

PWX3139K

20V Dual P-Channel MOSFET

$-0.66A -20V$; $R_{DS(ON)typ}=450m\Omega@-4.5V$, $R_{DS(ON)typ}=650m\Omega@-2.5V$
 $R_{DS(ON)typ}=950m\Omega@-1.8V$.

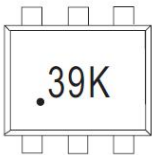
FEATURE

- Surface Mount Package
- P-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive

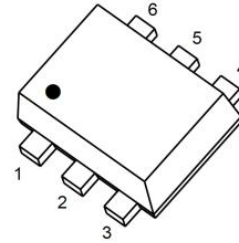
Application

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

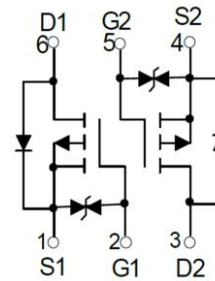
MARKING:



SOT-563



Schematic diagram



ABSOLUTE MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

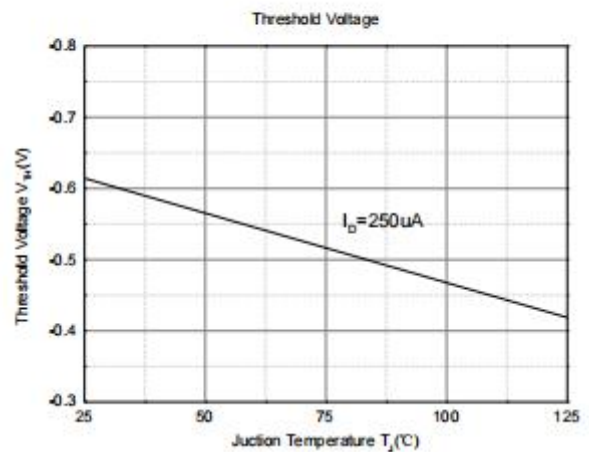
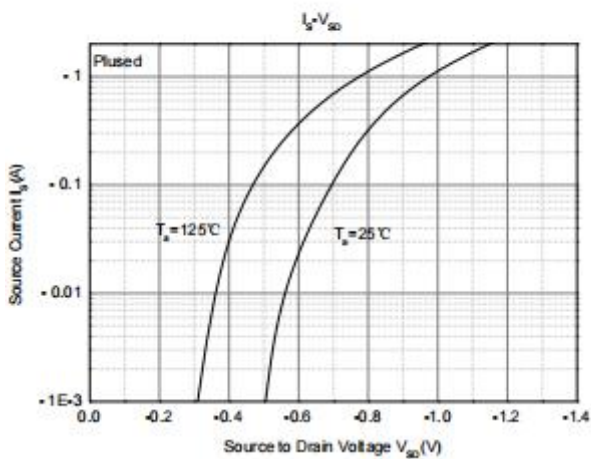
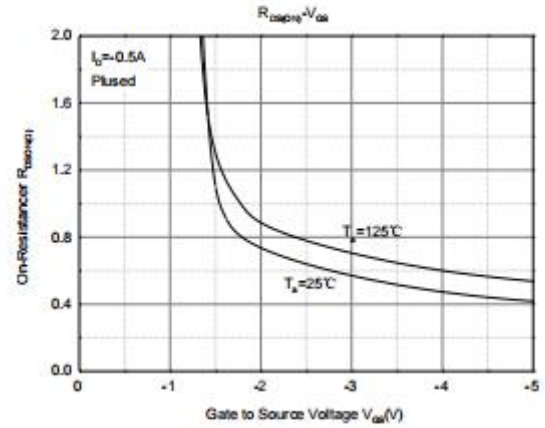
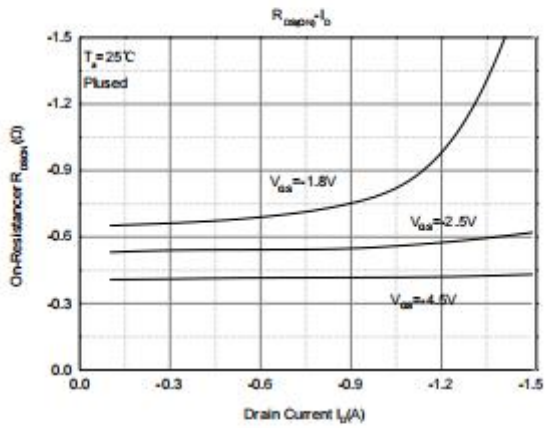
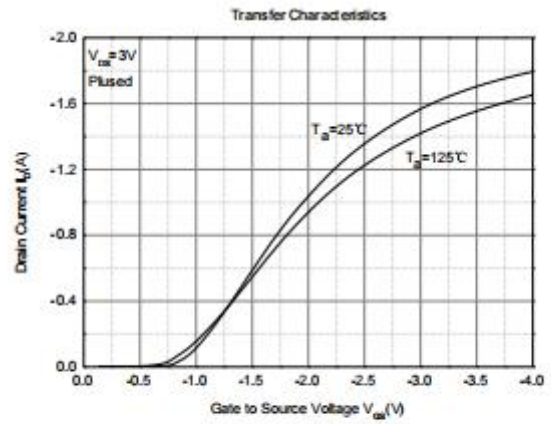
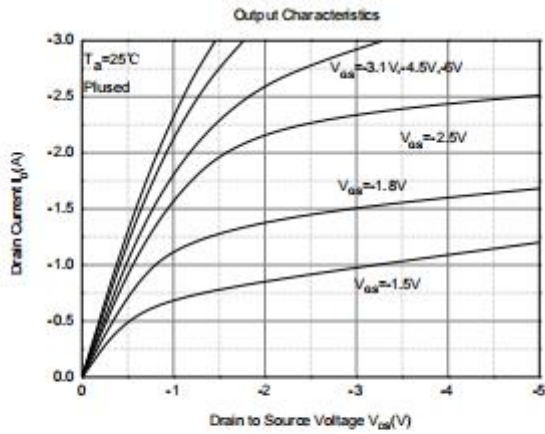
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-20	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	-0.66	A
Pulsed Drain Current ⁽¹⁾	I _{DM}	-2.64	A
Power Dissipation ⁽²⁾	P _D	150	W
Thermal Resistance from Junction to Ambient ⁽¹⁾	R _{θJA}	833	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C

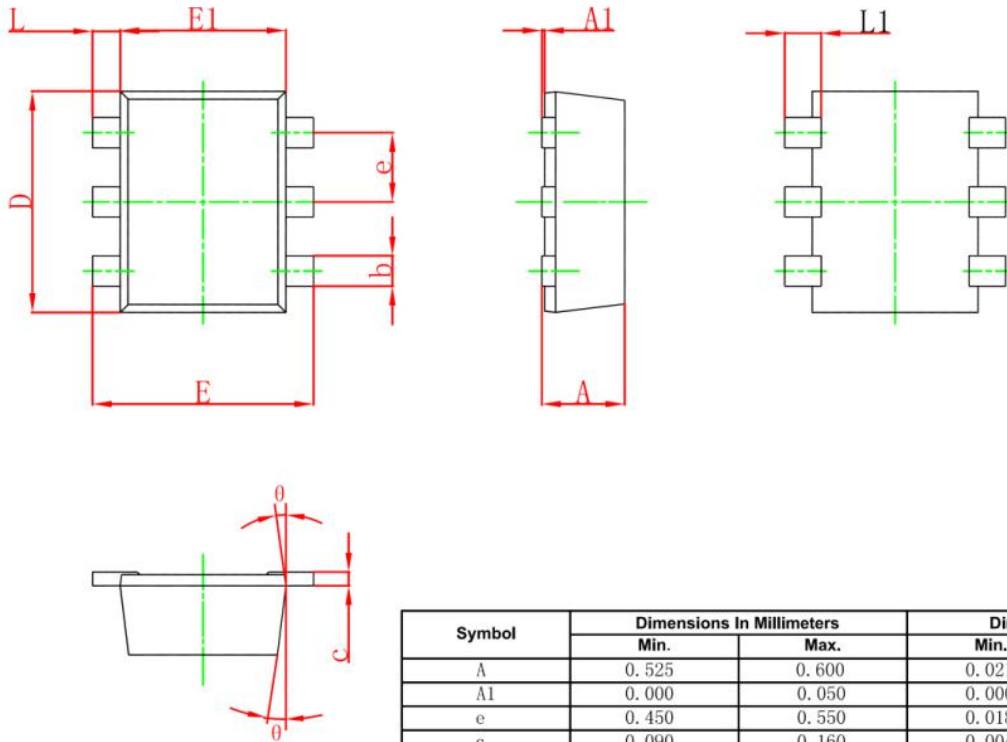
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -20V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±10V, V _{DS} = 0V			±20	uA
Gate threshold voltage ⁽³⁾	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.35	-0.61	-1.1	V
Drain-source on-resistance ⁽³⁾	R _{DS(on)}	V _{GS} = -4.5V, I _D = -1A		450	580	mΩ
		V _{GS} = -2.5V, I _D = -0.8A		650	840	
		V _{GS} = -1.8V, I _D = -0.5A		950		
Forward tranconductance	g _{FS}	V _{DS} = -10V, I _D = -0.54A	0.8			S
DYNAMIC CHARACTERISTICS⁽⁴⁾						
Input Capacitance	C _{iss}	V _{DS} = -16V, V _{GS} = 0V, f = 1MHz		113		pF
Output Capacitance	C _{oss}			15		
Reverse Transfer Capacitance	C _{rss}			9		
SWITCHING CHARACTERISTICS⁽⁴⁾						
Turn-on delay time	t _{d(on)}	V _{DS} = -10V, I _D = -200mA, V _{GS} = -4.5V, R _G = 10Ω		9		nS
Turn-on rise time	t _r			5.7		
Turn-off delay time	t _{d(off)}			32.6		
Turn-off fall time	t _f			20.3		
SOURCE-DRAIN DIODE CHARACTERISTICS						
Diode Forward voltage	V _{DS}	I _S = -0.5A, V _{GS} = 0V			-1.2	V

Notes :

- 1.Repetitive Rating: Pulse width limited by maximum junction temperature.
- 2.This test is performed with no heat sink at T_a=25°C.
- 3.Pulse Test : Pulse Width ≤ 300 μ s, Duty Cycle ≤ 0.5%.
- 4.These parameters have no way to verify.

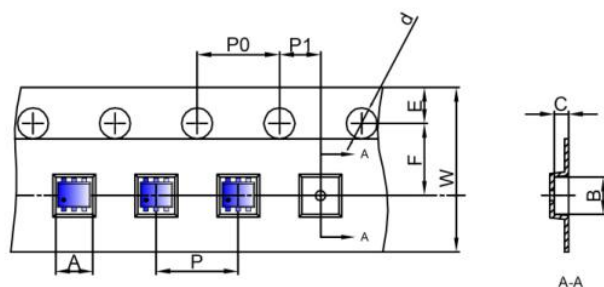




Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7 °REF.		7 °REF.	

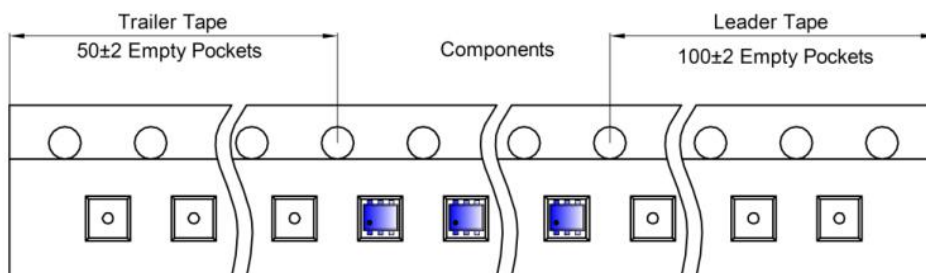
SOT-563 Tape and Reel

SOT-563 Embossed Carrier Tape

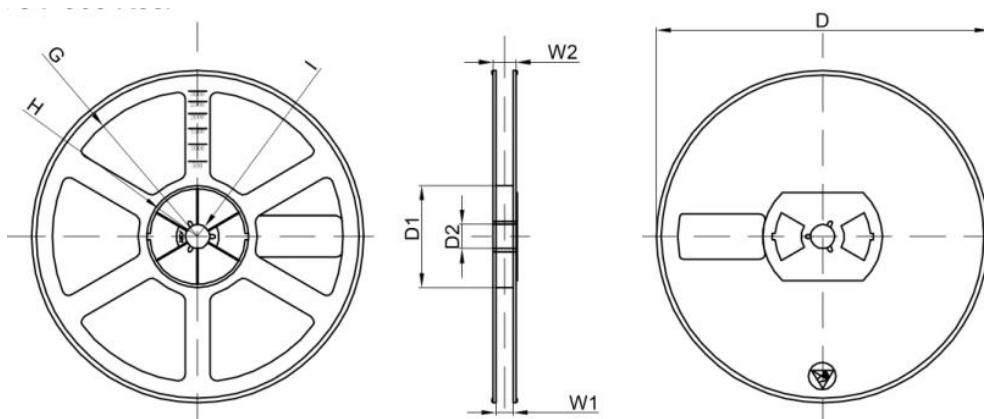


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-563	1.78	1.78	0.69	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-563 Tape Leader and Trailer



SOT-563 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	