

CHANNEL TO AMBIENT	$R_{th(ch-a)}$	• • •	100°C/W/TOTAL 139°C/W/ELEMENT MOUNTED ON A CERAMIC BOARD
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TSZ22111.03

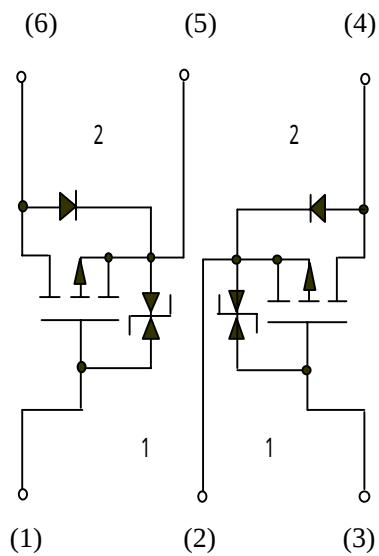
6.ELECTRICAL CHARACTERISTICS [Ta=25°C]
《 MOSFET 》

PARAMETER	ITEM	CONDITION	MIN.	TYP.	MAX.
GATE-SOURCE LEAKAGE	I_{GSS}	$V_{GS} = \pm 12V/V_{DS} = 0V$	-	-	$\pm 10\mu A$
DRAIN-SOURCE BREAKDOWN VOLTAGE	$V_{(BR)DSS}$	$I_D = -1mA/V_{GS} = 0V$	-20V	-	-
ZERO GATE VOLTAGE DRAIN CURRENT	I_{DSS}	$V_{DS} = -20V/V_{GS} = 0V$	-	-	-1 μA
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	$I_D = -1.5A/V_{GS} = -4.5V$	-	155m Ω	215m Ω
		$I_D = -1.5A/V_{GS} = -4V$	-	170m Ω	235m Ω
		$I_D = -0.75A/V_{GS} = -2.5V$	-	310m Ω	430m Ω
FORWARD TRANSFER ADMITTANCE	$ Y_{fs} $ * PULSED	$V_{DS} = -10V/I_D = -0.75A$	1.0S	-	-
INPUT CAPACITANCE	C_{iss}	$V_{DS} = -10V$ $V_{GS} = 0V$ $f = 1MHz$	-	270pF	-
OUTPUT CAPACITANCE	C_{oss}		-	40pF	-
REVERSE TRANSFER CAPACITANCE	C_{rss}		-	35pF	-
TURN-ON DELAY TIME	$t_{d(on)}$ * PULSED	$I_D = -0.75A$ $V_{DD} = -15V$ $V_{GS} = -4.5V$ $R_L = 20\Omega/R_G = 10\Omega$ see Fig.1-1,1-2	-	10ns	-
RISE TIME	t_r * PULSED		-	12ns	-
TURN-OFF DELAY TIME	$t_{d(off)}$ * PULSED		-	45ns	-
FALL TIME	t_f * PULSED		-	20ns	-
TOTAL GATE CHARGE	Q_g * PULSED	$V_{DD} = -15V$ $V_{GS} = -4.5V$ $I_D = -1.5A$ $R_L = 10\Omega/R_G = 10\Omega$ see Fig.2-1,2-2	-	3.0nC	-
GATE-SOURCE CHARGE	Q_{gs} * PULSED		-	0.8nC	-
GATE-DRAIN CHARGE	Q_{gd} * PULSED		-	0.85nC	-

《 MOSFET 》 BODY DIODE (SOURCE-DRAIN)

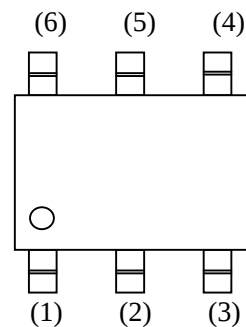
PARAMETER	ITEM	CONDITION	MIN.	TYP.	MAX.
FORWARD VOLTAGE	V_{SD}	$I_S = -0.75A/V_{GS} = 0V$	-	-	-1.2V

7. INNER CIRCUIT

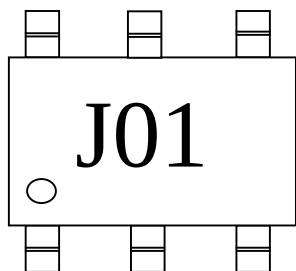


- 1 ESD PROTECTION DIODE
- 2 BODY DIODE

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



8. MARKING



“ J01 ”MEANS QS6J1.

9.MEASUREMENT CIRCUIT

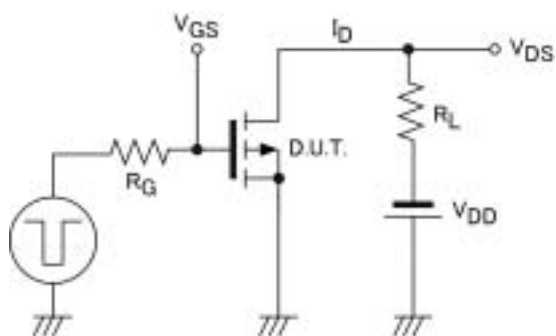


Fig.1-1 SWITCHING TIME MEASUREMENT CIRCUIT

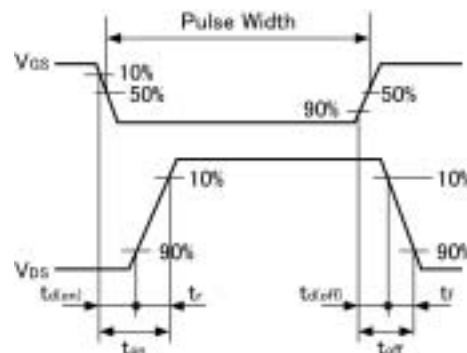


Fig.1-2 SWITCHING WAVEFORMS

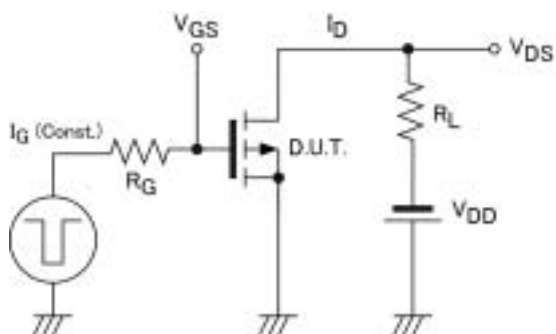


Fig.2-1 GATE CHARGE MASUREMENT CIRCUIT

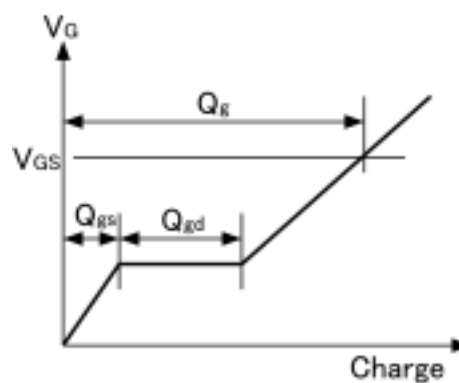


Fig.2-2 GATE CHARGE WAVEFORM