重庆平伟实业股份有限公司
CHONGQING PINGWEI ENTERPRISE CO.,LTD

PW3139K

20V P-Channel MOSFET

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

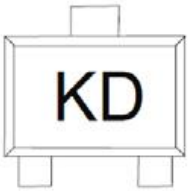
FEATURE

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

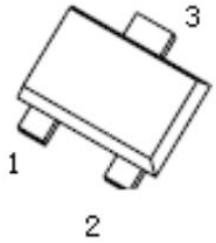
Application

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

MARKING:

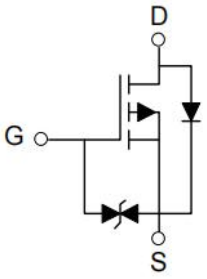


SOT-723



1. GATE
2. SOURCE
3. DRAIN

Schematic diagram



ABSOLUTE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current(1)	I_D	-0.66	A
Plused Drain Current(tp<10μs)	I_{DM}	-1.2	A
Power Dissipation(1)	P_D	150	mW
Thermal Resistance from Junction to Ambient(1)	$R_{\theta JA}$	833	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃
Lead Temperature for Soldering Purposes(1/8" from case for 10s)	T_L	260	℃

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

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
STATIC CHARACTERISTCS						
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	uA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±20	uA
Gate threshold voltage(2)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.35	-0.45	-1.1	V
Drain-source on-resistance(2)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-1A		450	580	mΩ
		V_{GS} =-2.5V, ID =-0.8A		650	840	
		V_{GS} =-1.8V, I_D =-0.5A		950		
Forward tranconductance(2)	g_{FS}	V_{DS} =-10V, I_D =-0.54A		1.2		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 CHARACTERISTCS(4)						
Turn-on delay time(3)	$t_{d(on)}$	V_{DS}=-10V,I_D=-200mA, V_{GS}=-4.5V,R_G=10Ω		9		nS
Turn-on rise time(3)	t_r			5.7		
Turn-off delay time(3)	$t_{d(off)}$			32.6		
Turn-off fall time(3)	t_f			20.3		
SOURCE-DRAIN DIODE CHARACTERISTCS						
Diode Forward voltage(1)	V_{DS}	I_S=-0.5A, V_{GS} = 0V			-1.2	V

Notes :

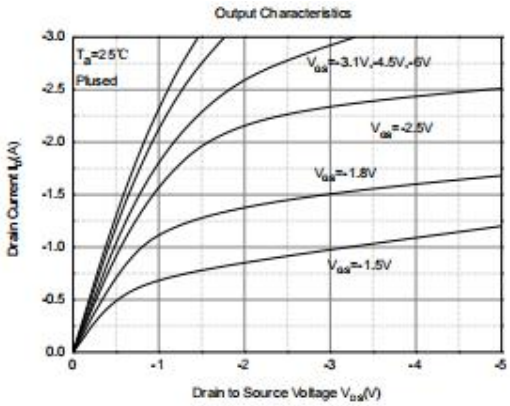
1.Surface mounted on FR4 board using the minimum recommended pad size.

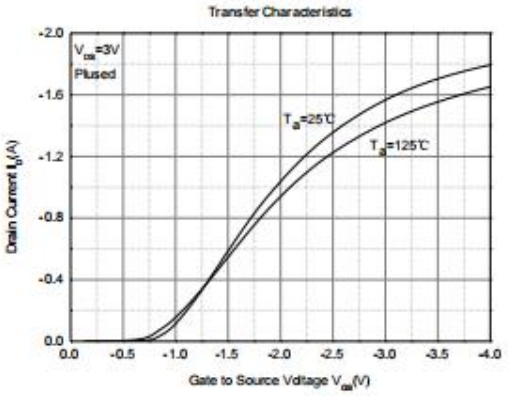
2.Pulse Test : Pulse Width=300 μ s, Duty Cycle=2%.

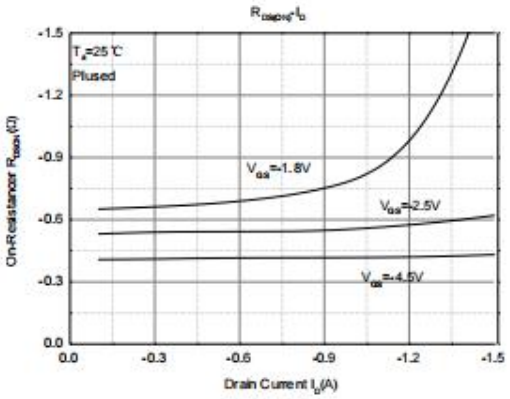
3.Switching characteristics are independent of operating junction temperatures.

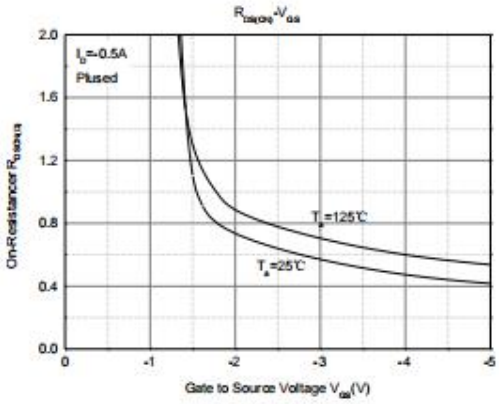
4.Guaranteed by design, not subject to producting.

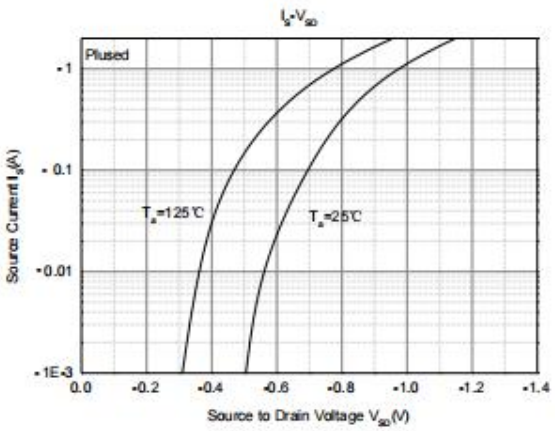
Typical Electrical and Thermal Characteristics

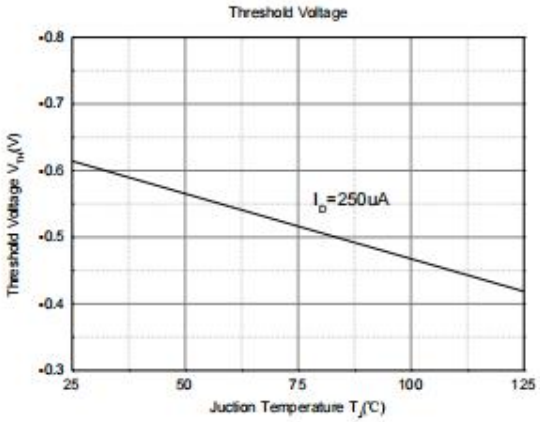




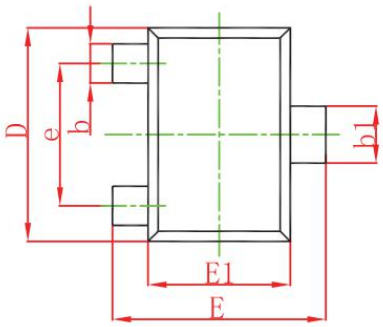


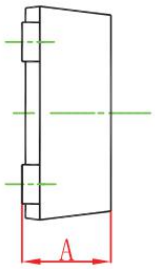


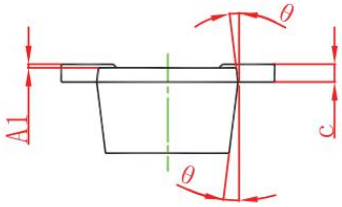




SOT-723 Package Information



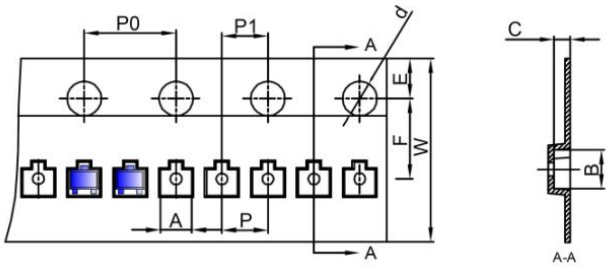




Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

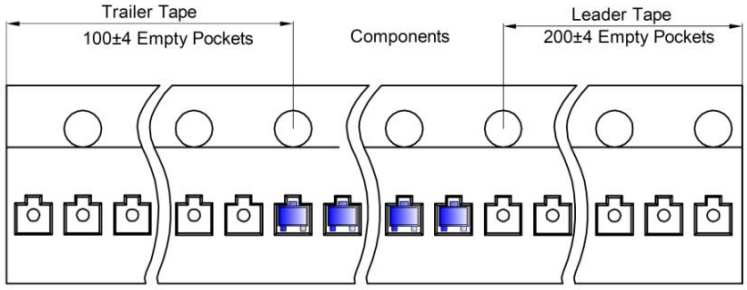
SOT-723 Tape and Reel

SOT-723 Embossed Carrier Tape

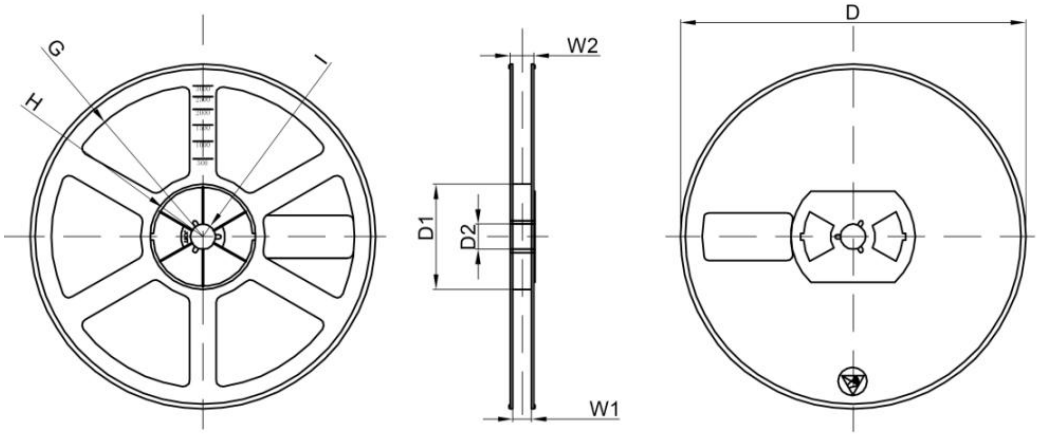


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-723	1.33	1.45	0.61	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

SOT-723 Tape Leader and Trailer



SOT-723 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)
8000 pcs	7 inch	80,000 pcs	203×203×195	320,000 pcs	438×438×220	