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

1.TYPE US6J2

2.STRUCTURE SILICON P-CHANNEL MOS FET

3.APPLICATIONS SWITCHING

4.ABSOLUTE MAXIMUM RATINGS [Ta=25°C]
《 IT IS THE SAME RATINGS FOR THE Tr1 AND Tr2. 》

DRAIN-SOURCE VOLTAGE V_{DSS} ・・・ -20V

GATE-SOURCE VOLTAGE V_{GSS} ・・・ ± 12V

DRAIN CURRENT CONTINUOUS I_D ・・・ ± 1A

PULSED I_{DP} ・・・ ± 4A PW ≦ 10μs DUTY CYCLE ≦ 1%

SOURCE CURRENT (BODY DIODE) CONTINUOUS I_S ・・・ -0.4A

PULSED I_{SP} ・・・ -4A PW ≦ 10μs DUTY CYCLE ≦ 1%

TOTAL POWER DISSIPATION P_D ・・・ 1.0W / TOTAL
0.7W / ELEMENT
MOUNTED ON A CERAMIC BOARD

CHANNEL TEMPERATURE T_{ch} ・・・ 150°C

RANGE OF STRAGE TEMPERATURE T_{stg} ・・・ − 55 ~ 150°C

5.THERMAL RESISTANCE

CHANNEL TO AMBIENT $R_{th(ch-a)}$ ・・・ 125°C/W / TOTAL
179℃/W / ELEMENT
MOUNTED ON A CERAMIC BOARD

6.ELECTRICAL CHARACTERISTICS [Ta=25°C]

《 IT IS THE SAME CHARACTERISTICS FOR THE Tr1 AND Tr2 》

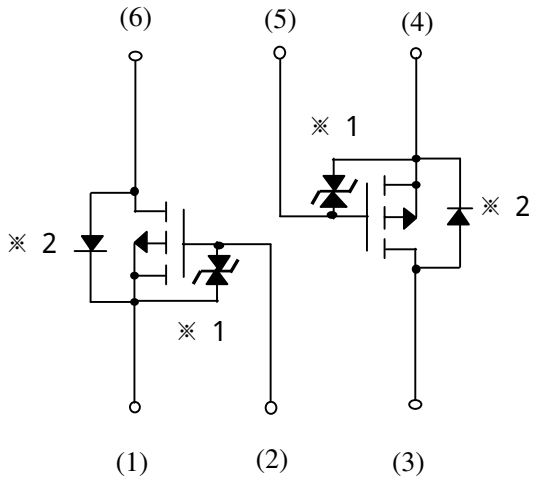
PARAMETER	ITEM	CONDITION	MIN.	TYP.	MAX.
GATE-SOURCE LEAKAGE	I_{GSS}	V_{GS}=± 12V/V_{DS}=0V	-	-	±10μA
DRAIN-SOURCE BREAKDOWN VOLTAGE	$V_{(BR)DSS}$	I_D=-1mA/V_{GS}=0V	-20V	-	-
ZERO GATE VOLTAGE DRAIN CURRENT	I_{DSS}	V_{DS}=-20V/V_{GS}=0V	-	-	-1μA
GATE THRESHOLD VOLTAGE	$V_{GS(th)}$	V_{DS}=-10V/I_D=-1mA	-0.7V	-	-2.0V
STATIC DRAIN-SOURCE ON-STATE RESISTANCE	$R_{DS(on)}$ * PULSED	I_D=-1A/V_{GS}=-4.5V	-	280mΩ	390mΩ
		I_D=-1A/V_{GS}=-4V	-	310mΩ	430mΩ
		I_D=-0.5A/V_{GS}=-2.5V	-	570mΩ	800mΩ
FORWARD TRANSFER ADMITTANCE	$\|Y_{fs}\|$ * PULSED	V_{DS}=-10V/I_D=-0.5A	0.7S	-	-
INPUT CAPACITANCE	C_{iss}	V_{DS}=-10V V_{GS}=0V f=1MHz	-	150pF	-
OUTPUT CAPACITANCE	C_{oss}		-	20pF	-
REVERSE TRANSFER CAPACITANCE	C_{rss}		-	20pF	-
TURN-ON DELAY TIME	$t_{d(on)}$ * PULSED	I_D=-0.5A V_{DD} ≒ -15V V_{GS}=-4.5V R_L ≒ 30Ω/R_G=10Ω see Fig. 1-1,1-2	-	9ns	-
RISE TIME	t_r * PULSED		-	8ns	-
TURN-OFF DELAY TIME	$t_{d(off)}$ * PULSED		-	25ns	-
FALL TIME	t_f *PULSED		-	10ns	-
TOTAL GATE CHARGE	Q_g *PULSED	V_{DD} ≒ -15V V_{GS}=-4.5V I_D=-1A R_L ≒ 15Ω/R_G=10Ω see Fig. 2-1,2-2	-	2.1nC	-
GATE-SOURCE CHARGE	Q_{gs} *PULSED		-	0.5nC	-
GATE-DRAIN CHARGE	Q_{gd} *PULSED		-	0.5nC	-

BODY DIODE (SOURCE-DRAIN)

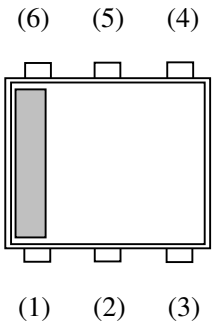
《 IT IS THE SAME CHARACTERISTICS FOR THE Tr1 AND Tr2 》

PARAMETER	ITEM	CONDITION	MIN.	TYP.	MAX.
FORWARD VOLTAGE	V_{SD}	I_S=-0.4A / V_{GS}=0V	-	-	-1.2V

7.INNER CIRCUIT

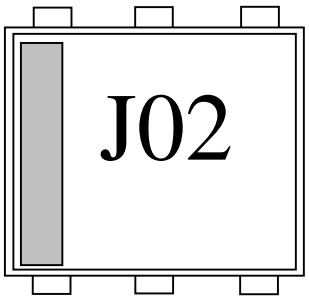


(1) Tr1 SOURCE
(2) Tr1 GATE
(3) Tr2 DRAIN
(4) Tr2 SOURCE
(5) Tr2 GATE
(6) Tr1 DRAIN



※ 1 ESD PROTECTION DIODE
※ 2 BODY DIODE

8. MARKING



"J02"MEANS US6J2.

9.MEASUREMENT CIRCUIT

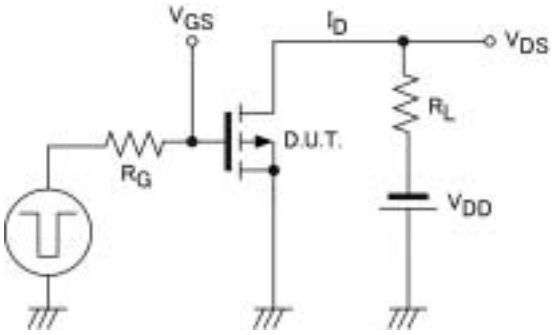


Fig.1-1 SWITCHING TIME MEASUREMENT CIRCUIT

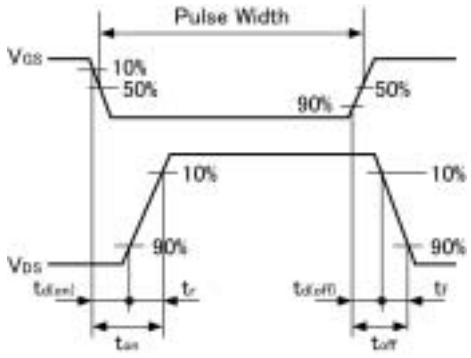


Fig.1-2 SWITCHING WAVEFORMS

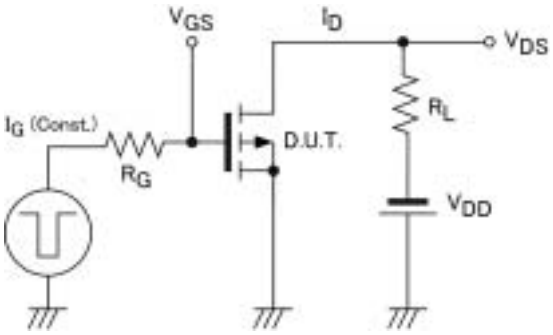


Fig.2-1 GATE CHARGE MASUREMENT CIRCUIT

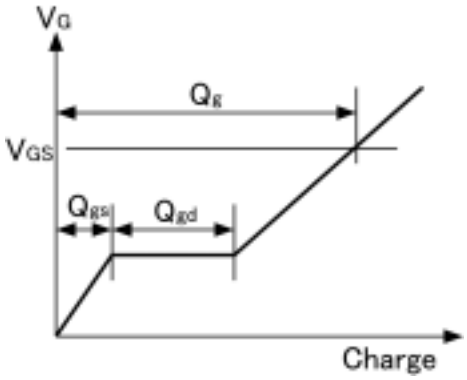


Fig.2-2 GATE CHARGE WAVEFORM