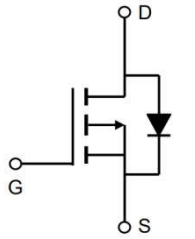
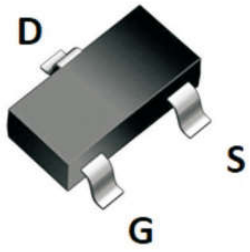
-60V P-CHANNEL ENHANCEMENT MODE MOSFET

MAIN CHARACTERISTICS

I_D	-6A
V_{DS}	-60V
R_{DSON}-typ(@V_{GS}=-10V)	＜105mΩ(Typ:80mΩ)
R_{DSON}-typ(@V_{GS}=-4.5V)	＜133mΩ(Typ:103mΩ)





SOT23-3L

FEATURES

- Trench FET Power MOSFET
- Load Switch for Portable Devices
- DC/DC Converter

MECHANICAL DATA

- Case: SOT23 -3L
- Epoxy UL: 94V-0.
- Mounting Position: Any.

Marking Code	
YFW6P06MI	6P06

Absolute Maximum Ratings (Ta=25℃ unless otherwise noted)

Characteristics	Symbols	Value	Units
Drain-Source Voltage	V_{DS}	-60	V
Gate - Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-6	A
Power Dissipation	P_D	1.3	W
Avalanche energy, single pulse	E_{AS}	10	mJ
Junction Temperature	T_J	-55-+150	°C
Storage Temperature	T_{STG}	-55-+150	°C
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	95	°C/W

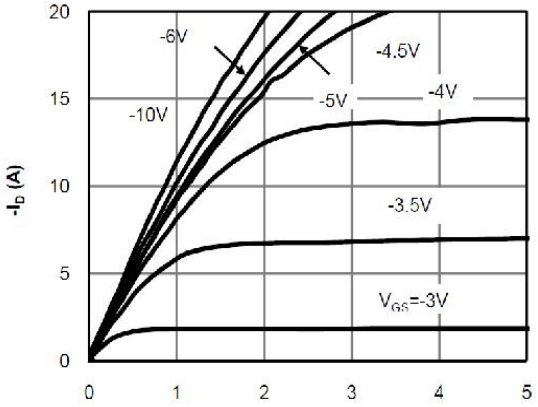
A. Repetitive rating; pulse width limited by max. junction temperature.
B. Pd is based on max. junction temperature, using junction-case thermal resistance.
C. The value of RθJA is measured with the device mounted on the minimum recommend pad size, in the still air environment with TA =25℃. The maximum allowed junction temperature of 150℃. The value in any given application depends on the user's specific board design.
D. E_{AS} condition: Starting T_J=25°C, V_{DD}=-20V, V_{GS}=-10V, RG=25Ω，L=0.5mH, I_{AS}=-5A

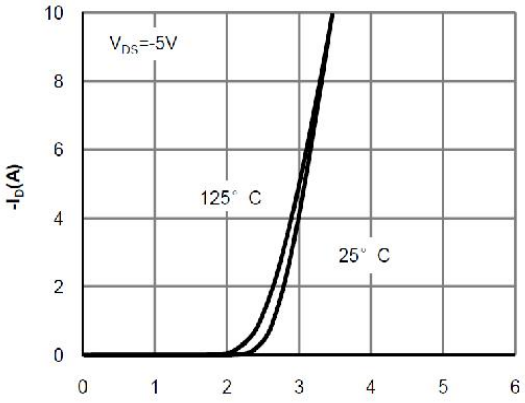
Electrical Characteristics (T_J=25℃,unless otherwise noted)

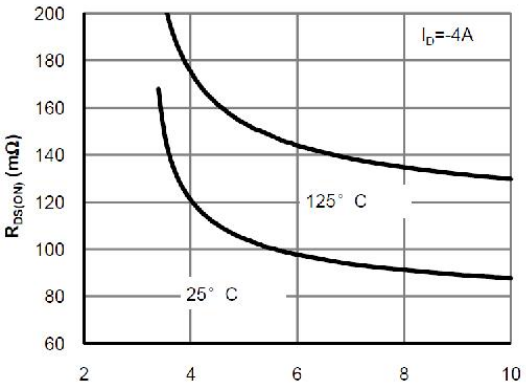
Characteristics	Test Condition	Symbols	Min	Typ	Max	Units
Drain-Source Breakdown Voltage	V_{GS}=0V, I_D=-250uA	BV_{DSS}	-60			V
Gate-Threshold voltage*	V_{DS}=V_{GS}, I_D=-250uA	$V_{GS(th)}$	-1.1	-1.6	-2.4	V
Gate-body Leakage	V_{DS}=0V, V_{GS}=±20V	I_{GSS}			±100	nA
Zero Gate Voltage Drain current	V_{DS}=-40V, V_{GS}=0V	I_{DSS}			-1	uA
Drain-Source On-Resistance (a)	V_{GS}=-10V, I_D=-3A	$R_{DS(ON)}$		80	105	mΩ
	V_{GS}=-4.5V, I_D=-2A			103	133	
Diode Forward Current		I_S			-3	A
Diode forward voltage	I_S=-0.42A, V_{GS}=0V	V_{SD}			-1.2	V
Input Capacitance	V_{DS}=-10V,V_{GS}=0V, f=1MHz	C_{iss}		324		pF
Output Capacitance		C_{oss}		66		pF
Reverse Transfer Capacitance		C_{rss}		4		pF
Gate resistance	V_{GS}=0V,V_{GS}=0V, f=1MHz	R_G		10		Ω

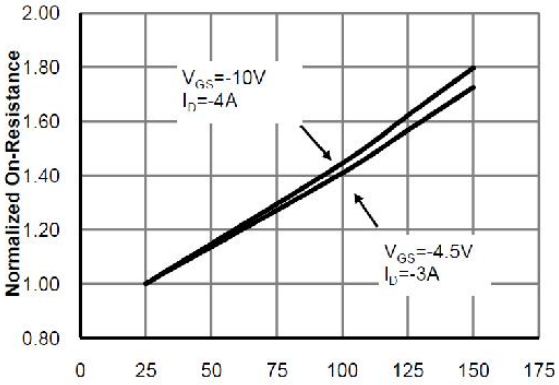
Notes:
a. Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%.
b. These parameters have no way to verify.

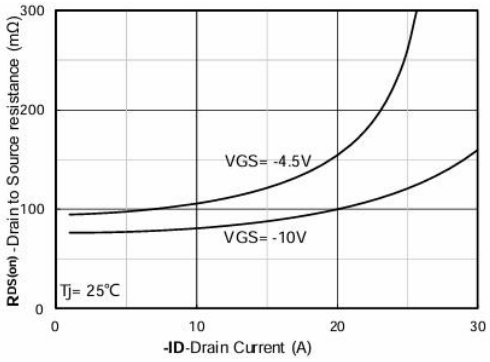
TYPICAL CHARACTERISTICS

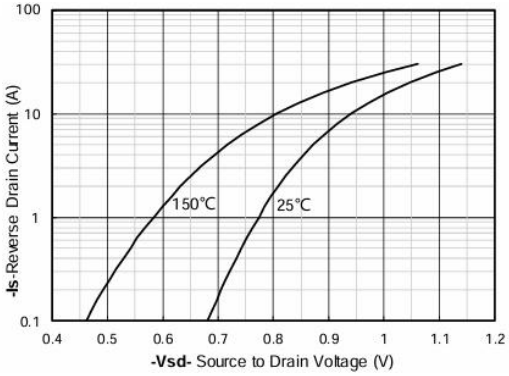


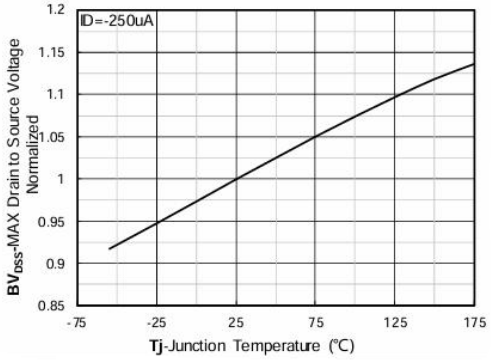


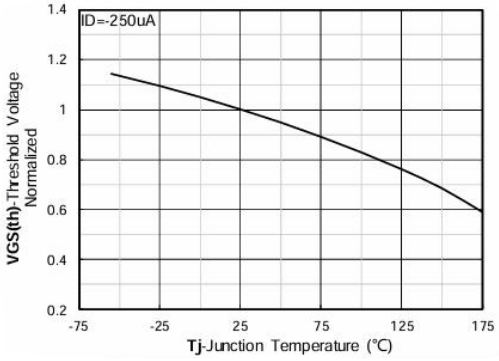










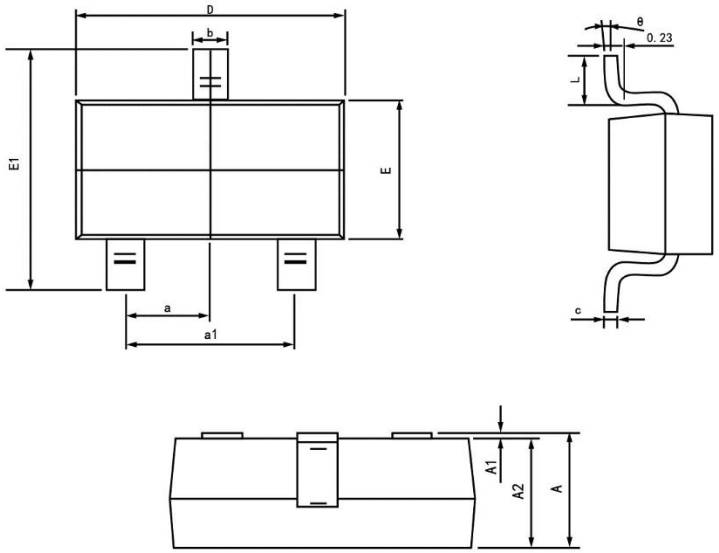


Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT23-3L	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

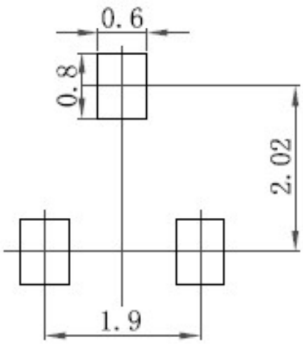
Package Dimensions

SOT23-3L



Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	1.05	1.25	41	49.2
A1	0.10		3.93	
A2	1.05	1.15	41	45
b	0.30	0.50	12	20
c	0.10	0.20	3.93	7.9
D	2.82	3.02	111	119
E	1.50	1.70	59	67
E1	2.65	2.95	104	116
a	0.95		37.4	
a1	1.80	2.00	71	78
L	0.30	0.066	12	26
Θ	8°			

The recommended mounting pad size



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