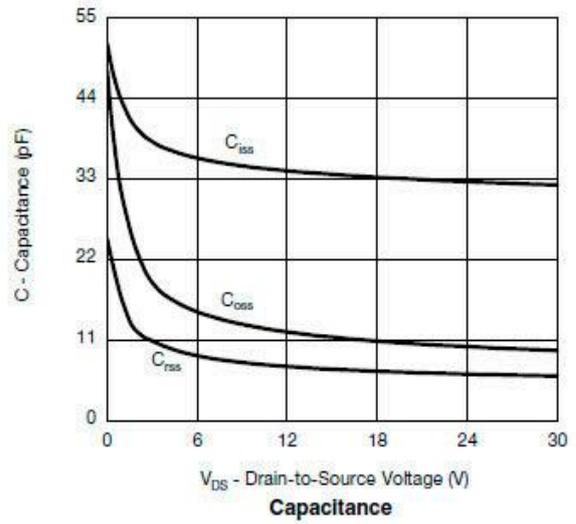
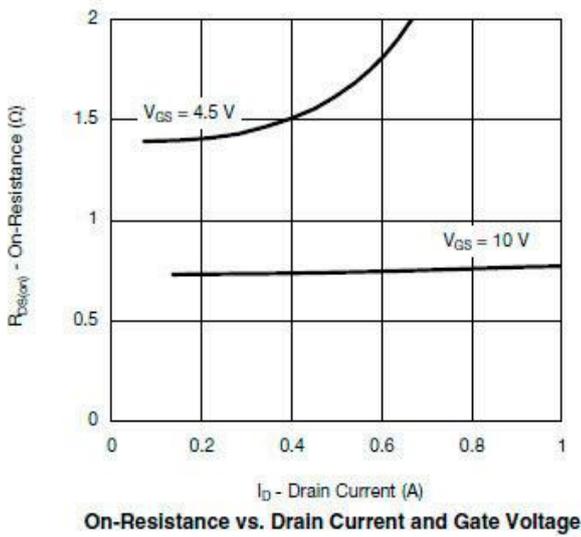
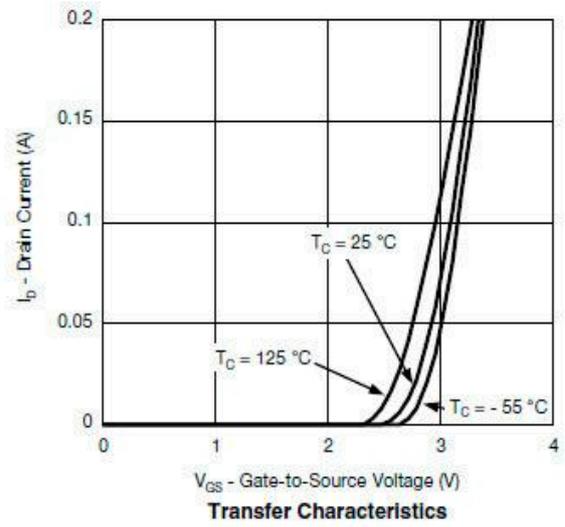
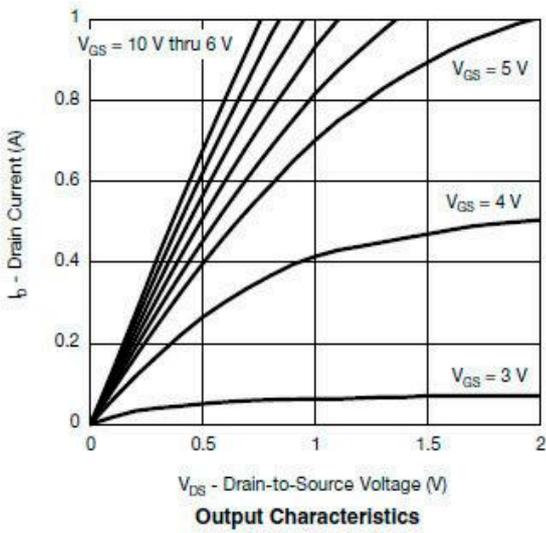
YFW06P03T is a P-channel MOSFET with low input capacitance, low operating voltage, low on-resistance and high current capability. Additionally, this chip incorporates a built-in ESD protection circuit.

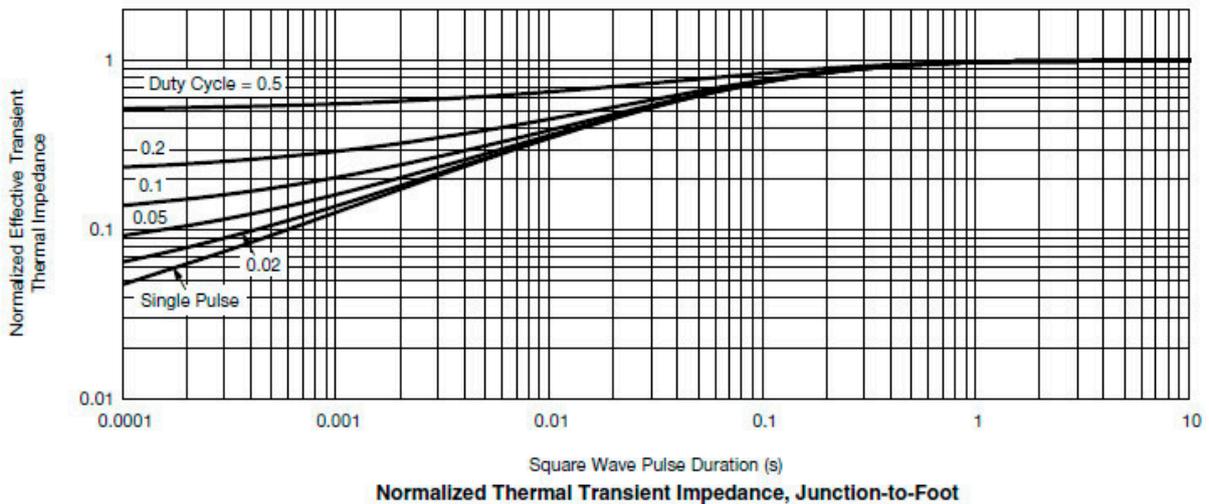
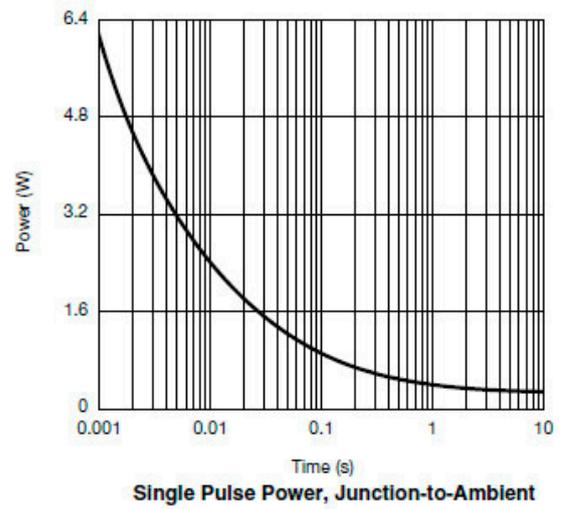
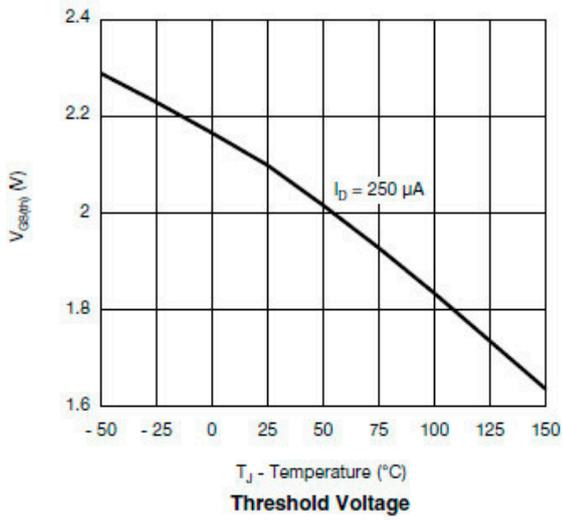
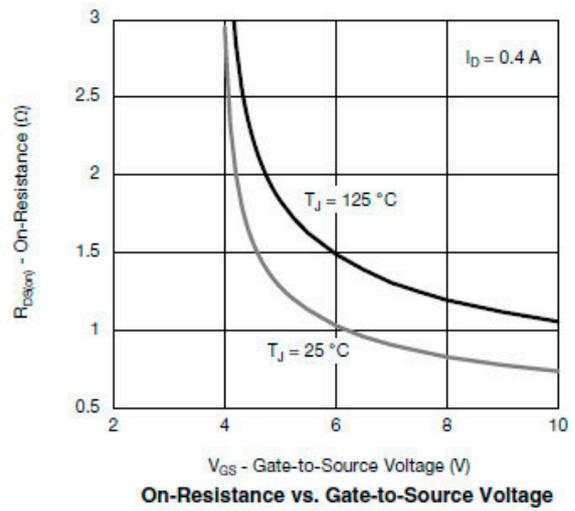
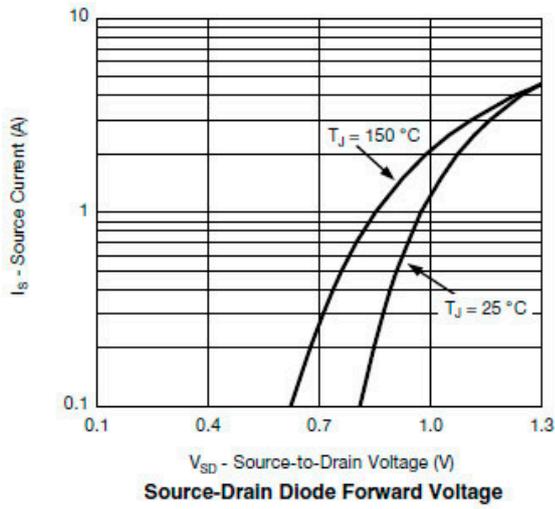
**Absolute Maximum Ratings ( $T_A=25^{\circ}C$  unless otherwise noted)**

Parameter		Symbol	Value	Units
Drain-Source Voltage		$V_{DS}$	-30	V
Gate-Source Voltage		$V_{GS}$	±12	V
Continuous Drain Current	$T_A = 25^{\circ}C$	$I_D$	-0.6	A
	$T_A = 70^{\circ}C$		-0.2	A
Pulsed Drain Current note1		$I_{DM}$	-1.0	A
Power Dissipation	$T_C = 25^{\circ}C$	$P_D$	0.27	W
Power Dissipation	$T_C = 70^{\circ}C$			
Storage Temperature Range		$T_{STG}$	-55 to 150	°C
Operating Junction Temperature Range		$T_J$	-55 to 150	°C

**Electrical Characteristics (Ta=25°C, unless otherwise noted)**

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	$BV_{DSS}$	-30	-	-	V
Zero Gate Voltage Drain Current	$V_{DS}=-24V$ $V_{GS}=0V$ $T_a=85^\circ C$	$I_{DSS}$	-	-	-1	$\mu A$
			-	-	-5	$\mu A$
Gate to Body Leakage Current	$V_{DS}=0V, V_{GS}=\pm 12V$	$I_{GSS}$	-	-	$\pm 5$	mA
Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=-250\mu A$	$V_{GS(th)}$	-0.7	-	-1.5	V
On-state drain current	$V_{GS}=-4.5V, V_{DS}\cong -5V$	$I_{D(on)}$	-0.5	-	-	A
Static Drain-Source on-Resistance	$V_{GS}=-10V, I_D=-0.6A$	$R_{DS(on)}$	-	560	900	m $\Omega$
	$V_{GS}=-4.5V, I_D=-0.3A$		-	730	1150	
	$V_{GS}=-2.5V, I_D=-0.2A$		-	1000	1450	
Forward Transconductance	$V_{DS}=-15V, I_D=-0.5A$	$g_{fs}$	-	1	-	S
Input Capacitance	$V_{DS}=-15V$ $V_{GS}=0V$ $f=1.0MHz$	$C_{iss}$	-	34	-	pF
Output Capacitance		$C_{oss}$	-	12	-	
Reverse Transfer Capacitance		$C_{rss}$	-	8	-	
Total Gate Charge	$V_{DS}=-4.5V$ $I_D=-0.4A$ $V_{GS}=-15V$	$Q_G$	-	0.8	1.3	nC
Gate-Source Charge		$Q_{GS}$	-	0.4	-	
Gate-Drain("Miller") Charge		$Q_{GD}$	-	0.4	-	
Turn-on Delay Time	$V_{GS}=-4.5V$ $V_{DS}=-15V$ $RL=38\Omega$ $I_D=-2A$ $R_{gen}=1\Omega$	$t_{d(ON)}$	-	35	50	ns
Turn-on Rise Time		$t_r$	-	20	30	
Turn-off Delay Time		$t_{d(OFF)}$	-	10	20	
Turn-off Fall Time		$t_f$	-	10	20	
Maximum Continuous Drain to Source Diode Forward Current		$I_S$	-	-	-0.3	A
Drain to Source Diode Forward Voltage	$V_{GS}=0V, I_S=-0.3A$	$V_{SD}$	-	-0.65	-1.20	V





**Ordering information**

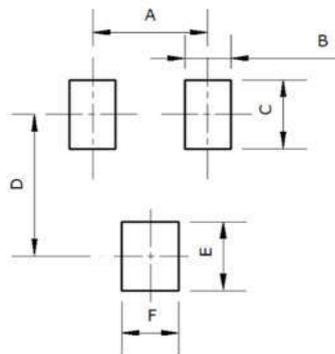
Package	Packing Description	Base Quantity	Packing Quantity
SOT-523	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

**Package Dimensions**

**SOT-523**

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	1.50	1.70	59	67
B	0.75	0.85	30	33
C	1.45	1.75	57	69
D	0.50TYP		0.020TYP	
E	0.90	1.10	35	43
G	0.00	0.10	0	4
H	0.60	0.80	24	31
J	0.10	0.20	4	8
K	0.15	0.35	6	14
L	0.26	0.46	10	18

**The recommended mounting pad size**



Millimeter (mm)	
Dim.	TYP
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50

## Disclaimer

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 which 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.