

PWX3134K

20V Dual N-Channel MOSFET

0.75A 20V; $R_{DS(ON)typ} = 190m\Omega @ 4.5V$, $R_{DS(ON)typ} = 260m\Omega @ 2.5V$
 $R_{DS(ON)typ} = 390m\Omega @ 1.8V$

FEATURE

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

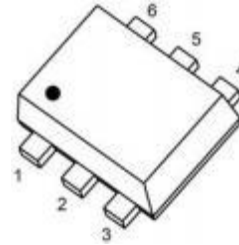
Application

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

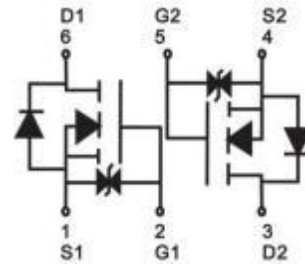
MARKING:



SOT-563



Schematic diagram



ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$ unless otherwise noted)

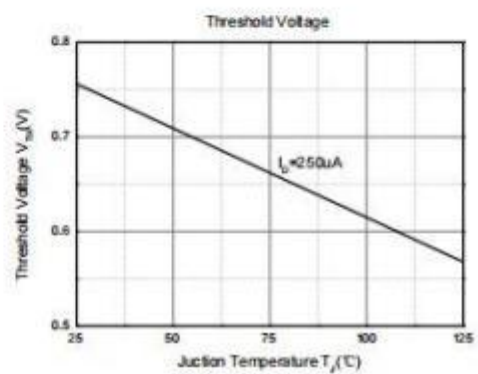
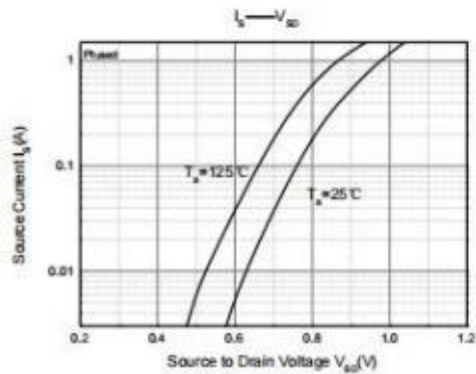
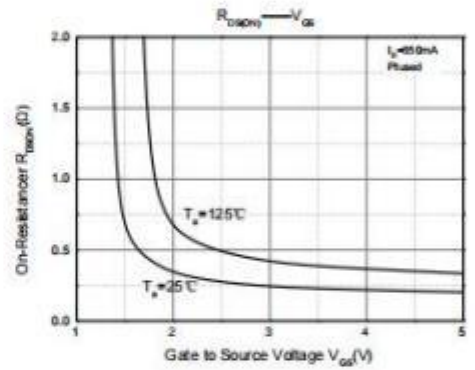
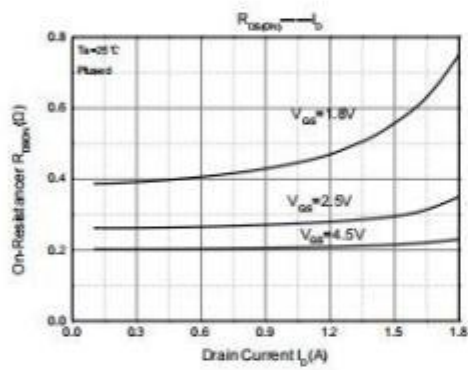
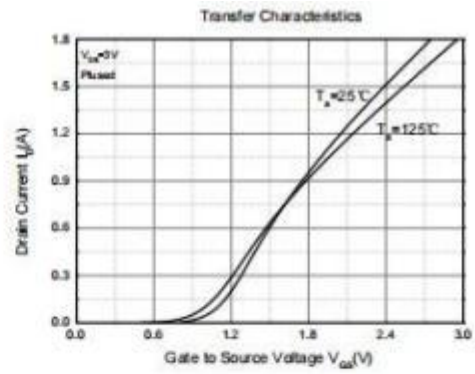
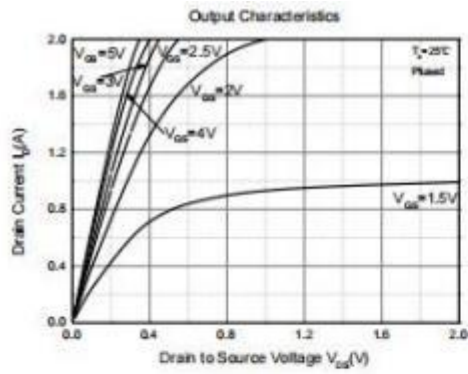
Parameter	Symbol	Value	Unit
Drain- Source Voltage	V_{DS}	20	V
Gate- Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	0.75	A
Pulsed Drain Current($t_p = 10\mu\text{s}$)	I_{DM}	1.5	A
Power Dissipation ⁽¹⁾	P_D	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^\circ\text{C}$

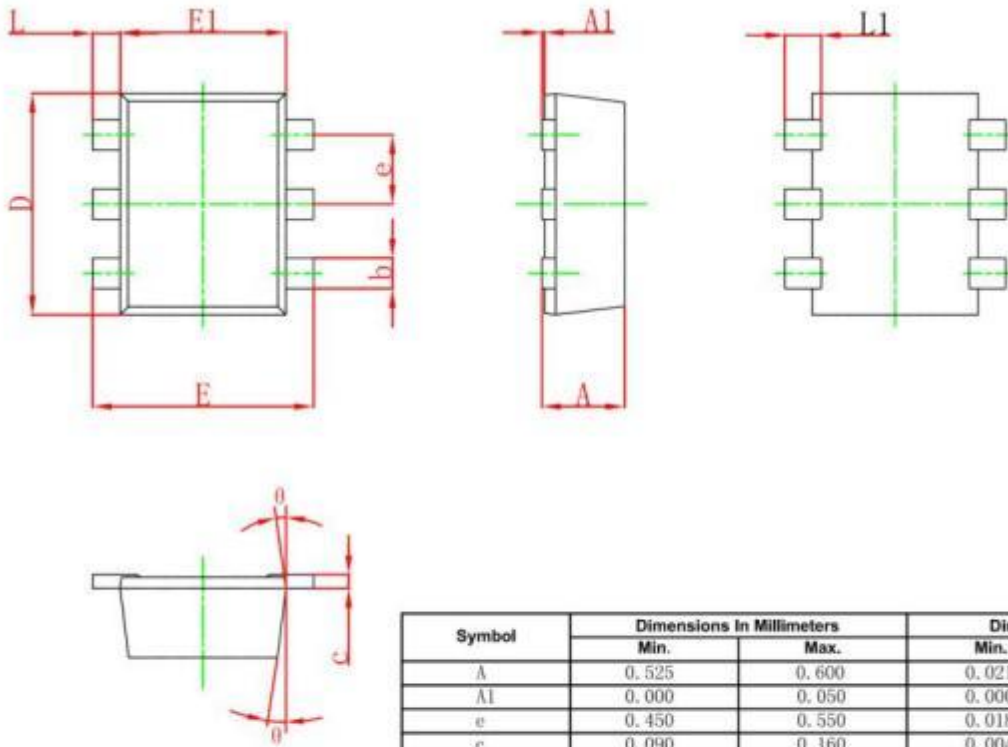
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

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 ⁽²⁾	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.35	0.75	1.1	V
Drain-source on-resistance ⁽²⁾	R _{DS(on)}	V _{GS} = 4.5V, I _D = 650mA		190	260	mΩ
		V _{GS} = 2.5V, I _D = 550mA		260	360	
		V _{GS} = 1.8V, I _D = 450mA		390	590	
Forward tranconductance ⁽²⁾	g _{FS}	V _{DS} = 10V, I _D = 800mA		1.6		S
DYNAMIC CHARACTERISTICS⁽³⁾						
Input Capacitance	C _{iss}	V _{DS} = 16V, V _{GS} = 0V, f = 1MHz		79	120	pF
Output Capacitance	C _{oss}			13	20	
Reverse Transfer Capacitance	C _{rss}			9	15	
SWITCHING CHARACTERISTICS⁽³⁾						
Turn-on delay time	t _{d(on)}	V _{DS} = 10V, I _D = 500mA, V _{GS} = 4.5V, R _G = 10Ω		3.5		nS
Turn-on rise time	t _r			2.8		
Turn-off delay time	t _{d(off)}			21.6		
Turn-off fall time	t _f			8.6		
Total Gate Charge	Q _g	V _{DS} = 10V, V _{GS} = 4.5V, I _D = 7A		20		nC
Gate- Source Charge	Q _{gs}			1		
Gate- Drain Charge	Q _{gd}			4		
SOURCE- DRAIN DIODE CHARACTERISTICS						
Diode Forward voltage	V _{DS}	I _S = 0.15A, V _{GS} = 0V			1.2	V

Notes :

1. Repetitive rating : Pulse width limited by junction temperature.
2. Pulse Test : Pulse width ≤ 300 μ s, duty cycle ≤ 0.5%.
3. Guaranteed by design, not subject to production testing.

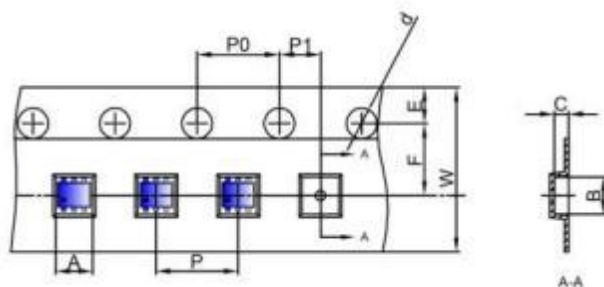




Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300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

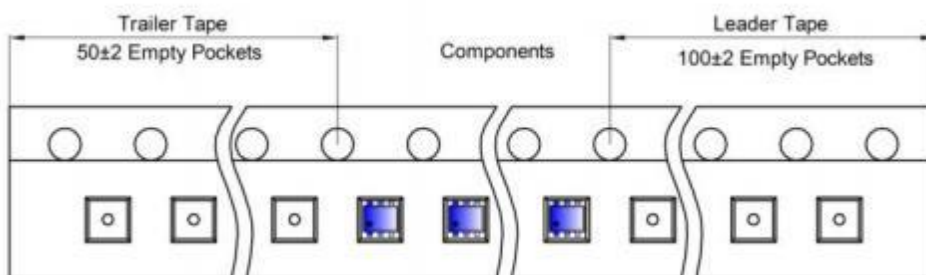
SOT-563 Tape and Reel

SOT-563 Embossed Carrier Tape

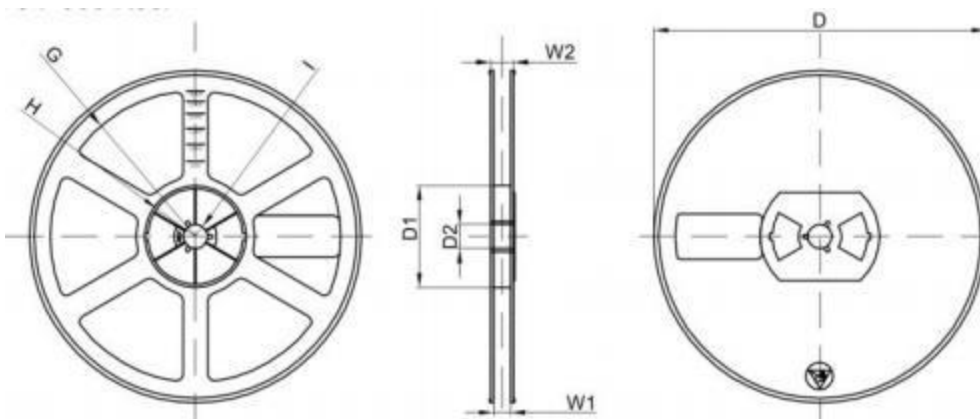


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-563	1.78	1.78	0.69	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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	