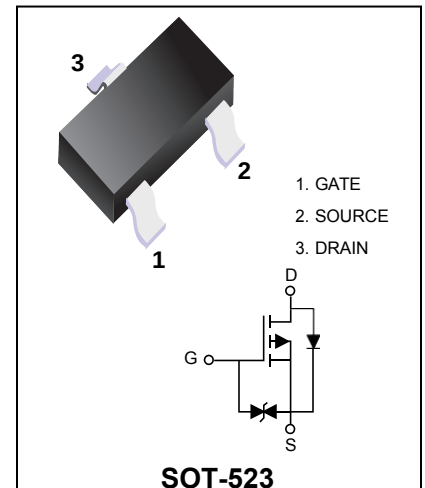


-20V P-CHANNEL ENHANCEMENT MODE MOSFET
MAIN CHARACTERISTICS

I_D	-0.66A
V_{DSS}	-20V
$R_{DS(on)-typ}(@V_{GS}=-4.5V)$	$<950m\Omega$
$R_{DS(on)-typ}(@V_{GS}=-2.5V)$	$<1050m\Omega$
$R_{DS(on)-typ}(@V_{GS}=-1.8V)$	$<1700m\Omega$


FEATURE

- ◆ Lead Free Product isAcquired
- ◆ Surface Mount Package
- ◆ P-Channel Switch with Low RDS(on)
- ◆ Operated at Low Logic Level Gate Drive

APPLICATION

- ◆ Load/Power Switching
- ◆ Interfacing, Logic Switching
- ◆ Battery Management for Ultra Small
- ◆ Portable Electronics

Product Specification Classification

Part Number	Package	Marking	Pack
YFW3139KT	SOT-523	39K	3000PCS/Tape

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=10μs)	I_{DM}	-1.2	A
Power Dissipation (note 1)	P_D	150	mW
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T_L	260	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Operating Junction Temperature Range	T_J	150	°C
Thermal Resistance Junction-Ambient ¹	$R_{\theta JA}$	833	°C/W

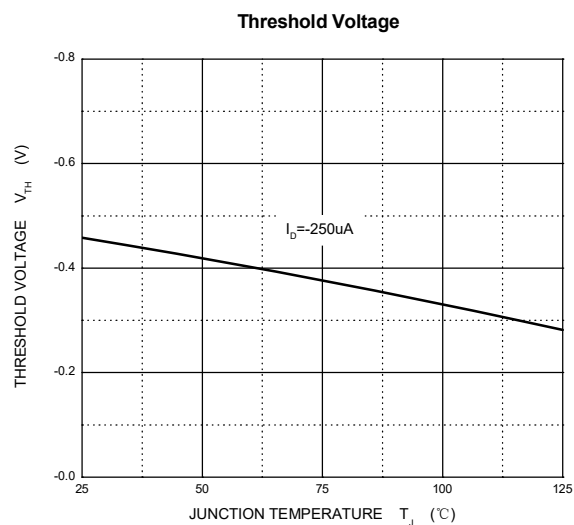
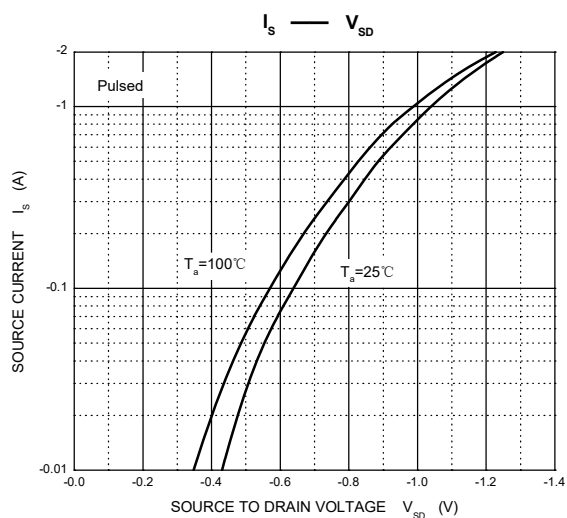
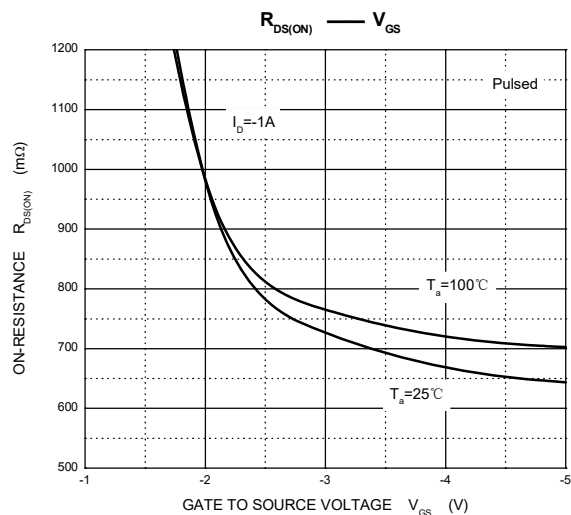
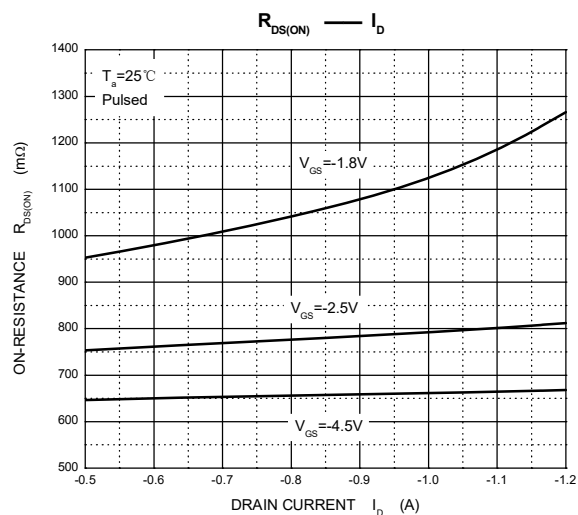
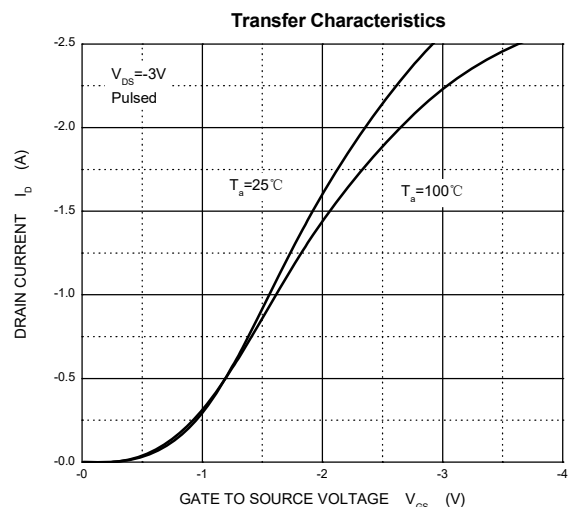
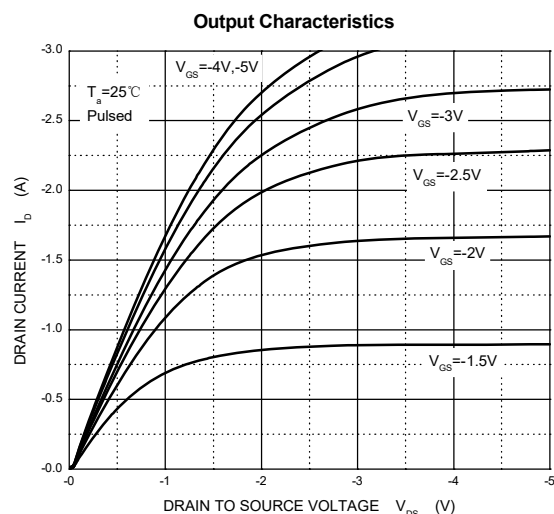
Maximum Ratings at Tc=25°C unless otherwise specified

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{GS} = 0V, I_D = -250\mu A$	$V_{(BR)DSS}$	-20			V
Zero gate voltage drain current	$V_{DS} = -20V, V_{GS} = 0V$	I_{DSS}			-1	μA
Gate-body leakage current	$V_{GS} = \pm 10V, V_{DS} = 0V$	I_{GSS}			± 20	μA
Gate threshold voltage (note 2)	$V_{DS} = V_{GS}, I_D = -250\mu A$	$V_{GS(th)}$	-0.35		-1.1	V
Drain-source on-resistance (note 2)	$V_{GS} = -4.5V, I_D = -1A$	$R_{DS(on)}$			950	m Ω
	$V_{GS} = -2.5V, I_D = -0.8A$				1050	m Ω
	$V_{GS} = -1.8V, I_D = -0.5A$				1700	m Ω
Forward transconductance (note 2)	$V_{DS} = -10V, I_D = -0.54A$	g_{FS}		1.2		S
Diode forward voltage	$I_S = -0.5A, V_{GS} = 0V$	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	pF
Reverse transfer capacitance		C_{rss}		9	15	pF
Turn-on delay time (note 3)	$V_{GS} = -4.5V$ $V_{DS} = -10V$ $I_D = -200mA$ $R_{GEN} = 10\Omega$	$t_{d(on)}$		9		ns
Turn-on risetime (note 3)		t_r		5.8		ns
Turn-off delay time (note 3)		$t_{d(off)}$		32.7		ns
Turn-off 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=300 μs , Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producing.

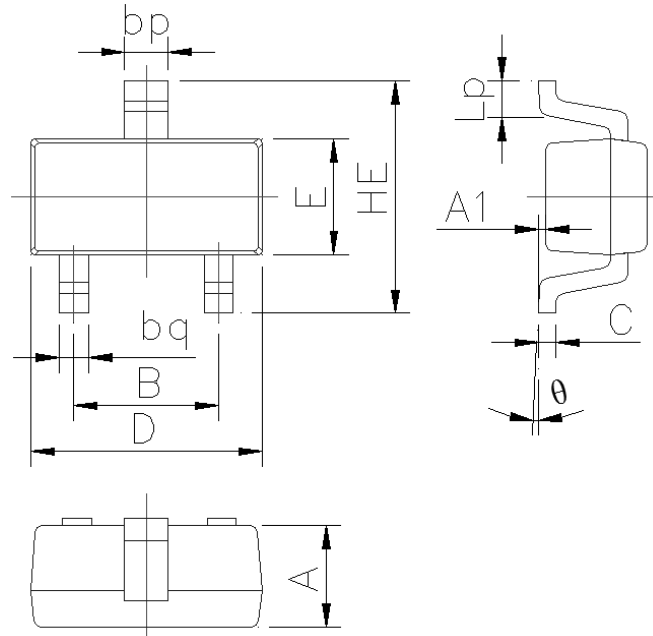
Typical Characteristics



Package Outline

SOT-523

Plastic surface mounted package; 3 leads



Symbol	Dimension in Millimeters	
	Min	Max
A	0.60	0.80
A1	0.010	0.100
B	0.95	1.05
bp	0.26	0.40
bq	0.16	0.30
C	0.09	0.15
D	1.50	1.70
E	0.70	0.85
HE	1.45	1.75
Lp	0.16	0.36
θ	0°	5°