



GP
ELECTRONICS

GP3139KDW

20V Dual P-Channel MOSFET

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-20V	450mΩ@-4.5V	-0.66A
	650mΩ@-2.5V	
	950mΩ@-1.8V	

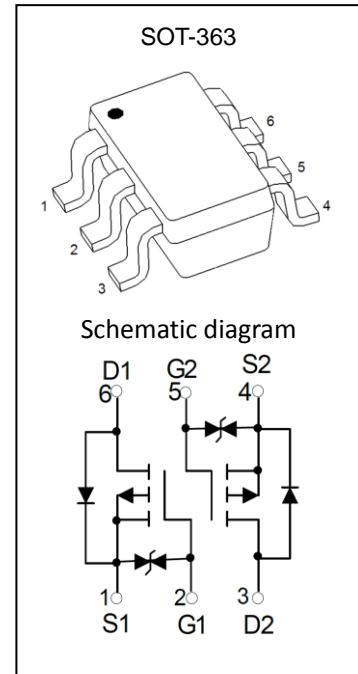
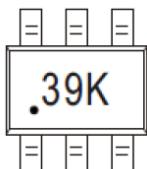
Feature

- 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

MARKING:



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	-0.66	A
Pulsed Drain Current ⁽¹⁾	I_{DM}	-1.8	A
Power Dissipation ⁽²⁾	P_D	150	mW
Thermal Resistance from Junction to Ambient ⁽¹⁾	$R_{\theta JA}$	833	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~+150	°C

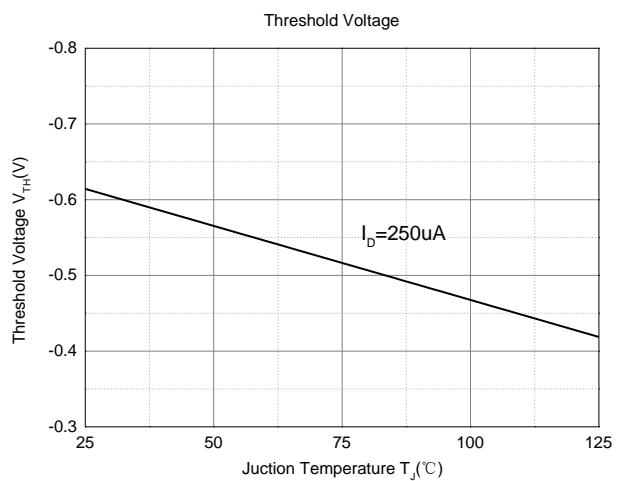
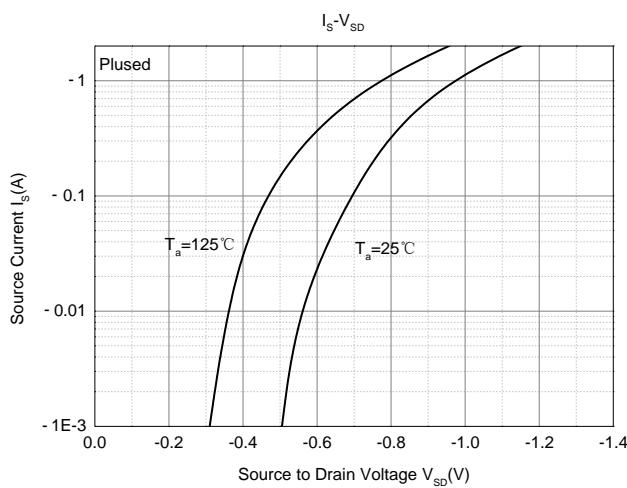
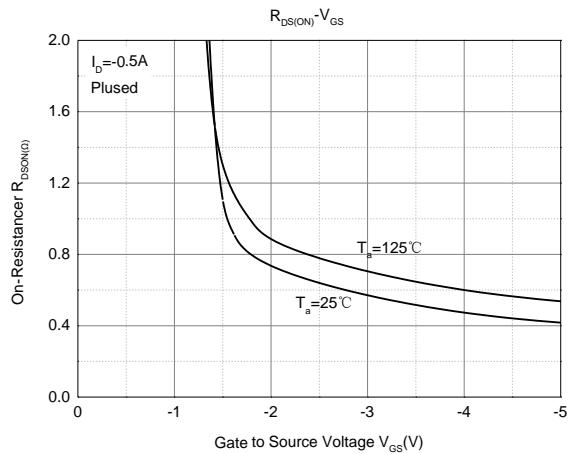
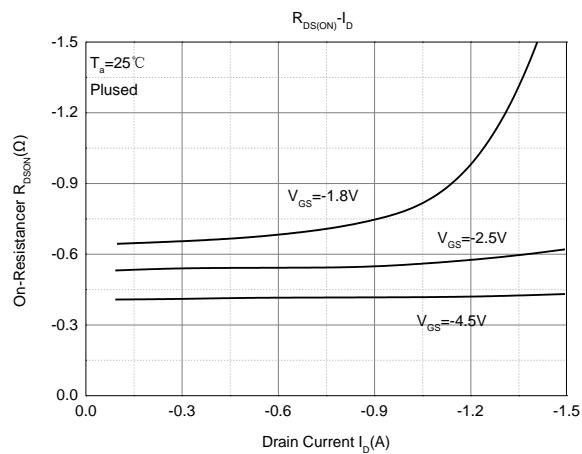
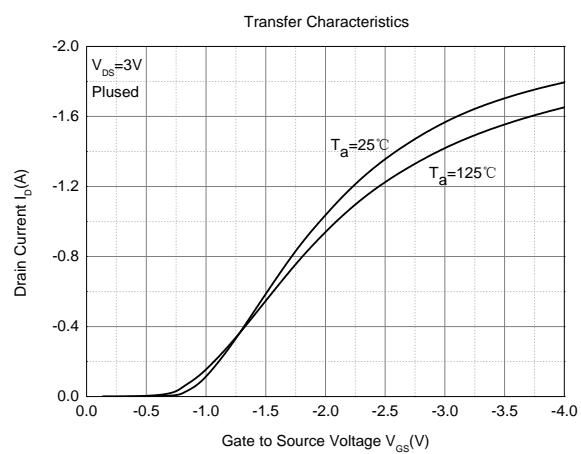
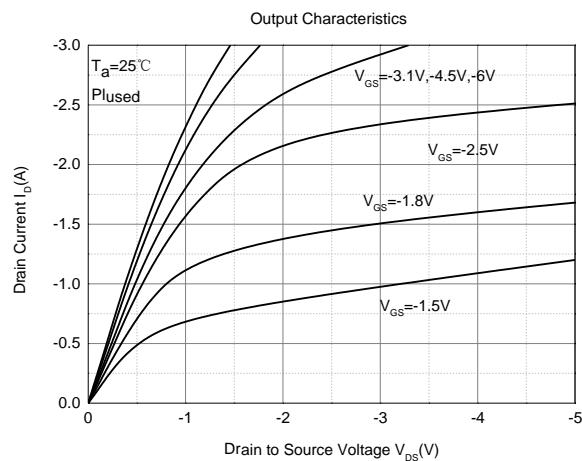
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise noted)

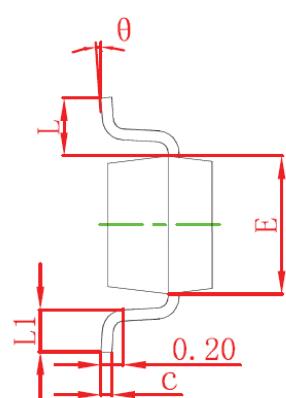
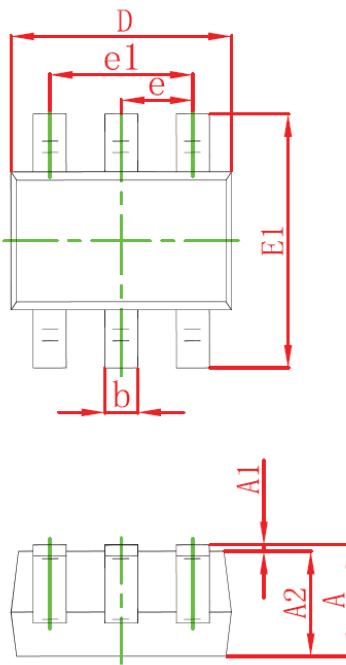
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(\text{BR})\text{DSS}}$	$V_{\text{GS}} = 0\text{V}, I_D = -250\mu\text{A}$	-20			V
Zero gate voltage drain current	I_{DSS}	$V_{\text{DS}} = -20\text{V}, V_{\text{GS}} = 0\text{V}$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{\text{GS}} = \pm 10\text{V}, V_{\text{DS}} = 0\text{V}$			± 20	μA
Gate threshold voltage ⁽³⁾	$V_{\text{GS}(\text{th})}$	$V_{\text{DS}} = V_{\text{GS}}, I_D = -250\mu\text{A}$	-0.35	-0.61	-1.1	V
Drain-source on-resistance ⁽³⁾	$R_{\text{DS}(\text{on})}$	$V_{\text{GS}} = -4.5\text{V}, I_D = -1\text{A}$		450	580	$\text{m}\Omega$
		$V_{\text{GS}} = -2.5\text{V}, I_D = -0.8\text{A}$		650	840	
		$V_{\text{GS}} = -1.8\text{V}, I_D = -0.5\text{A}$		950		
Forward transconductance	g_{FS}	$V_{\text{DS}} = -10\text{V}, I_D = -0.54\text{A}$	0.8			S
Dynamic characteristics⁽⁴⁾						
Input Capacitance	C_{iss}	$V_{\text{DS}} = -16\text{V}, V_{\text{GS}} = 0\text{V}, f = 1\text{MHz}$		113		pF
Output Capacitance	C_{oss}			15		
Reverse Transfer Capacitance	C_{rss}			9		
Switching Characteristics⁽⁴⁾						
Turn-on delay time	$t_{\text{d}(\text{on})}$	$V_{\text{DS}} = -10\text{V}, I_D = -200\text{mA}, V_{\text{GS}} = -4.5\text{V}, R_G = 10\Omega$		9		ns
Turn-on rise time	t_r			5.7		
Turn-off delay time	$t_{\text{d}(\text{off})}$			32.6		
Turn-off fall time	t_f			20.3		
Source-Drain Diode characteristics						
Diode forward voltage ⁽³⁾	V_{DS}	$I_S = -0.5\text{A}, V_{\text{GS}} = 0\text{V}$			-1.2	V

Notes:

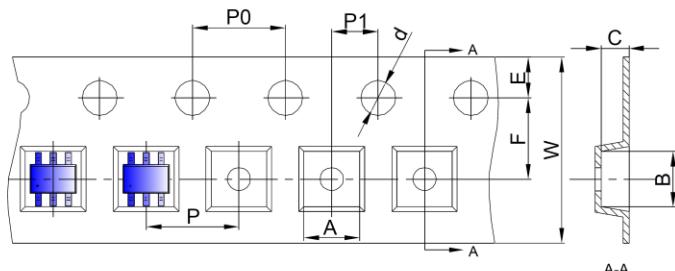
1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at $T_a=25^\circ\text{C}$.
3. Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 0.5\%$.
4. These parameters have no way to verify.

Typical Electrical and Thermal Characteristics

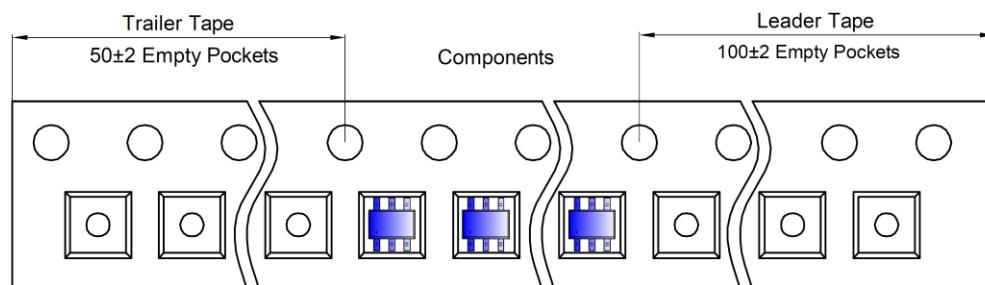
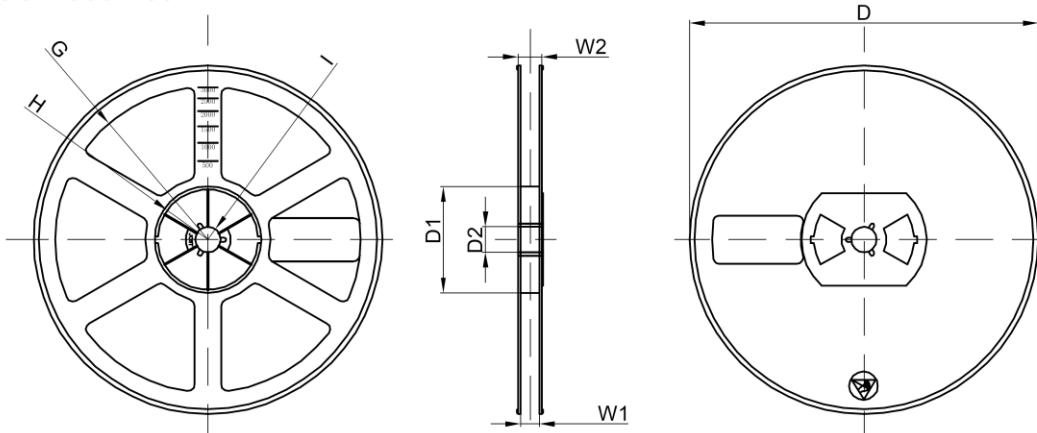


SOT-363 Package Information


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-363 Tape and Reel
SOT-363 Tape and reel
SOT-363 Embossed Carrier Tape


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-363 Tape Leader and Trailer

SOT-363 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	



电子元器件线上授权代理开拓者
原厂授权 · 正品现货 · 一件即发

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)