



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!



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1. TYPE RTU002P02

2. STRUCTURE SILICON P-CHANNEL MOS FET

3. APPLICATIONS SWITCHING

4. ABSOLUTE MAXIMUM RATINGS [Ta=25°C]

DRAIN-SOURCE VOLTAGE V<sub>DSS</sub> . . . -20VGATE-SOURCE VOLTAGE V<sub>GSS</sub> . . . ± 12VDRAIN CURRENT CONTINUOUS I<sub>D</sub> . . . ± 0.25APULSED I<sub>DP</sub> . . . ± 0.5A PW ≤ 10μs DUTY CYCLE ≤ 1%TOTAL POWER DISSIPATION P<sub>D</sub> . . . 0.2W EACH TERMINAL MOUNTED  
ON A RECOMMENDED LANDCHANNEL TEMPERATURE T<sub>ch</sub> . . . 150°CRANGE OF STORAGE TEMPERATURE T<sub>stg</sub> . . . -55 ~ 150°C

5. THERMAL RESISTANCE

CHANNEL TO AMBIENT R<sub>th(ch-a)</sub> . . . 625°C/W EACH TERMINAL MOUNTED  
ON A RECOMMENDED LAND

DESIGN

CHECK

APPROVAL

DATE : 27/JAN/2003

SPECIFICATION No. TSQ03025H-126

REV. : 0

**ROHM CO., LTD.**

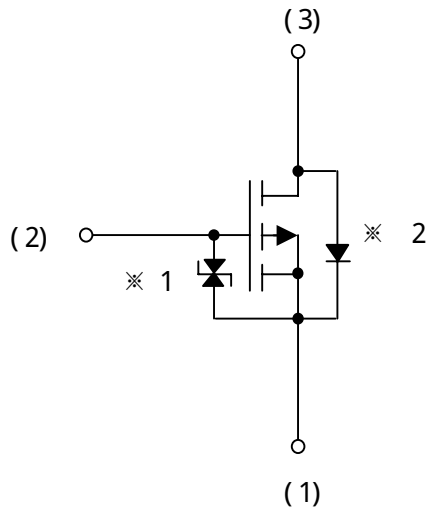
## 6. ELECTRICAL CHARACTERISTICS [Ta=25°C]

PARAMETER	ITEM	CONDITION	MIN	TYP.	MAX.
GATE-SOURCE LEAKAGE	I <sub>GSS</sub>	V <sub>GS</sub> =± 12V / V <sub>DS</sub> =0V	-	-	± 10μ A
DRAIN-SOURCE BREAKDOWN VOLTAGE	V(BR) <sub>DSS</sub>	I <sub>D</sub> =- 1mA / V <sub>GS</sub> =0V	- 20V	-	-
ZERO GATE VOLTAGE DRAIN CURRENT	I <sub>DSS</sub>	V <sub>DS</sub> =- 20V / V <sub>GS</sub> =0V	-	-	- 1μ A
GATE THRESHOLD VOLTAGE	V <sub>GS(th)</sub>	V <sub>DS</sub> =- 10V / I <sub>D</sub> =- 1mA	- 0.7V	-	- 2.0V
STATIC DRAIN-SOURCE ON-STATE RESISTANCE	R <sub>DS(on)</sub> * PULSED	I <sub>D</sub> =- 0.25A V <sub>GS</sub> =- 4.5V	-	1.0Ω	1.5Ω
		I <sub>D</sub> =- 0.25A V <sub>GS</sub> =- 4.0V	-	1.1Ω	1.6Ω
		I <sub>D</sub> =- 0.15A V <sub>GS</sub> =- 2.5V	-	2.0Ω	3.0Ω
FORWARD TRANSFER ADMITTANCE	Y <sub>fs</sub>   * PULSED	V <sub>DS</sub> =- 10V I <sub>D</sub> =- 0.15A	0.2S	-	-
INPUT CAPACITANCE	C <sub>iss</sub>	V <sub>DS</sub> =- 10V / V <sub>GS</sub> =0V f=1MHz	-	50pF	-
OUTPUT CAPACITANCE	C <sub>oss</sub>		-	5pF	-
REVERSE TRANSFER CAPACITANCE	C <sub>rss</sub>		-	5pF	-
TURN-ON DELAY TIME	t <sub>d(on)</sub> * PULSED	I <sub>D</sub> =- 0.15A V <sub>DD</sub> ≐ - 15V V <sub>GS</sub> =- 4.5V R <sub>L</sub> ≐ 100Ω R <sub>GS</sub> =10Ω	-	9ns	-
RISE TIME	t <sub>r</sub> * PULSED		-	6ns	-
TURN-OFF DELAY TIME	t <sub>d(off)</sub> * PULSED		-	35ns	-
FALL TIME	t <sub>f</sub> * PULSED		-	45ns	-

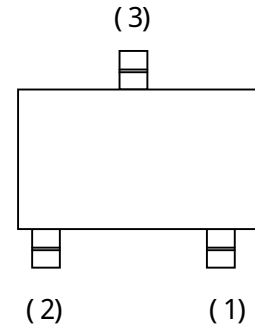
## BODY DIODE CHARACTERISTICS (SOURCE-DRAIN CHARACTERISTICS) [Ta=25°C]

PARAMETER	ITEM	CONDITION	MIN	TYP.	MAX.
FORWARD VOLTAGE	V <sub>SD</sub>	I <sub>S</sub> =- 0.1A / V <sub>GS</sub> =0V	-	-	- 1.2V

## 7. INNER CIRCUIT

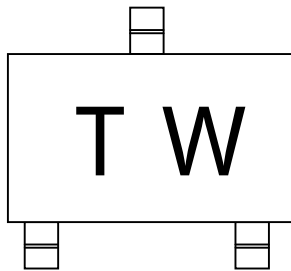


(1) SOURCE  
(2) GATE  
(3) DRAIN



- ※ 1 ESD PROTECTION DIODE  
※ 2 BODY DIODE

## 8. MARKING



" TW MEANS RTU002P02.