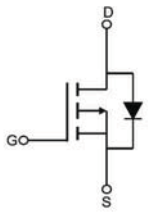
RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

RM08P100S2

P-Channel Enhancement Mosfet

Feature

- V_{DS} = -100V,I_D =-1.1A
  $R_{DS(ON)}$ < 0.6Ω @ V_{GS}=-10V
  $R_{DS(ON)}$ < 0.65Ω @ V_{GS}=-4.5V
- Advanced Trench Technology
- Low $R_{DS(ON)}$
- Low Gate Charge



Schematic Diagram

Application

- Power management
- Video montior
- Halogen-free

SOT-23 top view

Package Marking and Ordering Information

Device Marking	Device	Device Package	Reel Size	Tape width	Quantity (PCS)
A27SS	RM08P100S2	SOT23	7 inch	-	3000

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

Symbol	Parameter	Conditions	Min	Max	Unit
V_{DS}	Drain-Source Voltage	T_A=25℃	-100	-	V
V_{GS}	Gate-Source Voltage	T_A=25℃	-	±20	V
I_D*	Drain Current	T_A=25℃, V_{GS}=-10V	-	-1.1	A
		T_A=100℃, V_{GS}=-10V	-	-0.73	A
I_{DM}*,**	Pulsed Drain Current	T_A=25℃, V_{GS}=-10V	-	-4.4	A
P_{tot}	Total Power Dissipation	T_A=25℃	-	0.83	W
T_{stg}	Storage Temperature		-55	150	℃
T_J	Junction Temperature		-	150	℃
I_S	Diode Forward Current	T_A=25℃	-	-1.1	A
$R_{\theta JA}$*	Thermal Resistance-Junction to Ambient		-	150	℃/W

Notes：

* Surface Mounted on 1 in^2 pad area, t ≤ 10 sec

** Pulse width ≤ 300 μs, duty cycle ≤ 2 %

2022-10/113
REV:A

MOSFET ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static Characteristics						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V, I_{DS}=-250μA	-100	-	-	V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}, I_{DS}=-250μA	-1.0	-	-2.5	V
I_{DSS}	Drain Leakage Current	V_{DS}=-80V, V_{GS}=0V	-	-	-1	μA
		T_J=85℃	-	-	-30	μA
I_{GSS}	Gate Leakage Current	V_{GS}=±20V, V_{DS}=0V	-	-	±100	nA
$R_{DS(ON)}$[a]	On-State Resistance	V_{GS}=-10V, I_{DS}=-1A	-	500	600	mΩ
		V_{GS}=-4.5V, I_{DS}=-0.5A	-	600	650	mΩ
Diode Characteristics						
V_{SD}[a]	Diode Forward Voltage	I_{SD}=-1A, V_{GS}=0V	-	-	1.3	V
t_{rr}	Reverse Recovery Time	I_{SD}=-1A, dI_{SD}/dt=100A/μs	-	21	-	ns
Q_{rr}	Reverse Recovery Charge		-	17	-	nC
Dynamic Characteristics [b]						
C_{iss}	Input Capacitance	V_{GS}=0V, V_{DS}=-50V Frequency=1MHz	-	363	-	pF
C_{oss}	Output Capacitance		-	26	-	
C_{rss}	Reverse Transfer Capacitance		-	1	-	
t_d(on)	Turn-on Delay Time	V_{DS}=-50V, V_{GEN}=-10V, R_G=4.5Ω, R_L=50Ω, I_{DS}=-1A	-	6.8	-	ns
t_r	Turn-on Rise Time		-	20	-	
t_d(off)	Turn-off Delay Time		-	145	-	
t_f	Turn-off Fall Time		-	48	-	
Gate Charge Characteristics [b]						
Q_g	Total Gate Charge	V_{GS}=-10V, V_{DS}=-50V, I_{DS}=-1A	-	18	-	nC
Q_{gs}	Gate-Source Charge		-	3.5	-	
Q_{gd}	Gate-Drain Charge		-	2.2	-	

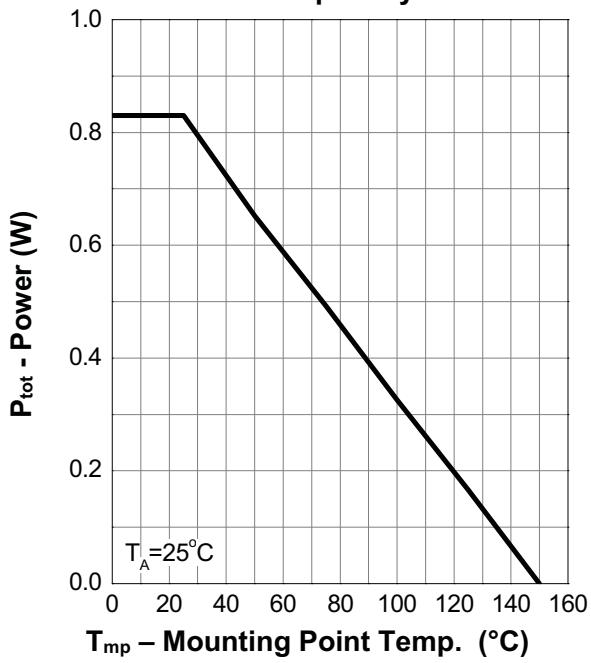
Notes:

a. Pulse test; pulse width ≤ 300μs, duty cycle ≤ 2%

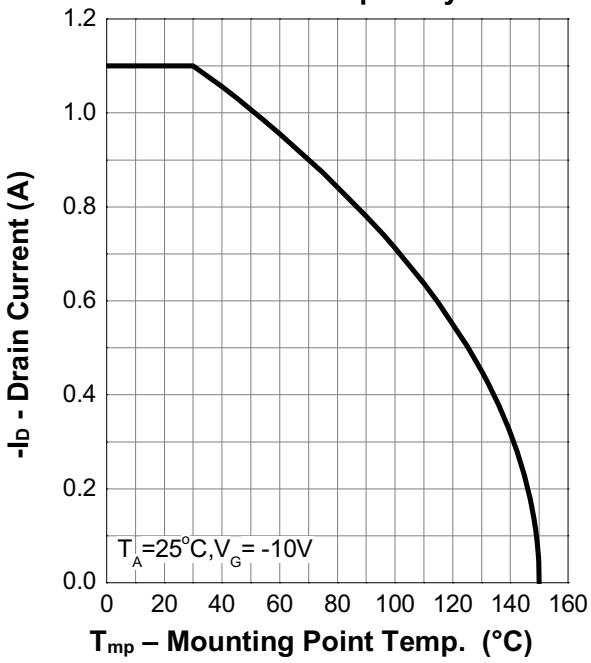
b. Guaranteed by design, not subject to production testing

RATING AND CHARACTERISTICS CURVES (RM08P100S2)

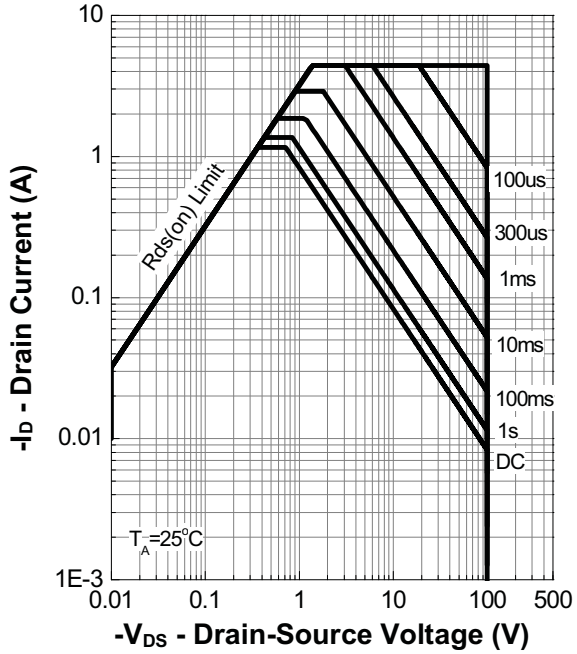
Power Capability



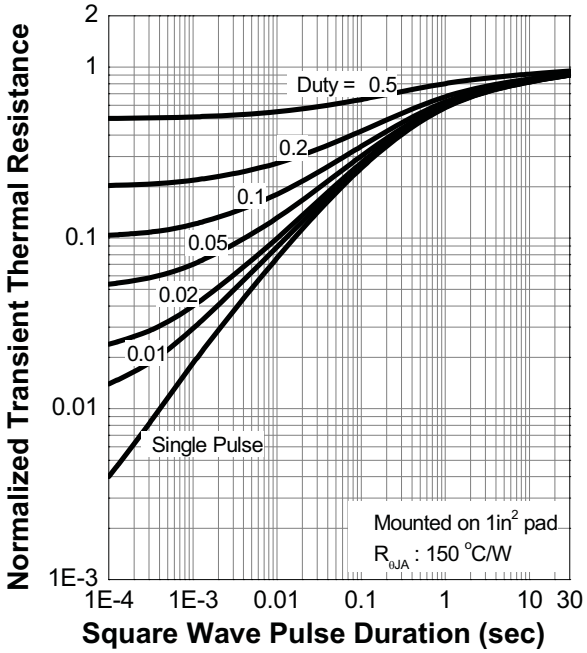
Current Capability



Safe Operation Area

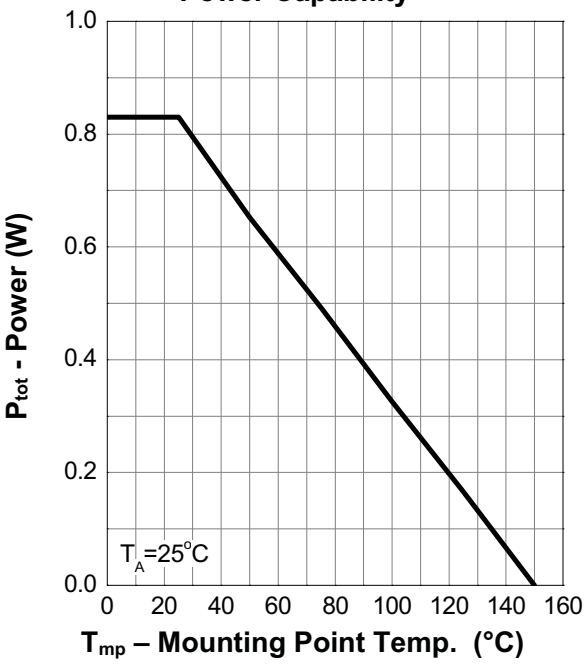


Transient Thermal Impedance

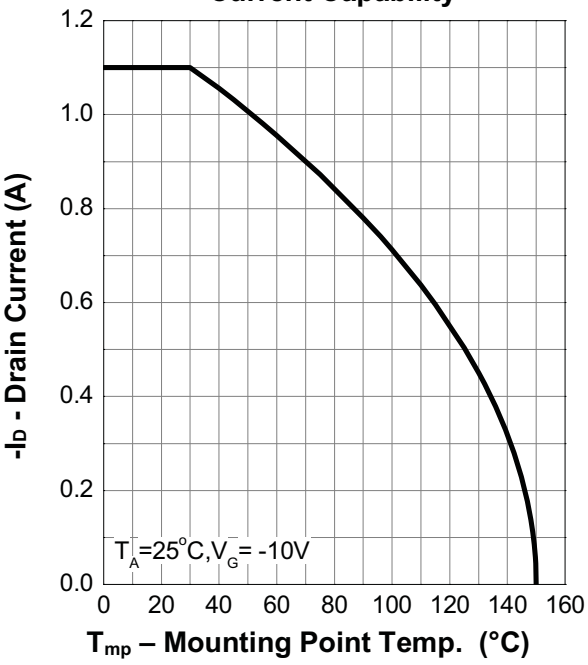


RATING AND CHARACTERISTICS CURVES (RM08P100S2)

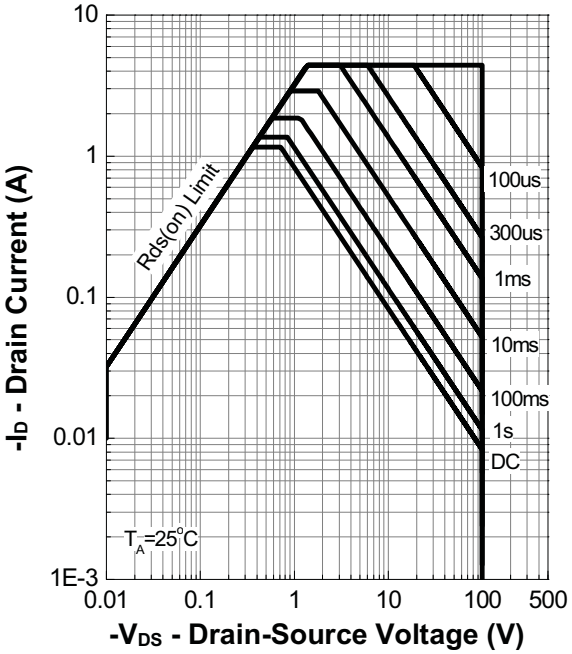
Power Capability



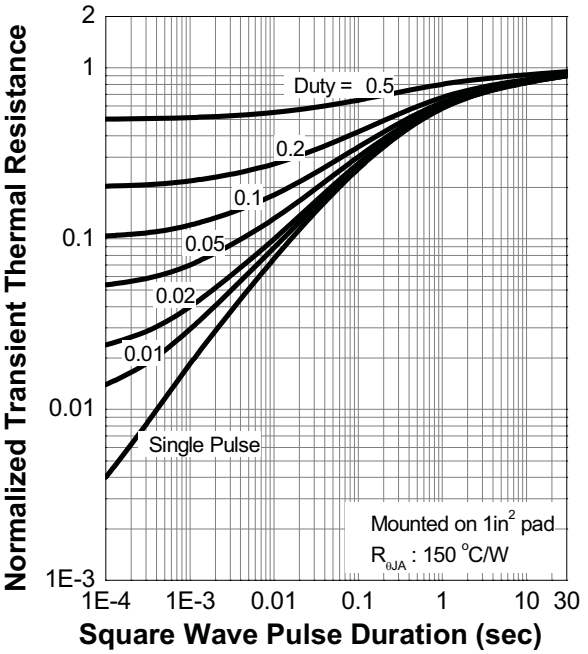
Current Capability



Safe Operation Area

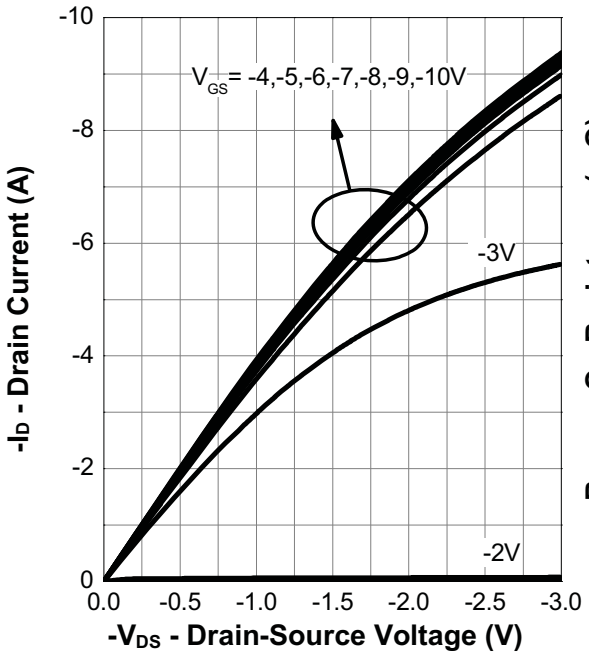


Transient Thermal Impedance

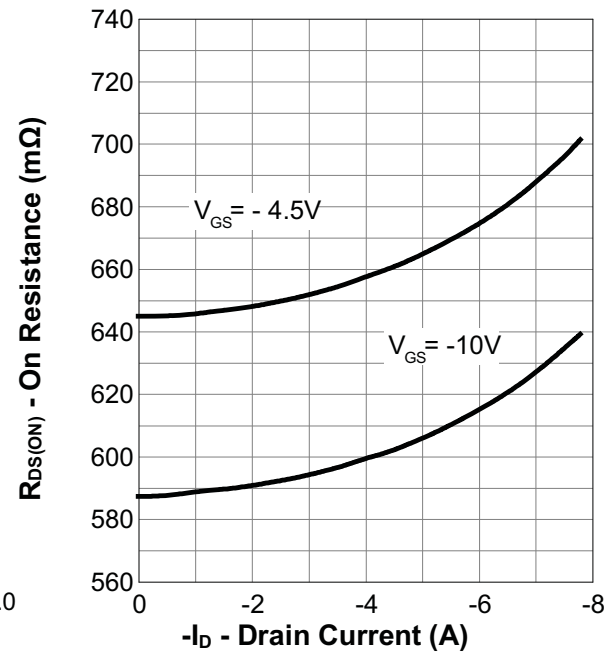


RATING AND CHARACTERISTICS CURVES (RM08P100S2)

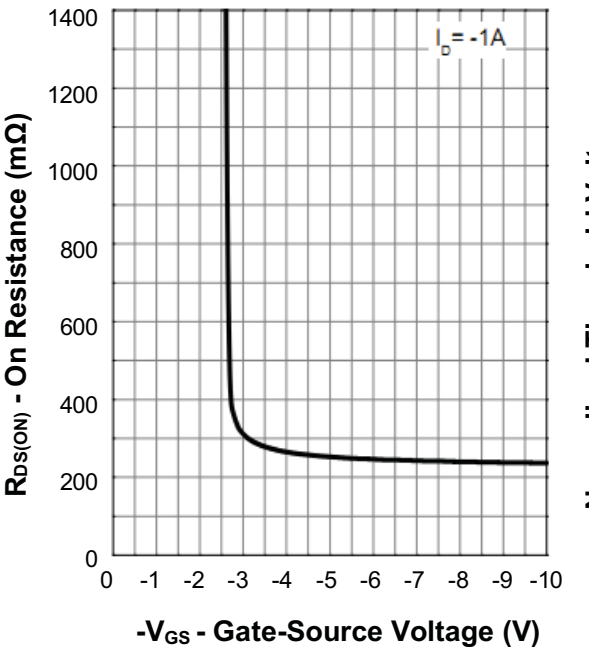
Output Characteristics



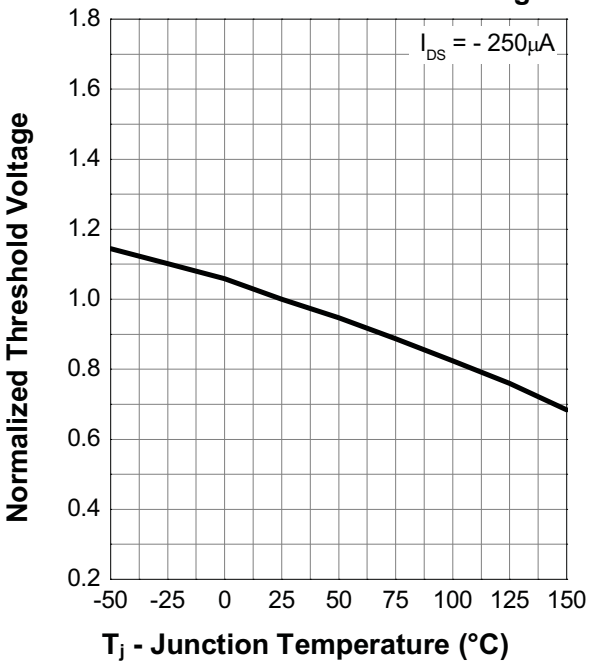
On Resistance



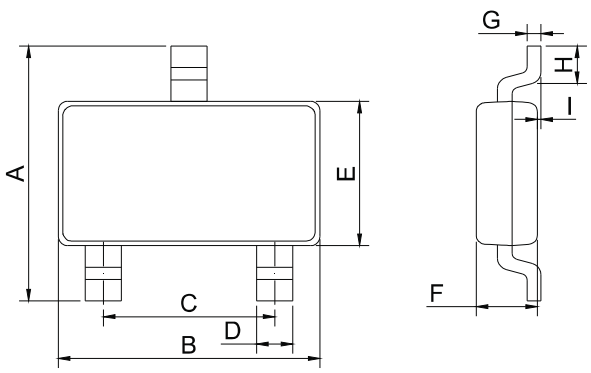
Transfer Characteristics



Normalized Threshold Voltage



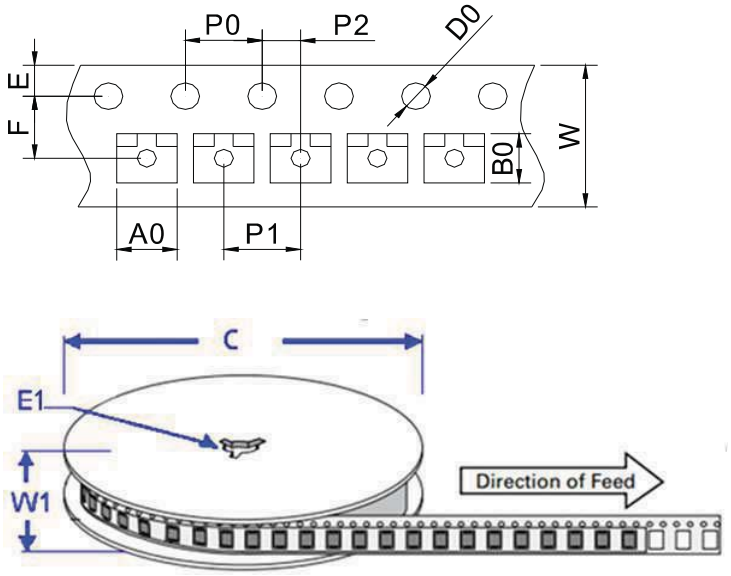
SOT-23 Package Information



SOT-23

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.30	2.40	2.50	0.091	0.095	0.098
B	2.80	2.90	3.00	0.110	0.114	0.118
C	1.90 REF			0.075 REF		
D	0.35	0.40	0.45	0.014	0.016	0.018
E	1.20	1.30	1.40	0.047	0.051	0.055
F	0.90	1.00	1.10	0.035	0.039	0.043
G		0.10	0.15		0.004	0.006
H	0.20			0.008		
I	0		0.10	0		0.004

Package Information-SOT-23



Ref.	Dimensions	
	Millimeters	Inches
A0	3.15 ± 0.3	0.124 ± 0.012
B0	2.77 ± 0.3	0.109 ± 0.012
C	178	7.0
D0	1.50±0.1	0.059 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3±0.3	0.524± 0.012
F	3.5 ± 0.2	0.138 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	8.00 ± 0.2	0.315 ± 0.008
W1	11.5±1.0	0.453 ± 0.039

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