Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

SLA5037

N-channel

General purpose

External dimensions Ⓐ ··· SLA (12-pin)

Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V$_{DSS}$	100	V
V$_{GSS}$	±20	V
I$_D$	±10	A
I$_{D(pulse)}$	±40 (PW≤1ms)	A
E$_{AS}$*	200	mJ
P$_T$	5 (Ta=25°C, with all circuits operating, without heatsink)	W
	40 (Tc=25°C, with all circuits operating, with infinite heatsink)	W
θj-a	25 (Junction-Air, Ta=25°C, with all circuits operating)	°C/W
θj-c	3.13 (Junction-Case, Tc=25°C, with all circuits operating)	°C/W
V$_{ISO}$	1000 (Between fin and lead pin, AC)	Vrms
Tch	150	°C
Tstg	−40 to +150	°C

* : V$_{DD}$=25V, L=3mH, I$_D$=10A, unclamped, R$_G$=50Ω, see Fig. E on page 15.

■Equivalent circuit diagram

Electrical characteristics

(Ta=25°C)

Symbol	Specifications min	typ	max	Unit	Conditions
V$_{(BR)DSS}$	100			V	I$_D$=100μA, V$_{GS}$=0V
I$_{GSS}$			±100	nA	V$_{GS}$=±20V
I$_{DSS}$			100	μA	V$_{DS}$=100V, V$_{GS}$=0V
V$_{TH}$	1.0		2.0	V	V$_{DS}$=10V, I$_D$=250μA
Re(yfs)	8	13		S	V$_{DS}$=10V, I$_D$=5A
R$_{DS(ON)}$		60	80	mΩ	V$_{GS}$=10V, I$_D$=5A
		75	95	mΩ	V$_{GS}$=4V, I$_D$=5A
Ciss		1630		pF	V$_{DS}$=10V, f=1.0MHz,
Coss		480		pF	V$_{GS}$=0V
td(on)		30		ns	I$_D$=5A,
tr		45		ns	V$_{DD}$≒50V,
td(off)		100		ns	R$_L$=10Ω, V$_{GS}$=5V,
tf		40		ns	see Fig. 3 on page 16.
V$_{SD}$		1.1	1.5	V	I$_{SD}$=10A, V$_{GS}$=0V
trr		300		ns	I$_{SD}$=±100mA

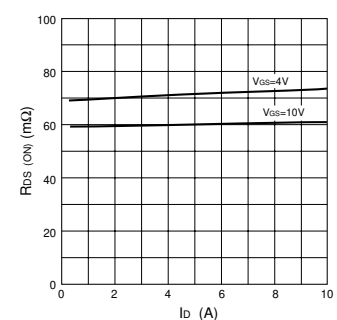## ━ Characteristic curves ━

I$_D$-V$_{DS}$ Characteristics (Typical)
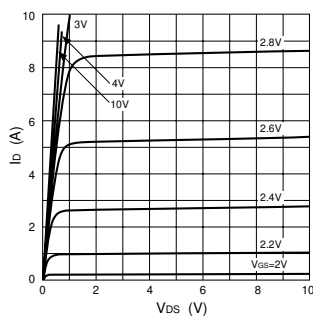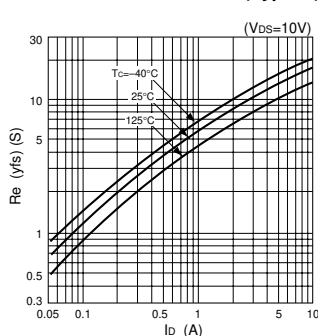

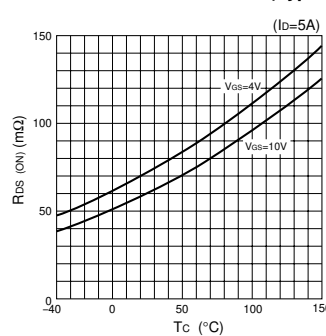### I$_D$-V$_{GS}$ Characteristics (Typical)
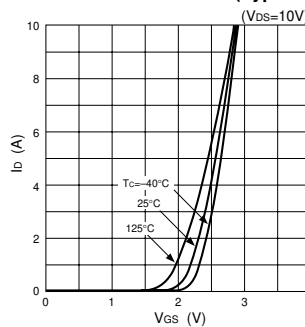
R$_{DS(ON)}$-I$_D$ Characteristics (Typical)
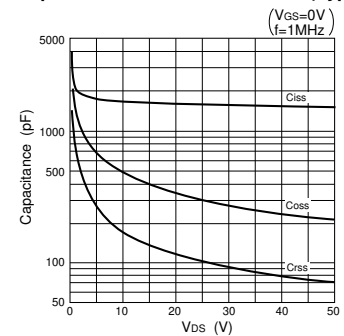

Re(yfs)-I$_D$ Characteristics (Typical)
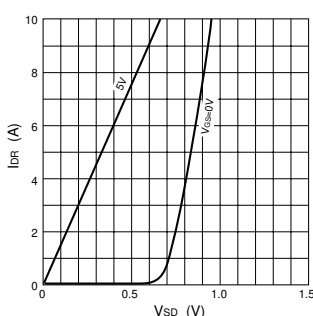

R$_{DS(ON)}$-T$_C$ Characteristics (Typical)

Capacitance-V$_{DS}$ Characteristics (Typical)
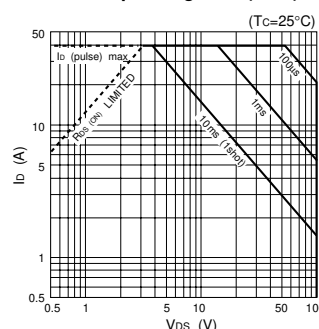

I$_{DR}$-V$_{SD}$ Characteristics (Typical)

Safe Operating Area (SOA)

P$_T$-T$_a$ Characteristics