

این دیتاشیت توسط توکل الکترونیک تهیه و ارائه شده است.
جهت مشاهده قیمت، موجودی و ثبت سفارش این قطعه به وبسایت توکل الکترونیک مراجعه فرمایید.

**مشاهده قیمت و خرید**

برای خرید و مشاهده سایر محصولات کلیک کنید

**RENESAS**

2SK3446

Silicon N Channel Power MOS FET
Power Switching

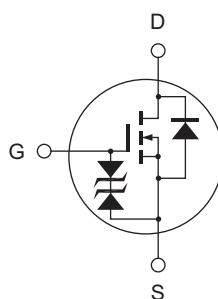
REJ03G1100-0800
(Previous: ADE-208-1566F)
Rev.8.00
Sep 07, 2005

Features

- Capable of 2.5 V gate drive
- Low drive current
- Low on-resistance
 $R_{DS(on)} = 1.5 \Omega$ typ. (at $V_{GS} = 4 V$)

Outline

RENESAS Package code: PRSS0003DC-A
(Package name: TO-92MOD)



1. Source
2. Drain
3. Gate

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Drain to source voltage	V_{DSS}	150	V
Gate to source voltage	V_{GSS}	± 10	V
Drain current	I_D	1	A
Drain peak current	$I_{D(pulse)}$ ^{Note 1}	4	A
Body-drain diode reverse drain current	I_{DR}	1	A
Channel dissipation	P_{ch} ^{Note 2}	0.9	W
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Notes: 1. $PW \leq 10 \mu s$, duty cycle $\leq 1\%$

2. Value at Ta = 25°C

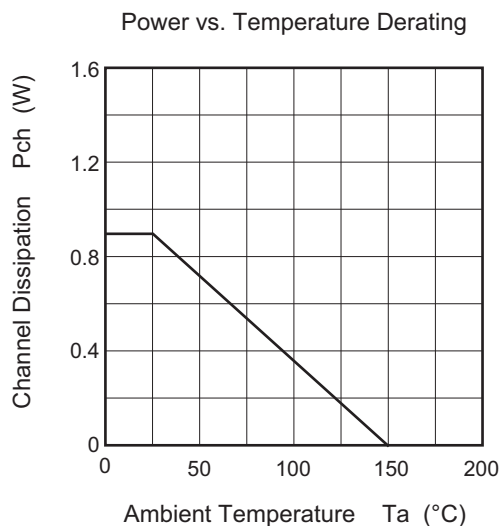
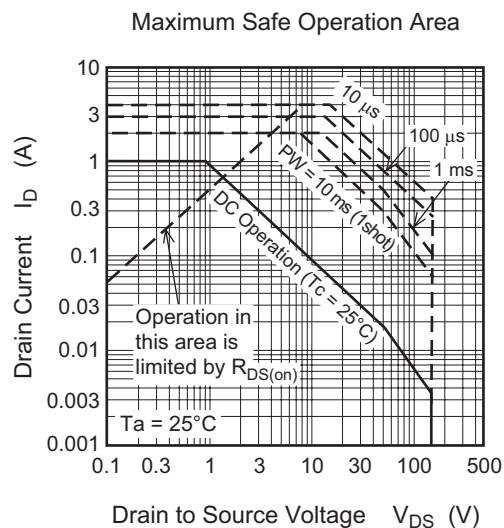
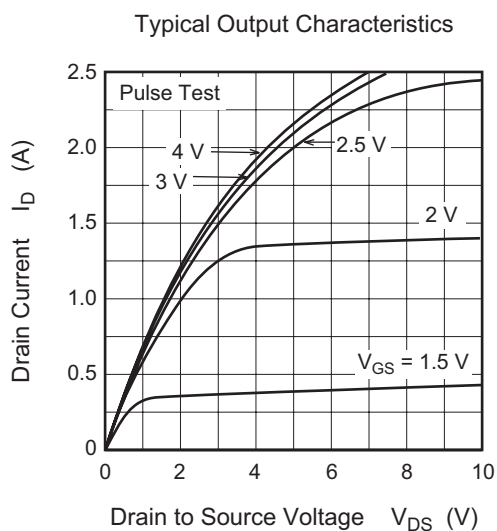
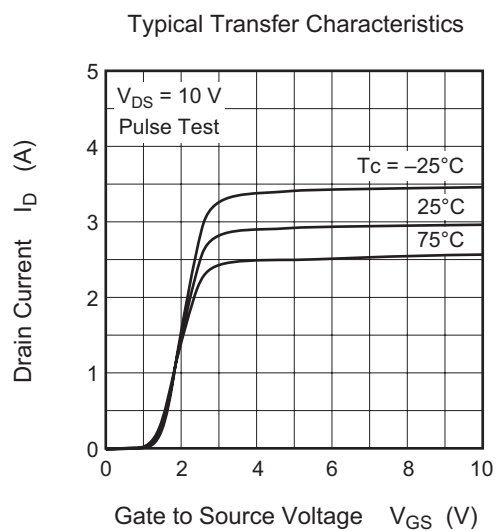
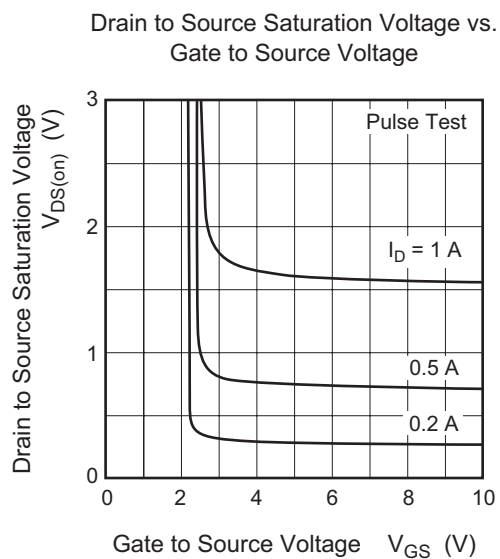
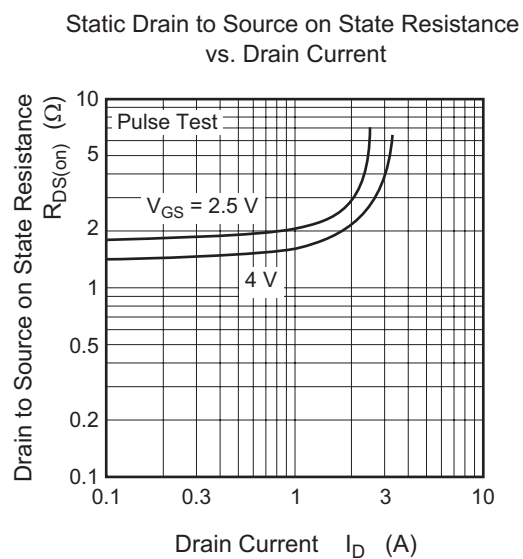
Electrical Characteristics

(Ta = 25°C)

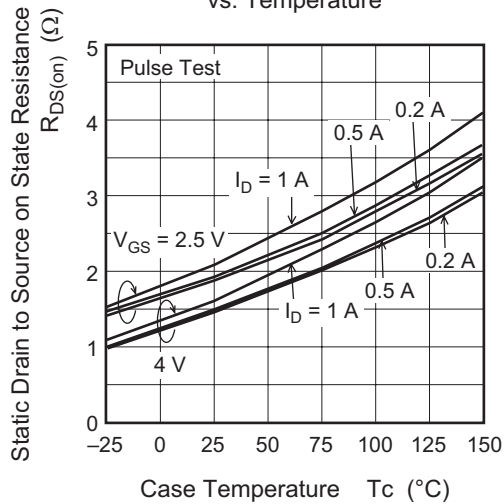
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	150	—	—	V	$I_D = 10 \text{ mA}$, $V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	± 10	—	—	V	$I_G = \pm 100 \mu A$, $V_{DS} = 0$
Gate to source leak current	I_{GSS}	—	—	± 10	μA	$V_{GS} = \pm 8 \text{ V}$, $V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	1	μA	$V_{DS} = 150 \text{ V}$, $V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	0.5	—	1.5	V	$V_{DS} = 10 \text{ V}$, $I_D = 1 \text{ mA}$
Static drain to source on state resistance	$R_{DS(on)}$	—	1.5	1.95	Ω	$I_D = 0.5 \text{ A}$, $V_{GS} = 4 \text{ V}$ ^{Note 3}
	$R_{DS(on)}$	—	1.9	2.5	Ω	$I_D = 0.5 \text{ A}$, $V_{GS} = 2.5 \text{ V}$ ^{Note 3}
Forward transfer admittance	$ y_{fs} $	0.8	1.4	—	S	$I_D = 0.5 \text{ A}$, $V_{DS} = 10 \text{ V}$ ^{Note 3}
Input capacitance	C_{iss}	—	98	—	pF	$V_{DS} = 10 \text{ V}$ $V_{GS} = 0$ $f = 1 \text{ MHz}$
Output capacitance	C_{oss}	—	31	—	pF	
Reverse transfer capacitance	C_{rss}	—	14	—	pF	
Total gate charge	Q_g	—	3.5	—	nC	$V_{DD} = 100 \text{ V}$ $V_{GS} = 4 \text{ V}$ $I_D = 1 \text{ A}$
Gate to source charge	Q_{gs}	—	0.5	—	nC	
Gate to drain charge	Q_{gd}	—	1.8	—	nC	
Turn-on delay time	$t_{d(on)}$	—	8	—	ns	$V_{GS} = 4 \text{ V}$ $I_D = 0.5 \text{ A}$ $R_L = 60 \Omega$
Rise time	t_r	—	12	—	ns	
Turn-off delay time	$t_{d(off)}$	—	34	—	ns	
Fall time	t_f	—	19	—	ns	
Body-drain diode forward voltage	V_{DF}	—	1.0	1.5	V	$I_F = 1 \text{ A}$, $V_{GS} = 0$
Body-drain diode reverse recovery time	t_{rr}	—	60	—	ns	$I_F = 1 \text{ A}$, $V_{GS} = 0$ $di_F/dt = 100 \text{ A}/\mu s$

Note: 3. Pulse test

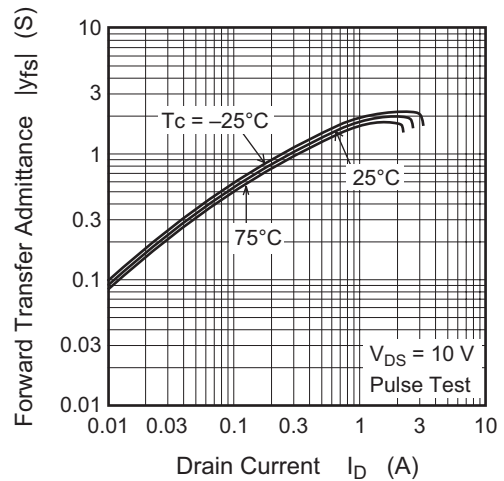
Main Characteristics



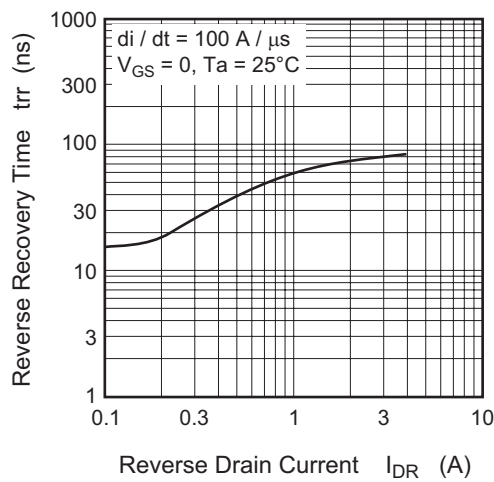
Static Drain to Source on State Resistance
vs. Temperature



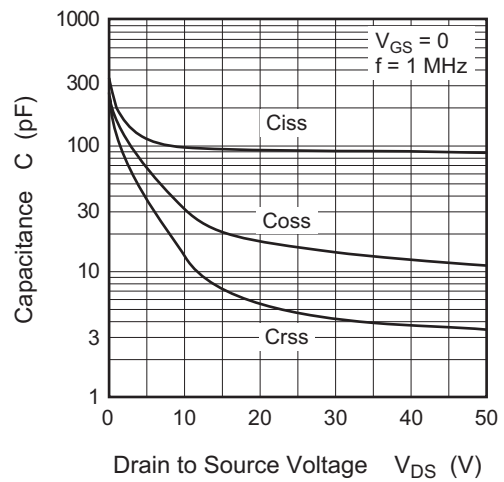
Forward Transfer Admittance vs.
Drain Current



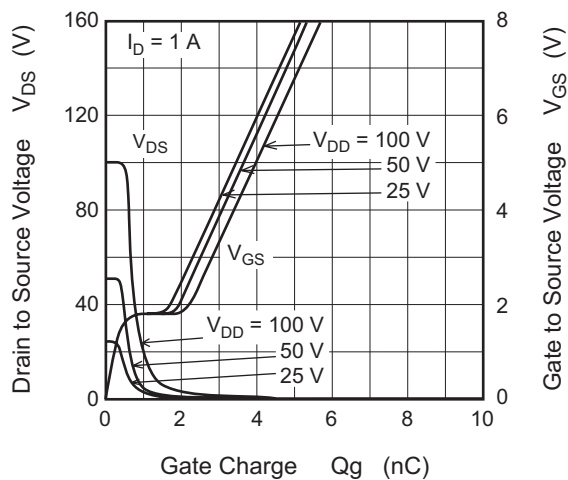
Body-Drain Diode Reverse
Recovery Time



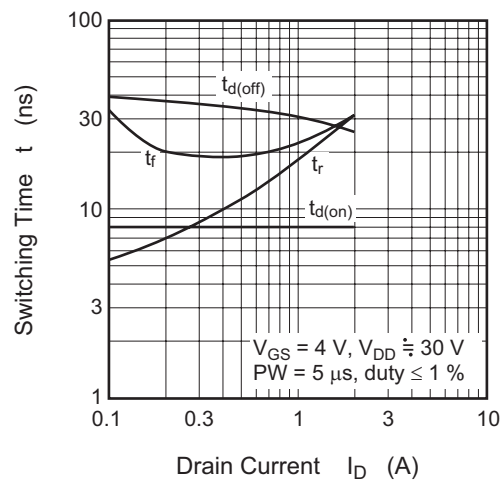
Typical Capacitance vs.
Drain to Source Voltage

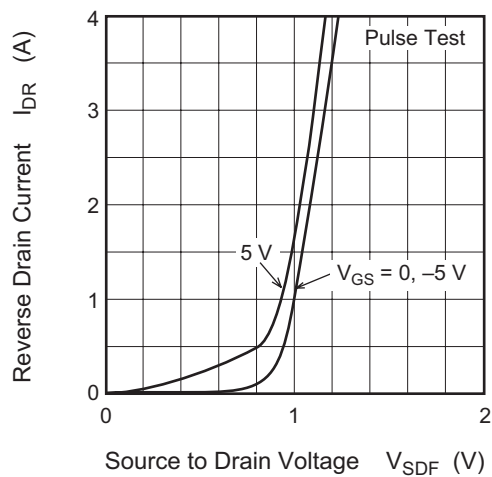
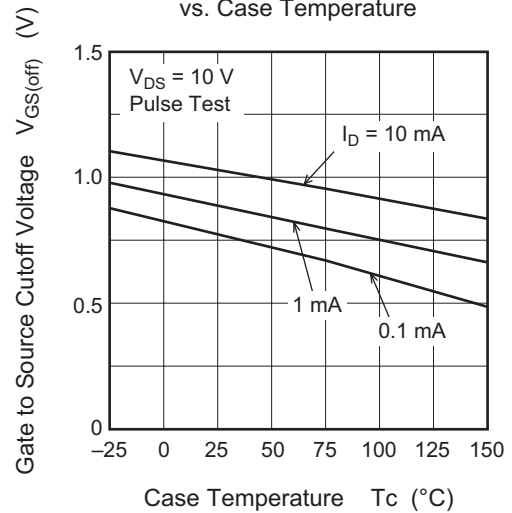


Dynamic Input Characteristics

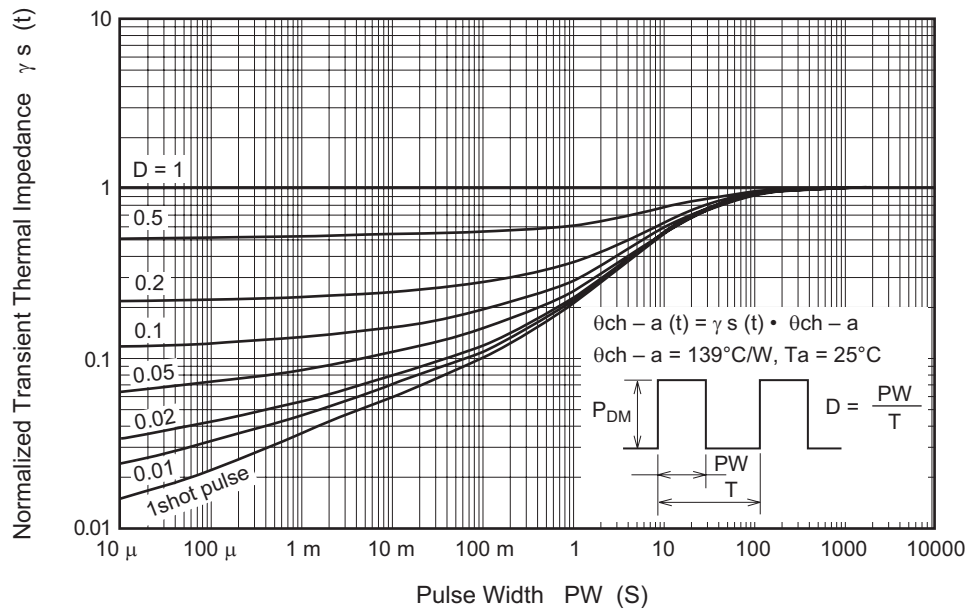


Switching Characteristics

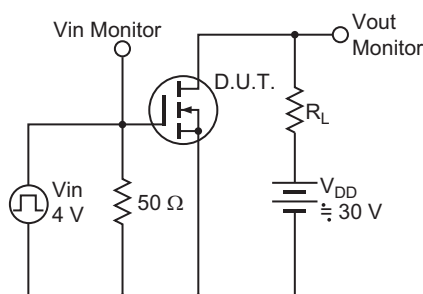


Reverse Drain Current vs.
Source to Drain VoltageGate to Source Cutoff Voltage
vs. Case Temperature

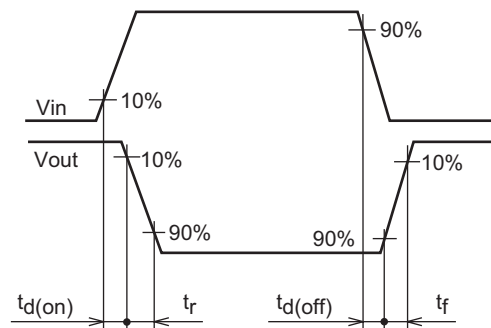
Normalized Transient Thermal Impedance vs. Pulse Width



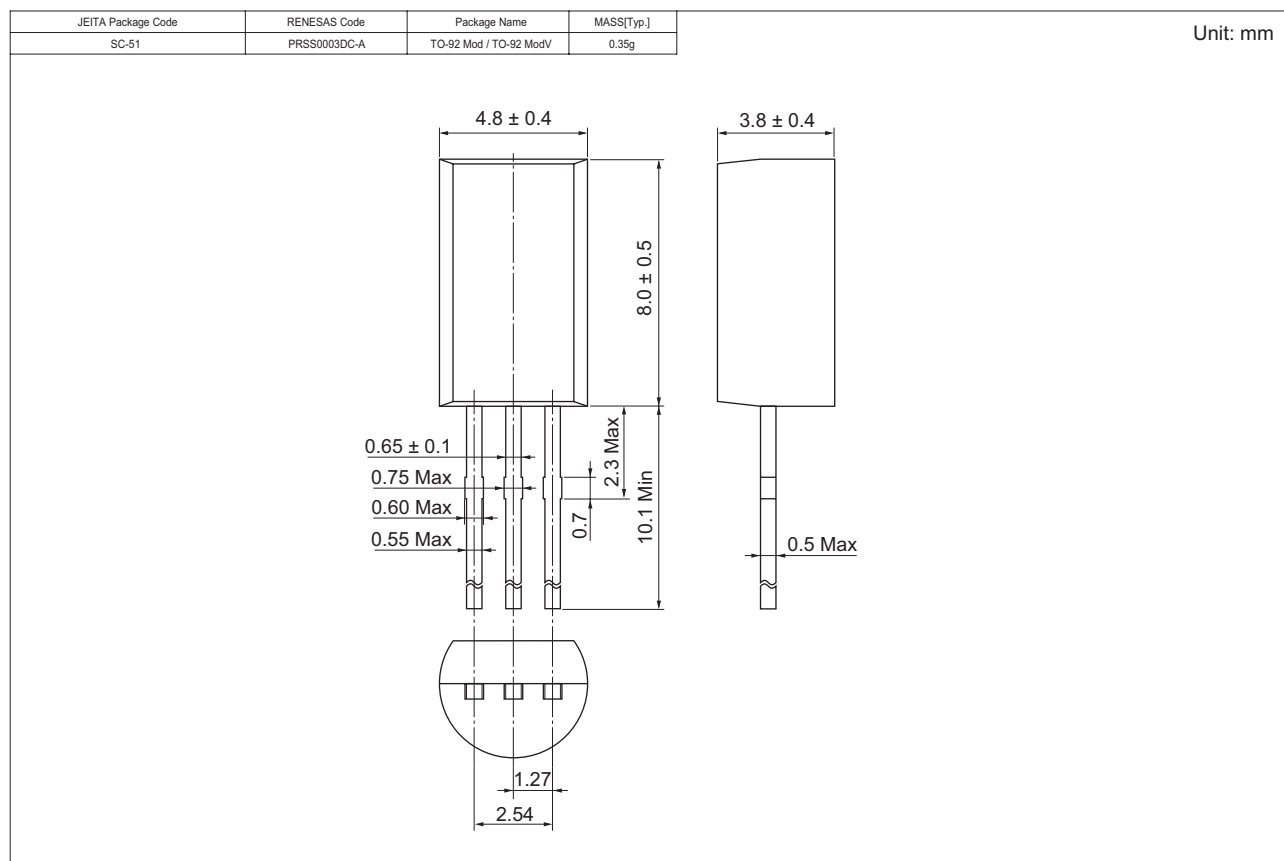
Switching Time Test Circuit



Waveform



Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SK3446TZ-E	2500 pcs	Hold box, Radial taping

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450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.

7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.

10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.

Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd.

Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> 2-796-3115, Fax: <82> 2-796-2145

Renesas Technology Malaysia Sdn. Bhd.

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510