SHANGHAI SINO-IC
MICROELECTRONICS CO., LTD.

SED4060GM

N-Channel Enhancement-Mode MOSFET

Revision: A

General Description

This type used advanced trench technology and design to provide excellent RDS(ON) with low gate charge. It can be used in a wide variety of application

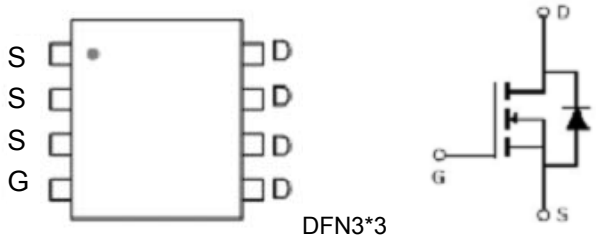
Features

For a single MOSFET

- V_{DS} = 40V
- $R_{DS(ON)}$ = 7mΩ @ V_{GS}=10V

Pin configurations

See Diagram below



Absolute Maximum Ratings

Parameter		Symbol	Rating	Units
Drain-Source Voltage		V_{DS}	40	V
Gate-Source Voltage		V_{GS}	±20	V
Drain Current	Continuous	I_D	60	A
	Pulsed		200	
Total Power Dissipation	@TA=25℃	P_D	65	W
Operating Junction Temperature Range		T_J	-55 to 175	℃

Thermal Resistance

Symbol	Parameter	Typ	Max	Units
$R_{\theta JC}$	Thermal Resistance Junction to Case	-	5	℃/W

Electrical Characteristics (TJ=25℃ unless otherwise noted)						
Symbol	**Parameter**	**Test Conditions**	**Min**	**Typ**	**Max**	**Units**
OFF CHARACTERISTICS (Note 2)						
BV_{DSS}	Drain-Source Breakdown Voltage	I_D=250μA, V_{GS}=0 V	40			V
I_{DSS}	Drain to Source Leakage Current	V_{DS}=40V, V_{GS}=0V			1	μA
I_{GSS}	Gate-Body Leakage Current	V_{GS}=20V			300	nA
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}, I_D=250μA	1.0	1.6	2.2	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V, I_D=20A	-	7.5	9.5	mΩ
g_{FS}	Forward Transconductance	V_{DS}=5V, I_D=20A		25		S
DYNAMIC PARAMETERS						
C_{iss}	Input Capacitance	V_{GS}=0V, V_{DS}=20V, f=1MHz		942		pF
C_{oss}	Output Capacitance			309		pF
C_{rss}	Reverse Transfer Capacitance			29		pF
SWITCHING PARAMETERS						
Q_g	Total Gate Charge	V_{GS}=10V, V_{DS}=20V, I_D=10A		14.5		nC
Q_{gs}	Gate Source Charge			2		nC
Q_{gd}	Gate Drain Charge			2.5		nC
$t_{d(on)}$	Turn-On Delay Time	V_{GS}=10V, V_{DS}=20V, R_{GEN}=10Ω, I_D=10A		6		ns
$t_{d(off)}$	Turn-Off Delay Time			21		ns
$t_{d(r)}$	Turn-On Rise Time			5		ns
$t_{d(f)}$	Turn-Off Fall Time			5		ns
Source-Drain Ratings and Characteristics						
V_{SD}	Diode Forward Voltage	V_{GS}=0V,I_S=20A			1.2	V
trr	Reverse Recovery Time	TJ=25℃, IF=10A Di/dt=100A/μs		24		ns
Qrr	Reverse Recovery Charge			19		nC

Typical Characteristics

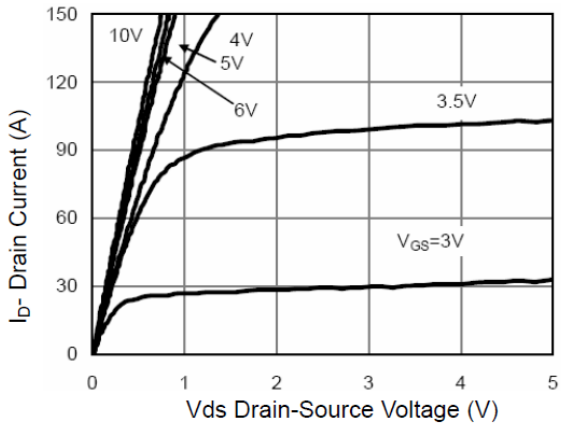


Figure 1 Output Characteristics

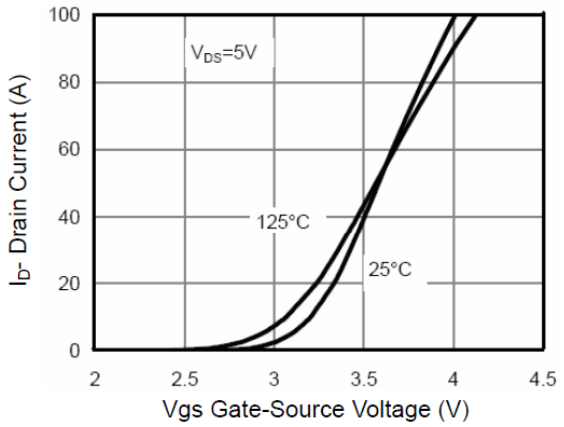


Figure 2 Transfer Characteristics

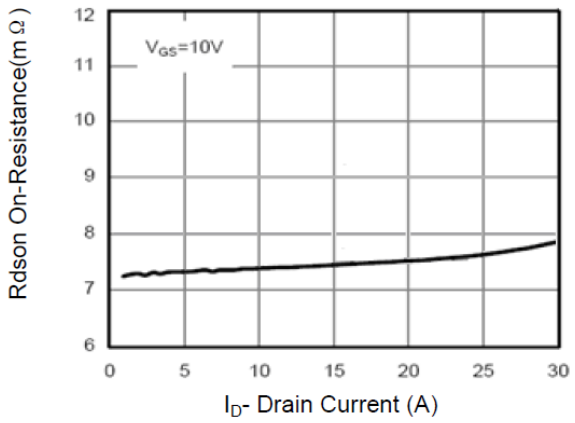


Figure 3 Rdson- Drain Current

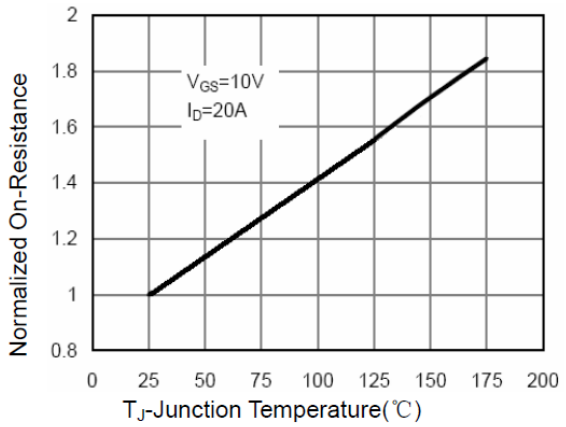


Figure 4 Rdson-JunctionTemperature

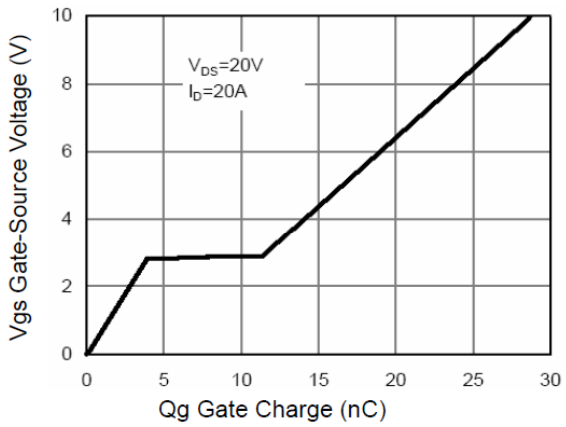


Figure 5 Gate Charge

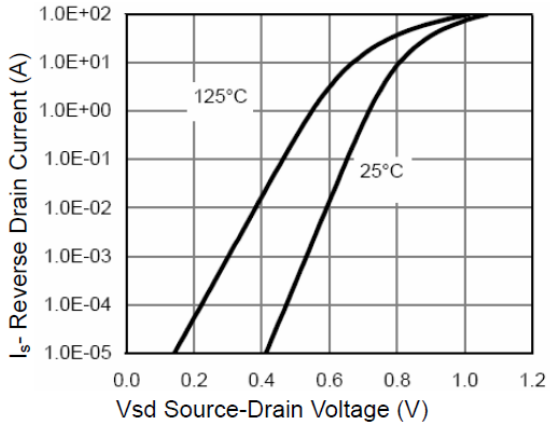


Figure 6 Source- Drain Diode Forward

Typical Characteristics

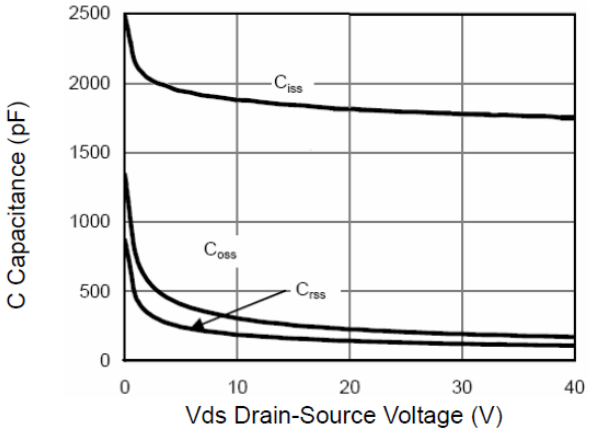


Figure 7 Capacitance vs Vds

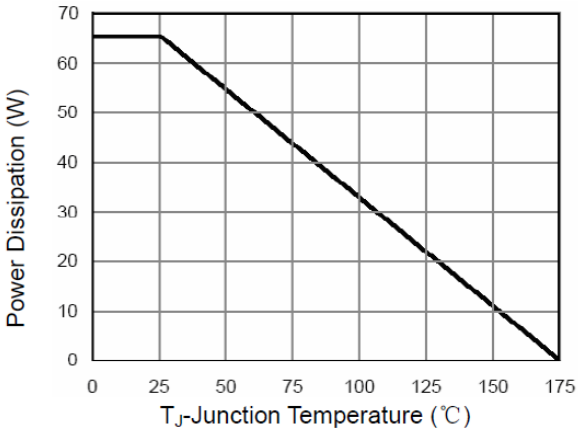


Figure 9 Power De-rating

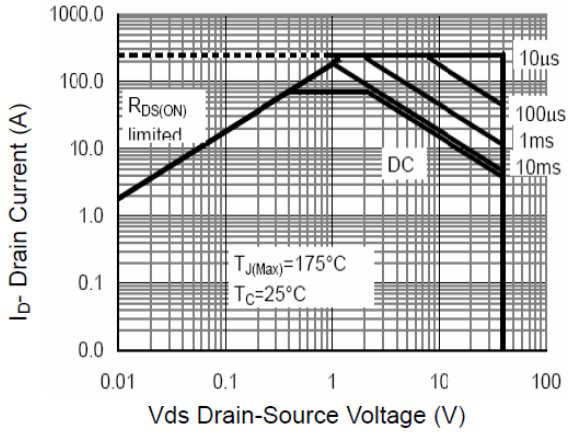


Figure 8 Safe Operation Area

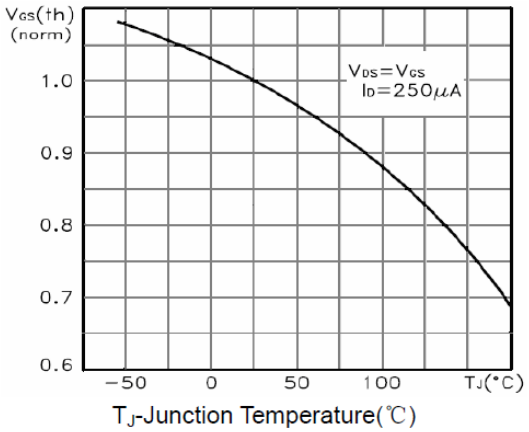


Figure 10 $V_{GS(th)}$ vs Junction Temperature

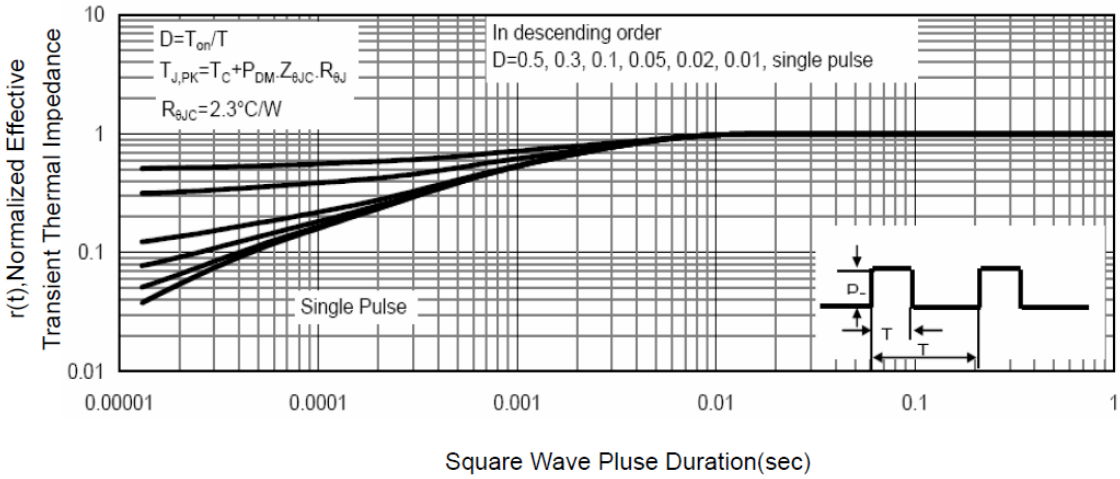
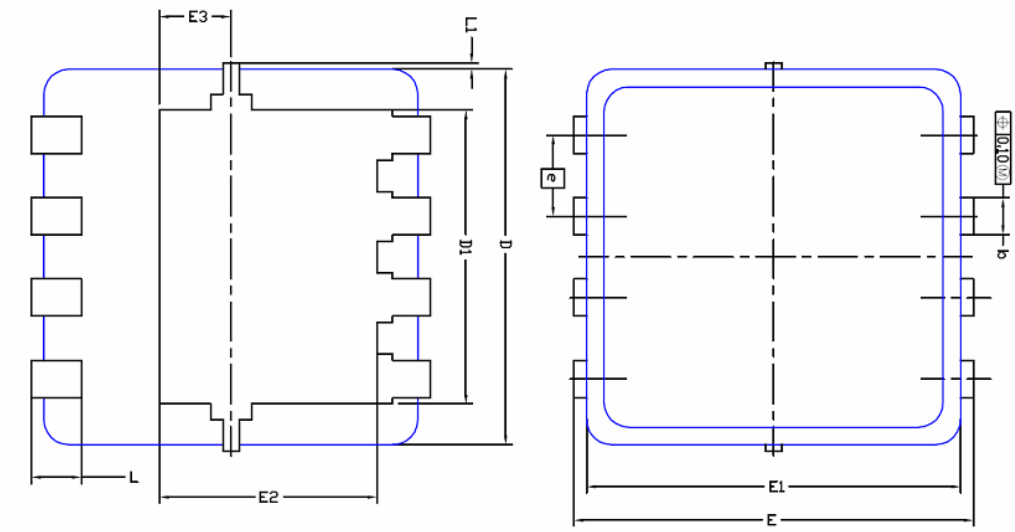
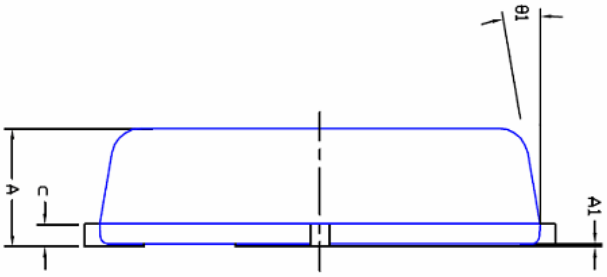


Figure 11 Normalized Maximum Transient Thermal Impedance

Package Outline Dimension

DFN3X3





DIM.	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.700	0.80	0.900	0.0276	0.0315	0.0354
A1	0.00	---	0.05	0.000	---	0.002
b	0.24	0.30	0.35	0.009	0.012	0.014
c	0.10	0.152	0.25	0.004	0.006	0.010
D	3.00 BSC			0.118 BSC		
D1	2.35 BSC			0.093 BSC		
E	3.20 BSC			0.126 BSC		
E1	3.00 BSC			0.118 BSC		
E2	1.75 BSC			0.069 BSC		
E3	0.575 BSC			0.023 BSC		
e	0.65 BSC			0.026 BSC		
L	0.30	0.40	0.50	0.0118	0.0157	0.0197
L1	0	---	0.100	0	---	0.004
θ1	0°	10°	12°	0°	10°	12°

SHANGHAI SINO-IC MICROELECTRONICS CO., LTD

Add: Building 3, Room 3401-03, No.200 Zhangheng Road, ZhangJiang Hi-Tech Park, Pudong, Shanghai 201203, China
Phone: +86-21-33932402 33932403 33932405 33933508 33933608
Fax: +86-21-33932401
Email: webmaster@sino-ic.net
Website: http://www.sino-ic.net

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for MOSFET ***category:***

Click to view products by SINO-IC ***manufacturer:***

Other Similar products are found below :

614233C 648584F FDPF9N50NZ IRFD120 IRFF430 JANTX2N5237 2N7000 FCA20N60_F109 FDZ595PZ 2SK2267(Q) 2SK2545(Q,T) 405094E 423220D MIC4420CM-TR VN1206L 614234A 715780A SSM6J414TU,LF(T 751625C PSMN4R2-30MLD TK31J60W5,S1VQ(O 2SK2614(TE16L1,Q) DMN1017UCP3-7 EFC2J004NUZTDG FCAB21350L1 P85W28HP2F-7071 DMN1053UCP4-7 NTE2384 NTE2969 NTE6400A DMN61D9UWQ-13 US6M2GTR DMN31D5UDJ-7 SSM6P54TU,LF DMP22D4UFO-7B IPS60R3K4CEAKMA1 DMN1006UCA6-7 DMN16M9UCA6-7 STF5N65M6 STU5N65M6 C3M0021120D DMN13M9UCA6-7 BSS340NWH6327XTSA1 MCM3400A-TP DMTH10H4M6SPS-13 IPS60R1K0PFD7SAKMA1 IPS60R360PFD7SAKMA1 IPS60R600PFD7SAKMA1 IPS60R210PFD7SAKMA1 DMN2990UFB-7B