

-20V P-CHANNEL ENHANCEMENT MODE MOSFET

MAIN CHARACTERISTICS

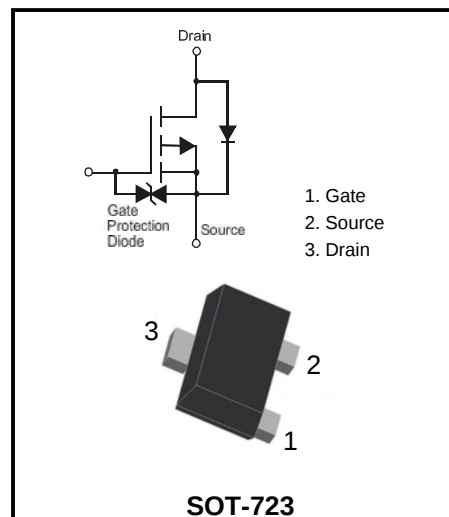
I_D	-0.66A
V_{DSS}	-20V
R_{DS(on)}-typ(@V_{GS}=-4.5V)	< 520mΩ (Typ:450 mΩ)
R_{DS(on)}-typ(@V_{GS}=-2.5V)	< 700mΩ (Typ:570 mΩ)

Features

- ♦P-Channel Switch with Low RDS(on)
- ♦operated at Low Logic Level Gate Drive
- ♦Load/Power Switching
- ♦Interfacing, Logic Switching
- ♦Battery Management for Ultra Small Portable Electronics
- ♦ESD protection

MECHANICAL DATA

- ♦Case:SOT-723
- ♦Epoxy UL: 94V-0.
- ♦Mounting Position: Any.



Marking Code	
YFW3139KM	KD

Absolute Maximum Ratings(Ta=25°C unless otherwise noted)

Characteristics	Symbols	Value	Units
Drain-Source Voltage	V_{DS}	-20	V
Gate - Source Voltage	V_{GS}	± 12	V
Continuous Drain Current (note 1)	I_D	-0.66	A
Pulsed Drain Current (tp=10us)	I_{DM}	-1.2	A
Total Power Dissipation (note1)	P_D	150	mW
Operating Junction Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Thermal Resistance Junction-Ambient (note1)	R_{θJA}	833	°C/W

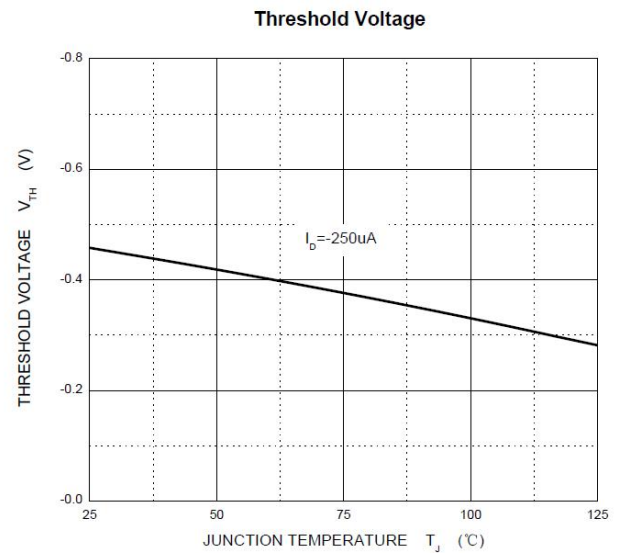
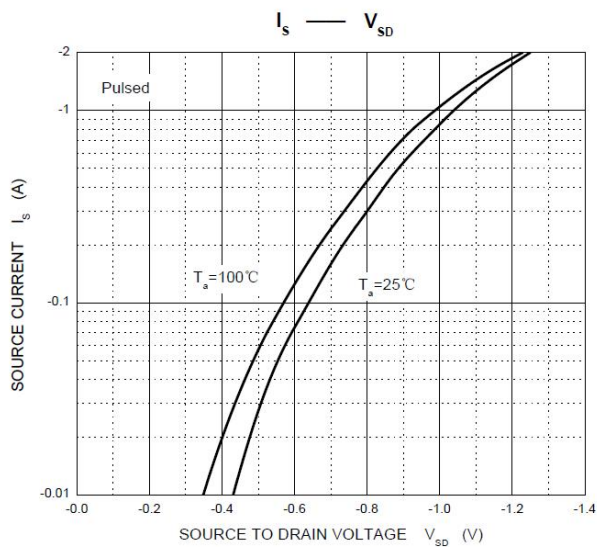
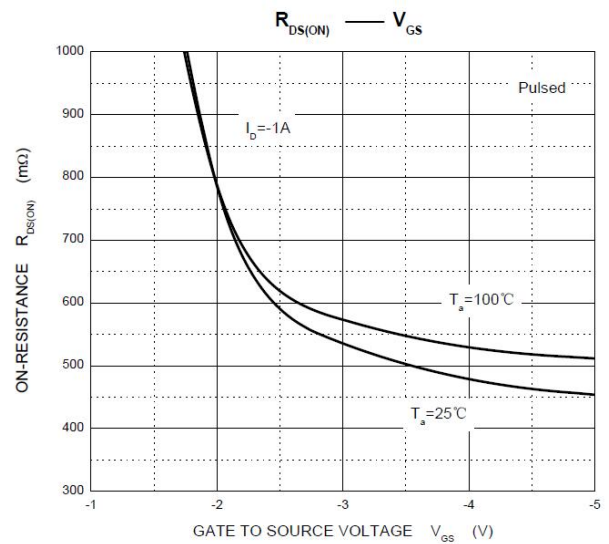
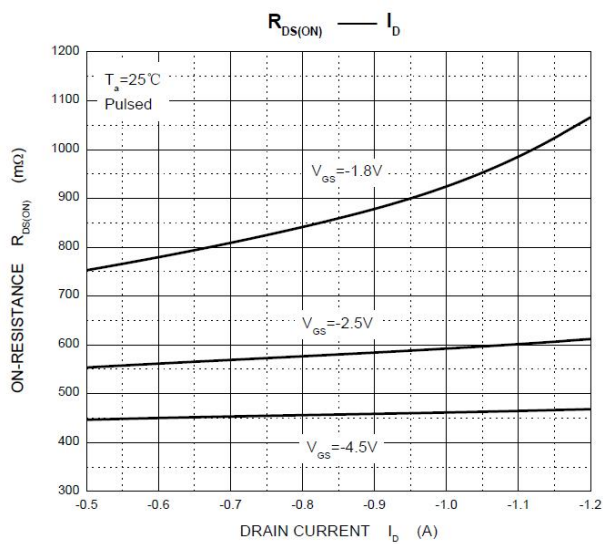
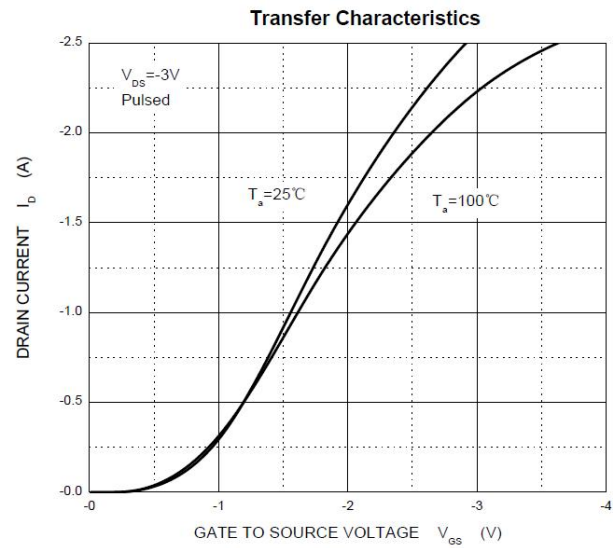
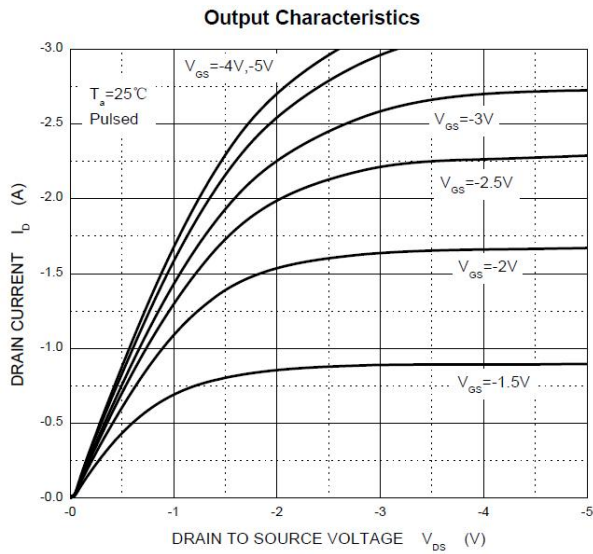
Electrical Characteristics (T_J=25°C, unless otherwise noted)

Characteristics	Test Conditions	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250uA	BV_{DSS}	-20			V
Gate-Threshold voltage (note2)	V _{DS} = V _{GS} , I _D =-250uA	V_{GS(th)}	-0.35		-1.2	V
Gate-body Leakage	V _{DS} =0V, V _{GS} =±10V	I_{GSS}			±20	μA
Zero Gate Voltage Drain current	V _{DS} =-20V, V _{GS} =0V	I_{DSS}			-1.0	μA
Drain-Source On-Resistance (note2)	V _{GS} =-4.5V, I _D =-1A	R_{DS(ON)}		450	520	mΩ
	V _{GS} =-2.5V, I _D =-0.8A			570	700	
	V _{GS} =-1.8V, I _D =-0.5A			950		
Forward Tran conductance (note2)	V _{DS} =-10V, I _D =-540mA	g_{fs}		1.2		S
Diode forward voltage	V _{GS} =0, I _S =-0.5A	V_{SD}			-1.2	V
Input capacitance	V _{DS} =-16V V _{GS} =0V f=1MHz	C_{iss}		113	170	pF
Output capacitance		C_{oss}		15	25	
Reverse Transfer capacitance		C_{rss}		9	15	
Turn-on Delay Time (note 3)	V _{GS} =-4.5V V _{DS} =-10V R _{GEN} =10 Ω I _D =-200mA	t_{d(on)}		9		ns
Rise Time (note 3)		T_r		5.8		ns
Turn-off Delay Time (note 3)		t_{d(OFF)}		32.7		ns
Fall Time (note 3)		t_f		20.3		ns

Notes :

- 1.Surface mounted on FR4 board using the minimum recommended pad size.
- 2.Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
- 3.Switching characteristics are independent of operating junction temperatures.
- 4.Guaranteed by design, not subject to producing.

Typical Characteristics



Ordering information

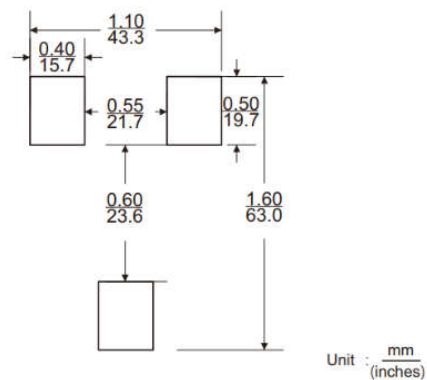
Package	Packing Description	Base Quantity	Packing Quantity
SOT-723	Tape/Reel, 7" reel	8000pcs/Reel	64000PCS/Box 320000PCS/Carton

Package Dimensions

SOT-723

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	1.10	1.30	43.3	51.2
B	-	0.80	-	31.5
C	1.10	1.30	43.3	51.2
D	0.70	0.90	27.6	35.4
E	0.20	0.30	7.9	11.8
F	0.40	0.50	15.7	19.7
G	0.15	0.25	5.9	9.8
H	0.06	0.16	2.4	6.3
L	0.15	0.25	5.9	9.8

The recommended mounting pad size



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