

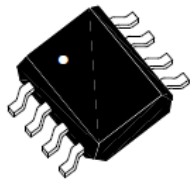
Dual N-Channel Enhancement-Mode MOSFET(20V, 6A)

PRODUCT SUMMARY

V _{DSS}	I _D	R _{DS(on)} (m-ohm) Max
20V	6A	28 @ V _{GS} = 4.5V, I _D =6A
		40 @ V _{GS} =2.5V, I _D =5.2A

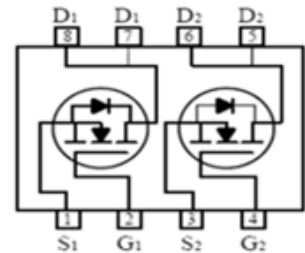
◆ Features

1. Advanced Trench Process Technology.
2. High Density Cell Design for Ultra Low On-Resistance.
3. Lead free product is acquired.
4. Surface mount Package.
5. RoHS Compliant.






SOP-8

Pin 1: Source1
Pin 2: Gate1
Pin 3: Source2
Pin 4: Gate2
Pin 5 / 6 : Drain2
Pin 7 / 8 : Drain1



◆ Ordering Information

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		2/4	1/3	5/6/7/8	
SM9926PRL	SM9926PRG	SOP-8	G	S	D	Tape Reel
<p style="text-align: center;">SM9926X X X</p> <p>(1)Package Type </p> <p>(2)Packing Type </p> <p>(3)Lead Free </p>			<p>(1) P: SOP-8</p> <p>(2) R: Tape Reel</p> <p>(3) G: Halogen Free; L: Lead Free</p>			



◆ Absolute Maximum Ratings (T_A=25°C, unless otherwise noted)

Symbol	Parameter	Ratings	Units
V _{DS}	Drain-Source Voltage	20	V
V _{GS}	Gate-Source Voltage	±12	V
I _D	Drain Current (Continuous) ^a	6	A
I _{DM}	Drain Current (Pulsed) ^b	20	A
P _D	Total Power Dissipation @T _A =25°C	2.0	W
T _j , T _{stg}	Operating Junction and Storage Temperature Range	-55 to +150	°C
R _{θJA}	Thermal Resistance Junction to Ambient (PCB mounted) ^c	62.5	°C/W

a:Fused current that based on wire numbers and diameter

b:Repetitive Rating: Pulse width limited by the maximum junction temperature

c:1-in² 2oz Cu PCB board

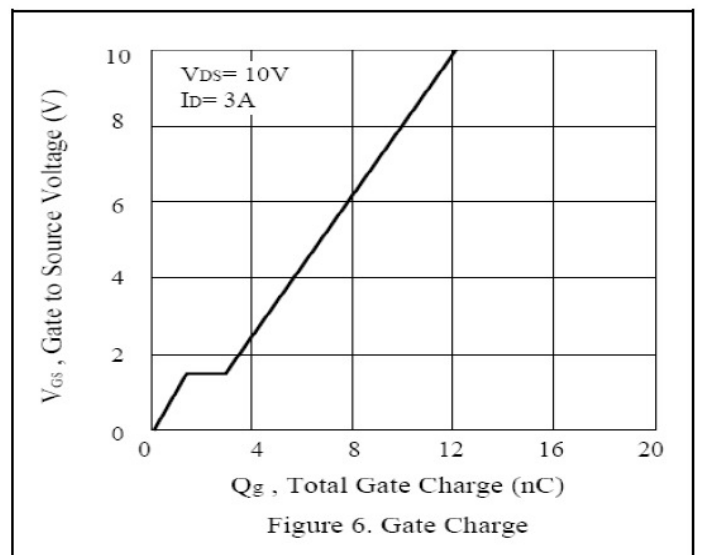
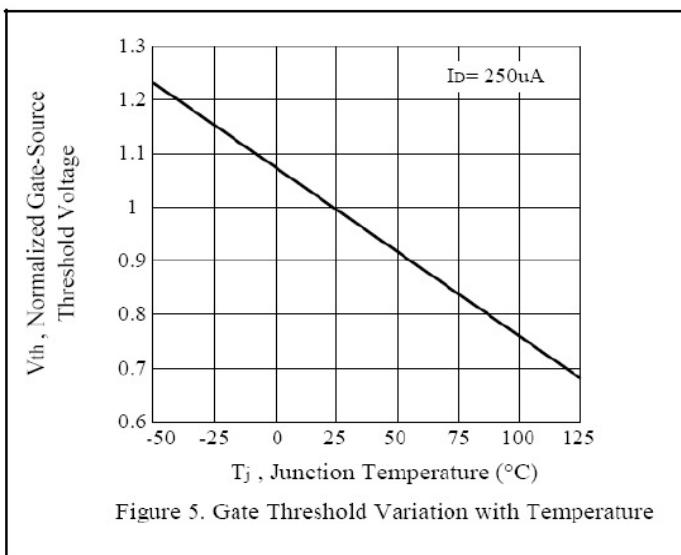
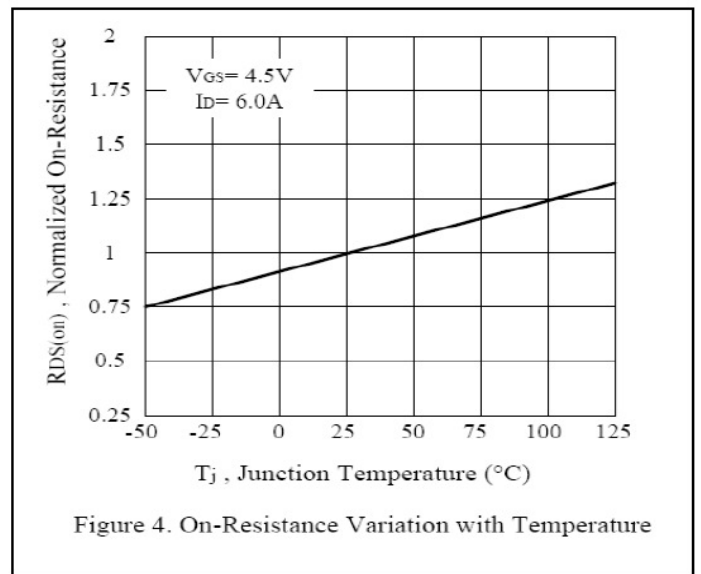
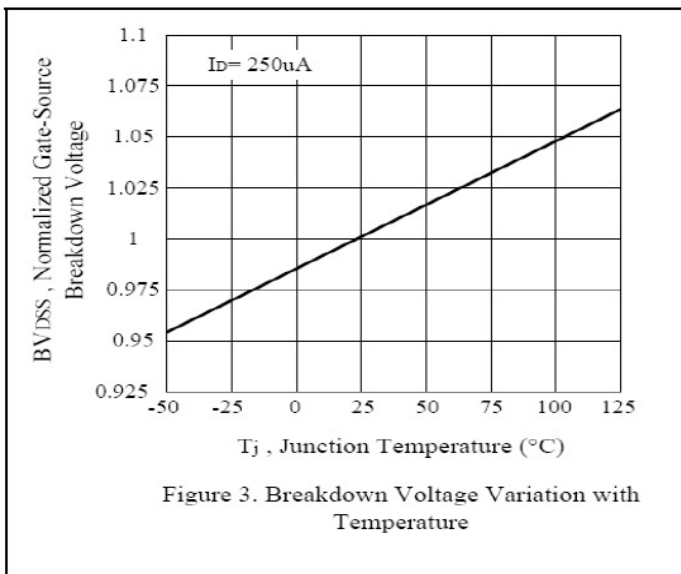
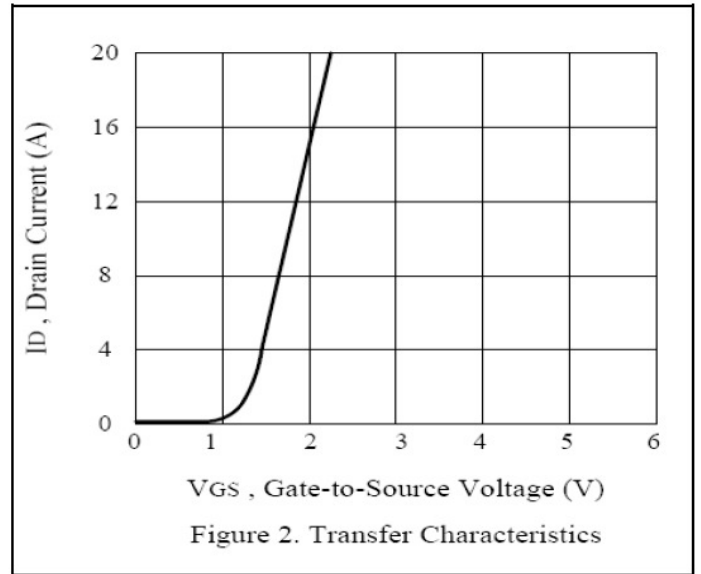
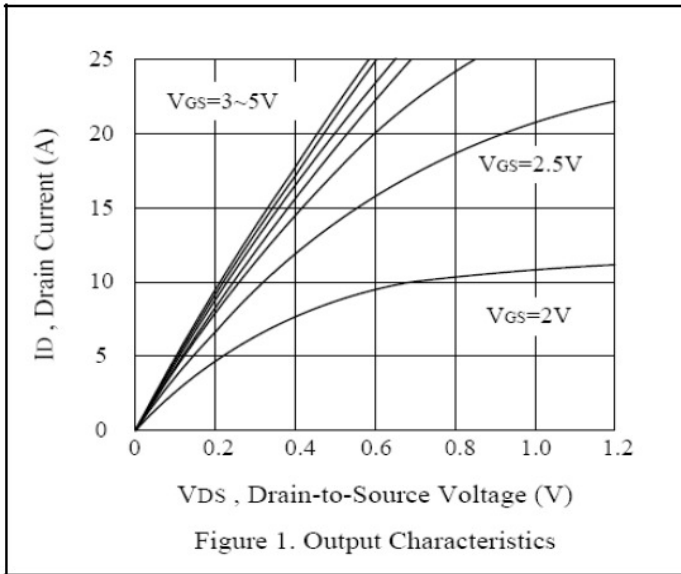
◆ Electrical Characteristics (T_A=25°C, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
• Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	20	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =20V, V _{GS} =0V	-	-	1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±12V, V _{DS} =0V	-	-	±100	nA
• On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	0.6	0.65	1.2	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =4.5V, I _D =6.0A	-	20	28	mΩ
		V _{GS} =2.5V, I _D =5.2A	-	26	40	
• Dynamic Characteristics^d						
C _{iss}	Input Capacitance	V _{DS} =8V, V _{GS} =0V, f=1MHz	-	522.3	-	pF
C _{oss}	Output Capacitance		-	98.48	-	
C _{rss}	Reverse Transfer Capacitance		-	74.69	-	
• Switching Characteristics^d						
Q _g	Total Gate Charge	V _{DS} =10V, I _D =6A, V _{GS} =4.5V	-	6.24	-	nC
Q _{gs}	Gate-Source Charge		-	1.64	-	
Q _{gd}	Gate-Drain Charge		-	1.34	-	
t _{d(on)}	Turn-on Delay Time	V _{DD} =10V, I _D =1A, V _{GEN} =4.5V, R _G =6Ω	-	10.4	-	nS
t _r	Turn-on Rise Time		-	4.4	-	
t _{d(off)}	Turn-off Delay Time		-	27.36	-	
t _f	Turn-off Fall Time		-	4.16	-	
• Drain-Source Diode Characteristics						
I _S	Maximum Diode Forward Current		-	-	1.7	A
V _{SD}	Drain-Source Diode Forward Voltage	V _{GS} =0V, I _S =1.7A	-	-	1.2	V

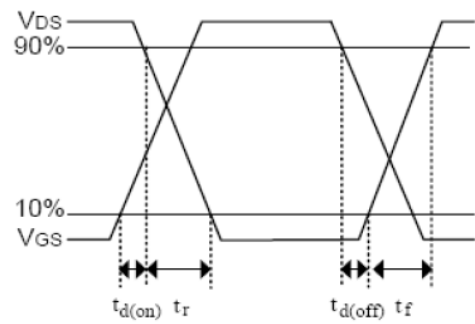
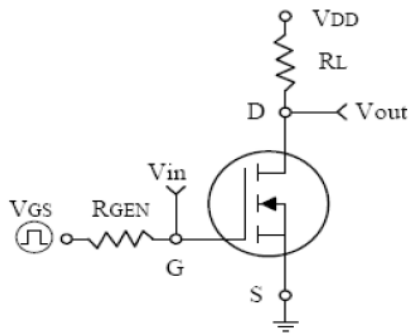
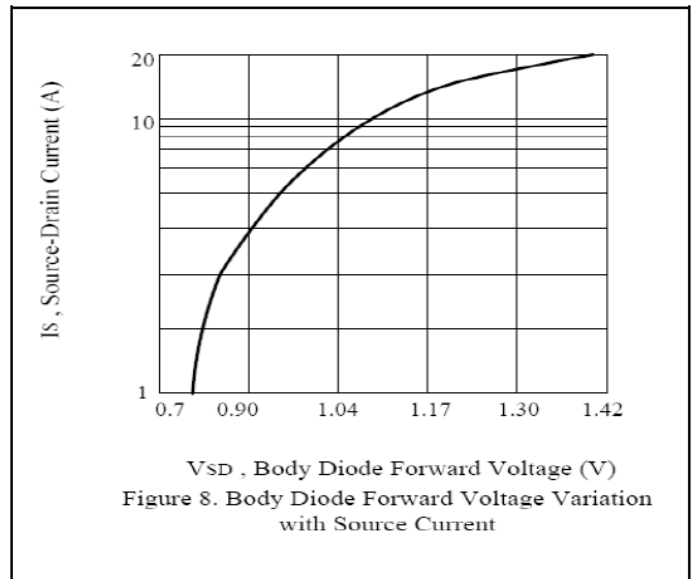
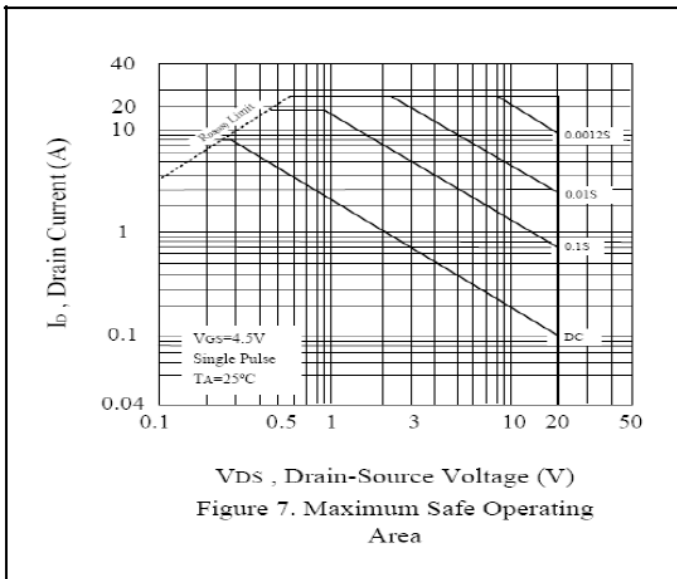
Note: Pulse Test: Pulse Width ≤300us, Duty Cycle≤2%

d: Guaranteed by design: not subject to production testing

◆ Characteristics Curve



◆ Characteristics Curve



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