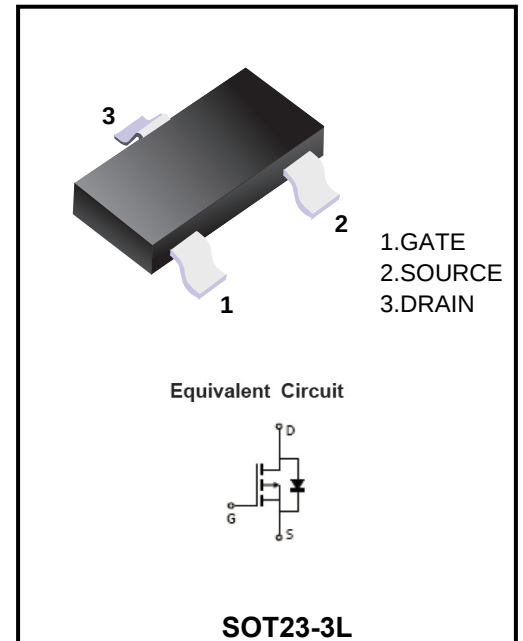


-30V P-Channel Enhancement Mode Field Effect Transistor

MAIN CHARACTERISTICS

I_D	-4.8A
V_{DS}	-30V
$R_{DS(on)-typ}(@V_{GS}-10V)$	<60mΩ(Typ:50mΩ)
$R_{DS(on)-typ}(@V_{GS}-4.5V)$	<87mΩ(Typ:68mΩ)



Features

- ♦ High dense cell design for extremely low $R_{DS(on)}$.
- ♦ Exceptional on-resistance and maximum DC current capability.
- ♦ Load/Power Switching.
- ♦ Interfacing Switching

Mechanical Data

- ♦ SOT-23-3L Small Outline Plastic Package.
- ♦ Epoxy UL: 94V-0.
- ♦ Mounting Position: Any.

Product Specification Classification

Part Number	Package	Marking	Pack
YFW3407MI	SOT23-3L	3407	3000PCS/Tape

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-4.8	A
Drain Current-Pulsed	I_{DM}	-20	A
Power Dissipation	P_D	300	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient (note 2)	$R_{\theta JA}$	417	°C/W

Electrical Characteristics

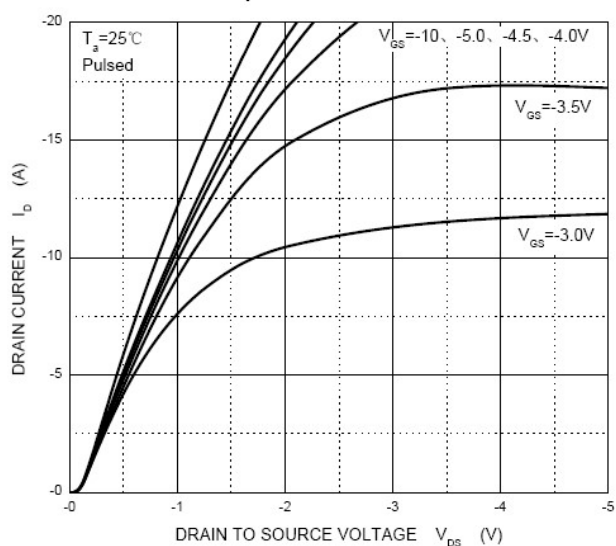
(Ratings at 25℃ ambient temperature unless otherwise specified).

Characteristics	Test Condition	Symbols	Min	Typ	Max	Units
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	BV_{DSS}	-30			V
Zero Gate Voltage Drain current	$V_{DS}=-24V, V_{GS}=0V$	I_{DSS}			-1	μA
Gate-body Leakage	$V_{DS}=\pm 20V, V_{GS}=0V$	I_{GSS}			± 100	nA
Drain-Source On-Resistance (note 1)	$V_{GS}=-10V, I_D=-4.1A$	$R_{DS(ON)}$		50	60	mΩ
	$V_{GS}=-4.5V, I_D=-3A$			68	87	
Forward trans conductance	$V_{DS}=-5V, I_D=-4A$	g_{fs}	5.5			S
Gate-Threshold voltage*	$V_{DS}=V_{GS}, I_D=-250\mu A$	$V_{GS(th)}$	-1.0	-1.4	-3.0	V
Input capacitance	$V_{DS}=-15V, V_{GS}=0V, f=1MHz$	C_{iss}		700		pF
Output capacitance		C_{oss}		120		
Reverse Transfer capacitance		C_{rss}		75		
Turn-on Time	$V_{GS}=-10V$ $R_L=3.6\Omega$ $V_{DS}=-15V$ $R_{GEN}=3\Omega$	$t_{d(on)}$		8.6		nS
Rise time		T_r		5.0		
Turn-off Time		$t_{d(OFF)}$		28.2		
Fall time		t_f		13.5		
Diode forward voltage(note 1)	$I_S=-1A, V_{GS}=0V$	V_{SD}			-1.0	V

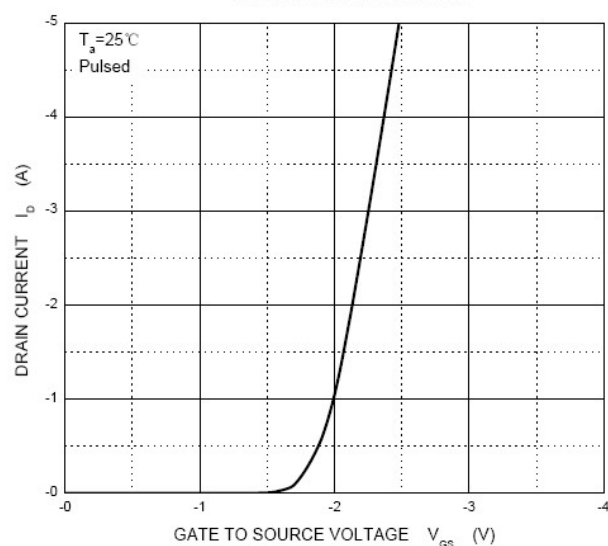
Notes: 1. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycles $\leq 2\%$.

Typical characteristics

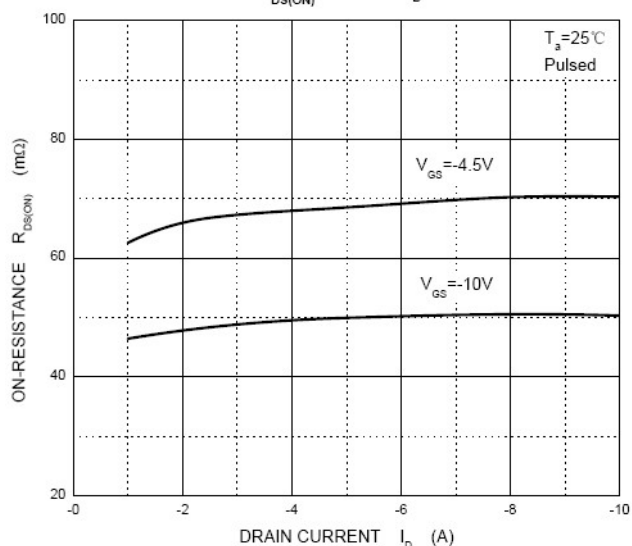
Output Characteristics



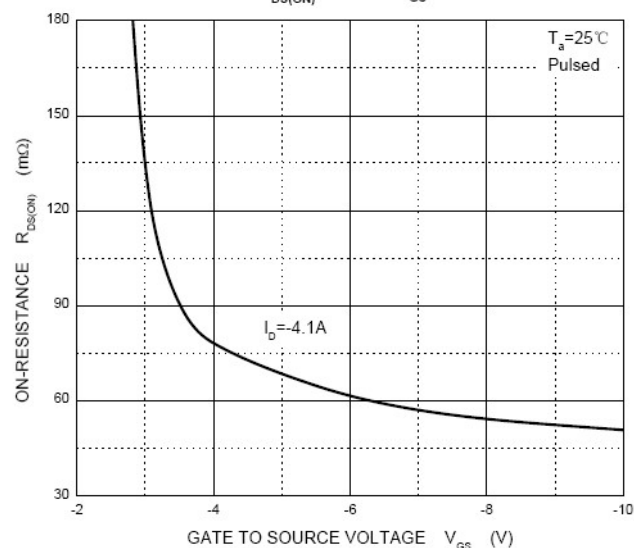
Transfer Characteristics



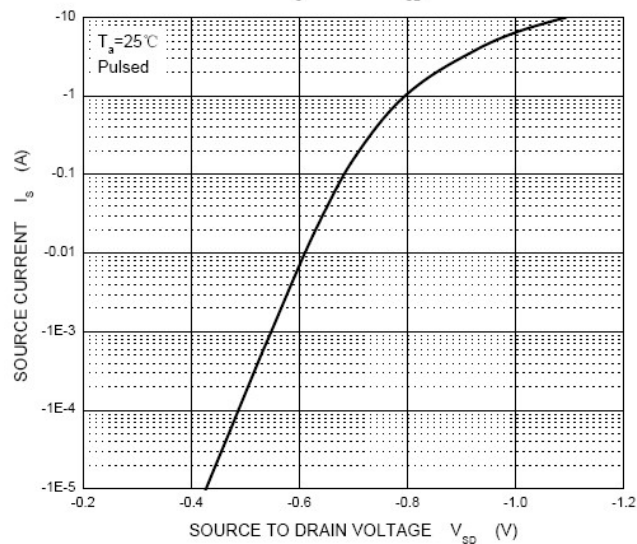
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}

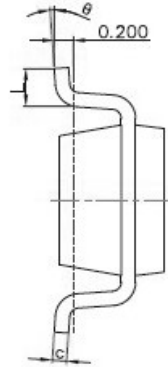
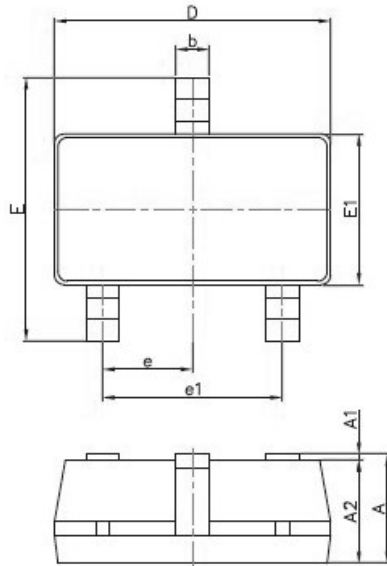


I_S — V_{SD}



Package Outline

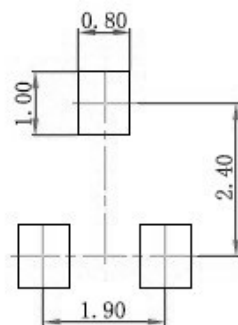
SOT23-3L



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

Precautions: PCB Design

Recommended land dimensions for SOT-23-3L diode. Electrode patterns for PCBs



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.