

SE3406
N-Channel Enhancement Mode MOSFET

General Description

The MOSFETs from SINO-IC provide the best combination of fast switching, low on-resistance and cost-effectiveness

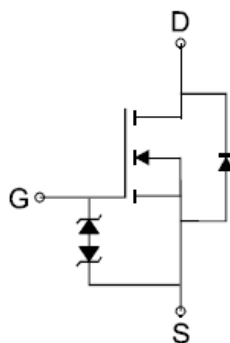
Features

- $R_{DS(ON)} \leq 30m\Omega @ V_{GS}=10V$
- $R_{DS(ON)} \leq 35m\Omega @ V_{GS}=4.5V$
- $R_{DS(ON)} \leq 52m\Omega @ V_{GS}=2.5V$

APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter

Pin configurations



Absolute Maximum Ratings

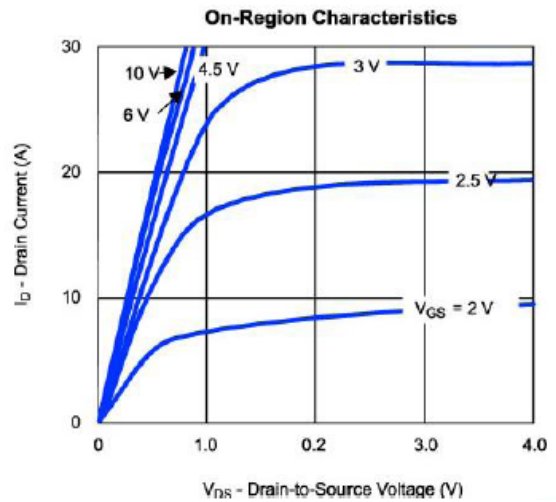
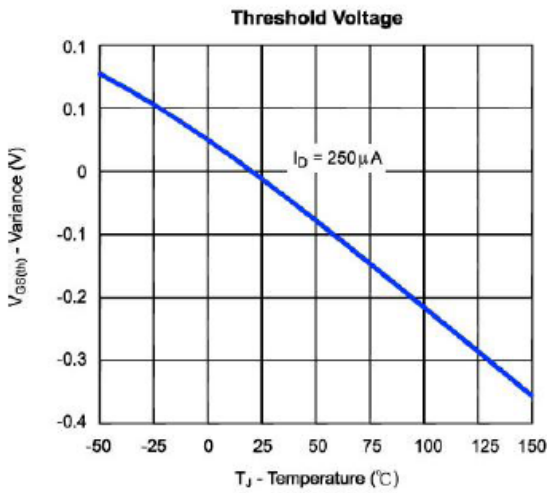
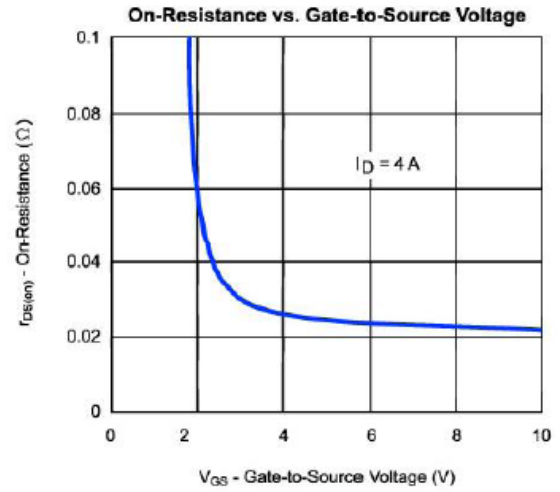
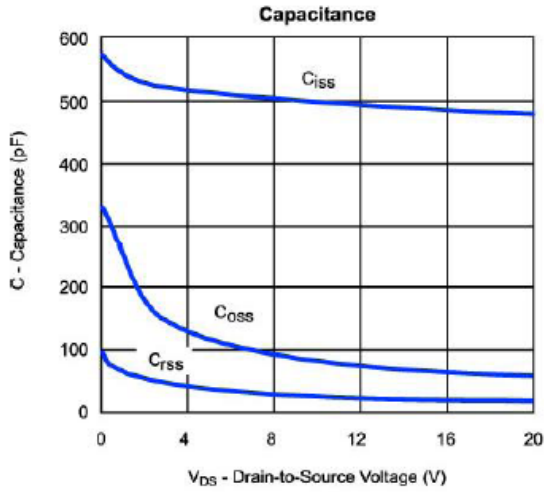
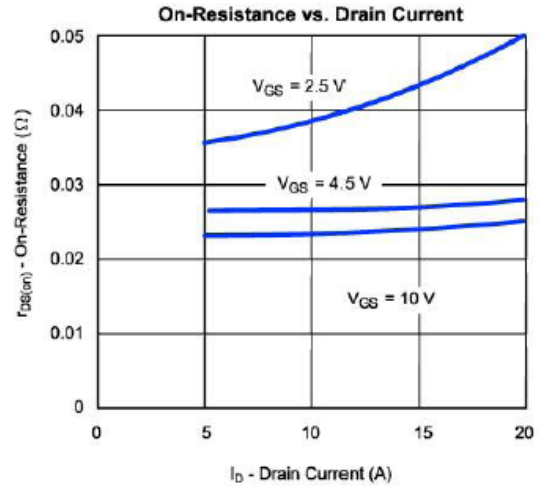
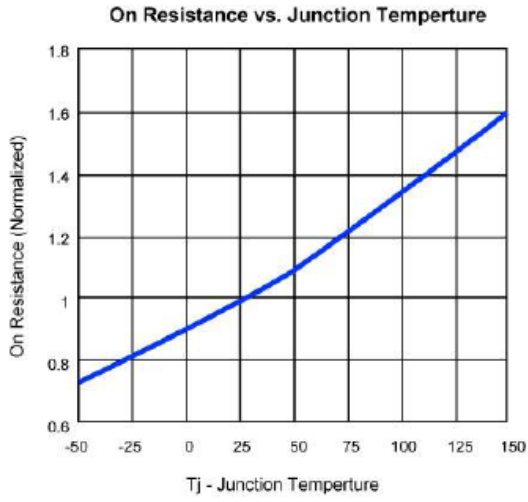
Parameter	Symbol	Limit	Units	
Drain-Source Voltage	V_{DSS}	30	V	
Gate-Source Voltage	V_{GSS}	± 12	V	
Continuous Drain Current ($t_J=150^\circ C$)	$T_A=25^\circ C$	I_D	5	A
	$T_A=70^\circ C$		4	
Pulsed Drain Current	I_{DM}	20	A	

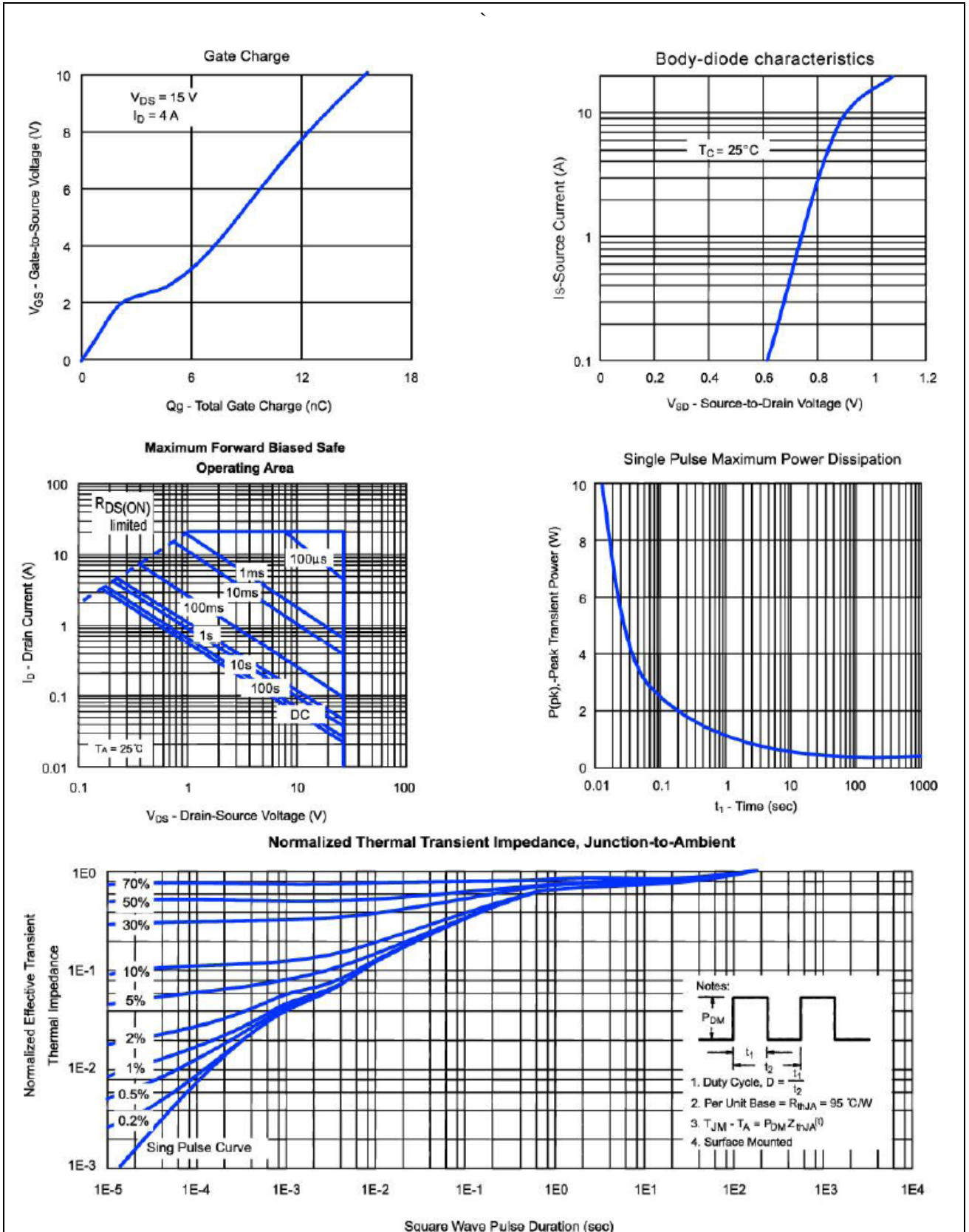
SE3406

Maximum Power Dissipation	TA=25°C	P _D	0.8	W
	TA=70°C		0.5	
Operating Junction Temperature		T _J	-55 to 150	°C
Thermal Resistance-Junction to Ambient*		R _{θJA}	95	°C

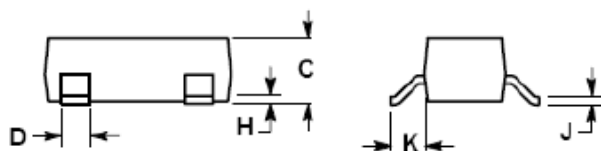
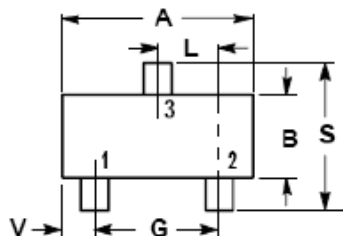
Electrical Characteristics (T _J =25°C unless otherwise noted)						
Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC PARAMETERS						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250μA	30			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250μA	0.7		1.4	
I _{GSS}	Gate-Body Leakage Current	V _{DS} =0V, V _{GS} =±12V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =30V, V _{GS} =0V			1	μA
R _{DS(ON)}	Drain-Source On-Resistance ^a	V _{GS} =10V, I _D = 4A		24	30	mΩ
		V _{GS} =4.5V, I _D = 3.5A		27	35	
		V _{GS} =2.5V, I _D = 2.8A		37	52	
V _{SD}	Diode Forward Voltage	I _S =1.25A, V _{GS} =0V		0.8	1.2	V
Dynamic PARAMETERS						
Qg	Total Gate Charge	V _{DS} =15V, V _{GS} =10V, I _D =4A		10.5	12	nC
Qgs	Gate-Source Charge			0.5		
Qgd	Gate-Drain Charge			3		
Rg	Gate Resistance	f=1MHz		0.7		Ω
Ciss	Input Capacitance	V _{DS} =15V, V _{GS} =0V, f=1MHZ		220	250	pF
Coss	Output Capacitance			95		
Crss	Reverse Transfer Capacitance			30		
td(on)	Turn-On Delay Time	V _{DD} =15V, R _L =15Ω, I _D =1A, V _{GEN} =10V, R _G =6Ω		8.5		
tr	Rise Time			17		
td(off)	Turn-Off Delay Time			31		
tf	Fall Time			3		

Typical Characteristics





SOT-23 Packaging Information



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

The SINO-IC logo is a registered trademark of ShangHai Sino-IC Microelectronics Co., Ltd.

© 2005 SINO-IC – Printed in China – All rights reserved.

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.com

Website: <http://www.sino-ic.com>