

Compact IGBT Modules & Compact IPM

NEW PRODUCT GUIDE

Compact IGBT Modules

Features

- The new package technology achieved small and compact size.
- The new generation IGBT and FRD chips achieved low loss and low emission noise.
- Fault-signal output circuit (short circuit and overtemperature) is included.
- UL recognized: File No. E87989 (Package A, B', C, D type)

Applications

- Inverters
- Servo
- UPS
- Elevators, etc.

Compact IGBT Series

Item	Rating		Circuit	Package	Product No.	Function						
	Voltage	Current				OC	SC	UV	OT	Tc-M	H-Fo	L-Fo
IGBT	600 V	150 A	7 in 1	A	MG150J7KS60	-	-	-	-	●	-	-
		200 A	6 in 1	B'	MG200J6ES60	-	-	-	-	●	-	-
		400 A	2 in 1	D	MG400J2YS60A	-	-	-	(#)	-	●	●
		600 A			MG600J2YS60A	-	-	-	(#)	-	●	●
		800 A		E	*MG800J2YS50A	-	-	-	-	●	-	-
	1200 V	200 A	2 in 1	D	MG200Q2YS60A	-	-	-	(#)	-	●	●
		300 A			MG300Q2YS60A	-	-	-	(#)	-	●	●
		400 A			MG400Q2YS60A	-	-	-	(#)	-	●	●
		600 A		E	*MG600Q2YS60A	-	-	-	-	●	-	-
	1700 V	400 A	2 in 1	E	*MG400V2YS60A	-	-	-	-	●	-	-

OC : Overcurrent protection

OT : Overtemperature protection

L-Fo : Low-side error output

SC : Short-circuit protection

Tc-M: Cu-base temperature detector

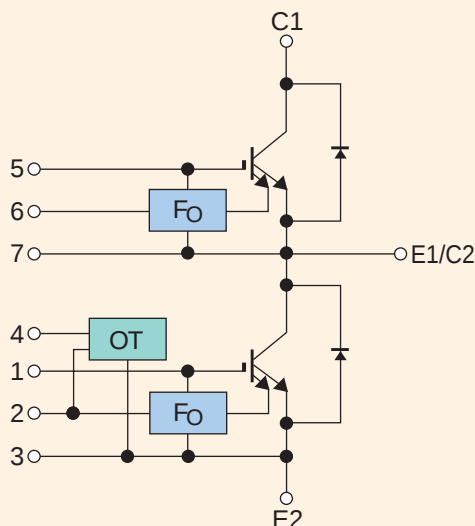
(#):Low-side error output without protection

UV : Low supply voltage protection

H-Fo : High-side error output

*: Under approval for UL recognition

Equivalent Circuit (2 in 1 & Package D type)



Signal terminal

- | | | | |
|----------|-----------|----------|---------|
| 1. G (L) | 2. FO (L) | 3. E (L) | 4. VD |
| 5. G (H) | 6. FO (H) | 7. E (H) | 8. Open |

Compact IPM

Features

- The new package technology achieved small and compact size.
- The new generation IGBT and FRD chips achieved low loss and low emission noise.
- 50 A to 600 A for 600 V rating , 50 A to 400 A for 1200 V rating.
- UL recognized: File No. E87989

Applications

- Inverters
- Servo
- UPS
- Elevators, etc.

■ Compact IPM Series

Item	Rating		Circuit	Package	Product No.	Function						
	Voltage	Current				OC	SC	UV	OT	Tc-M	H-Fo	L-Fo
IPM	600 V	50 A	7 in 1	A	MIG50J7CSB1W	●	●	●	●	—	●	●
		75 A			MIG75J7CSB1W	●	●	●	●	—	●	●
		100 A			MIG100J7CSB1W	●	●	●	●	—	●	●
		150 A			MIG150J7CSB1W	●	●	●	●	—	●	●
		200 A	6 in 1	B	MIG200J6CMB1W	●	●	●	●	—	●	●
		300 A			MIG300J2CSB1W	●	●	●	●	—	●	●
		400 A	2 in 1	C	MIG400J2CSB1W	●	●	●	●	—	●	●
		600 A			MIG600J2CMB1W	●	●	●	●	—	●	●
	1200 V	50 A	7 in 1	A	MIG50Q7CSB1X	●	●	●	●	—	●	●
		75 A			MIG75Q7CSB1X	●	●	●	●	—	●	●
		100 A			MIG100Q6CMB1X	●	●	●	●	—	●	●
		150 A	6 in 1	B	MIG150Q6CMB1X	●	●	●	●	—	●	●
		200 A			MIG200Q2CSB1X	●	●	●	●	—	●	●
		300 A	2 in 1	D	MIG300Q2CMB1X	●	●	●	●	—	●	●
		400 A			MIG400Q2CMB1X	●	●	●	●	—	●	●

OC : Overcurrent protection

SC : Short-circuit protection

UV : Low supply voltage protection

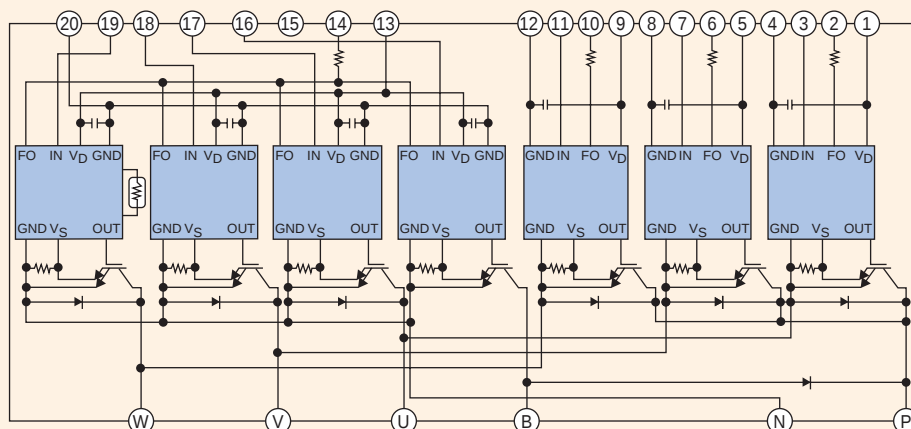
OT : Overtemperature protection

Tc-M: Cu-Base temperature detector

H-Fo : High-side error output

L-Fo : Low-side error output

■ Equivalent Circuit (7 in 1 type)

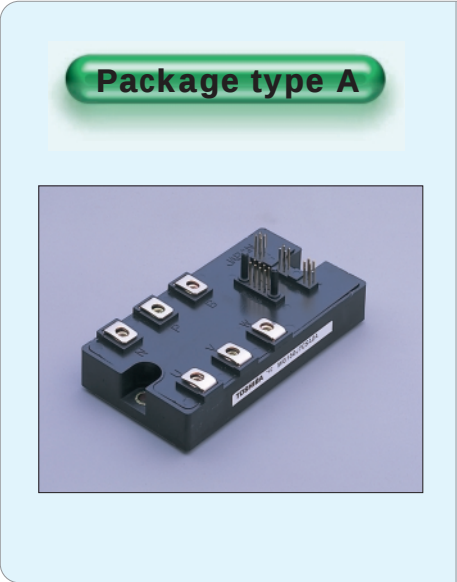
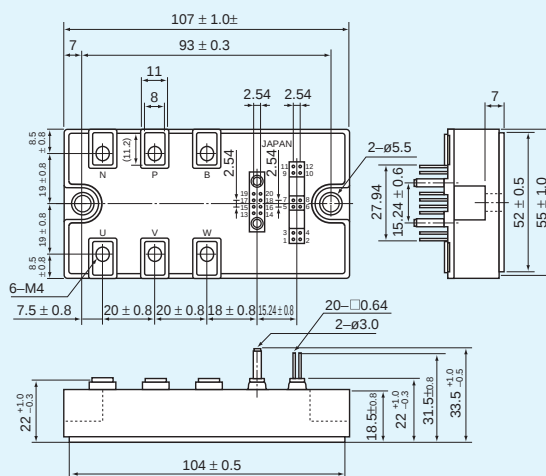


Signal terminal

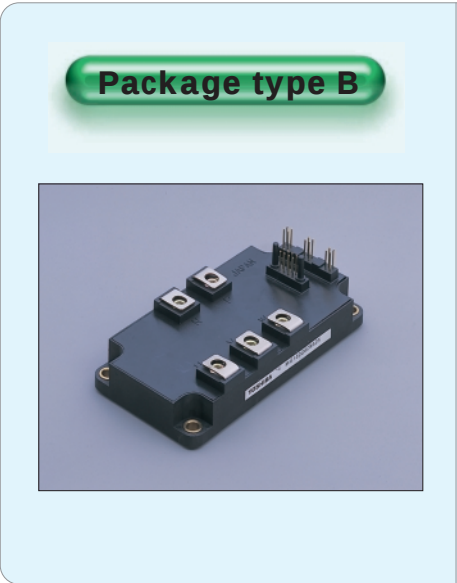
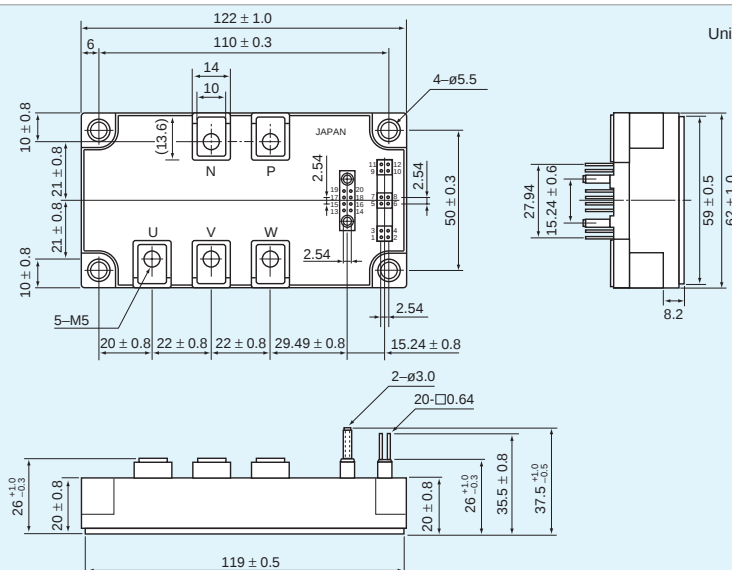
- | | | |
|---------------|--------------|--------------|
| 1. V_D (U) | 2. FO (U) | 3. IN (U) |
| 4. GND (U) | 5. V_D (V) | 6. FO (V) |
| 7. IN (V) | 8. GND (V) | 9. V_D (W) |
| 10. FO (W) | 11. IN (W) | 12. GND (W) |
| 13. V_D (L) | 14. FO (L) | 15. Open |
| 16. IN (B) | 17. IN (X) | 18. IN (Y) |
| 19. IN (Z) | 20. GND (L) | |

Package Dimensions

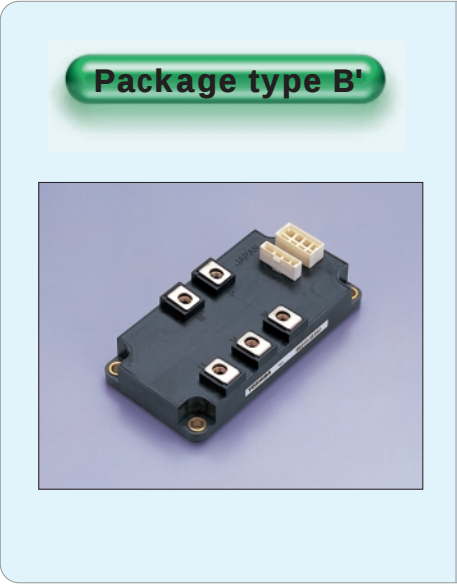
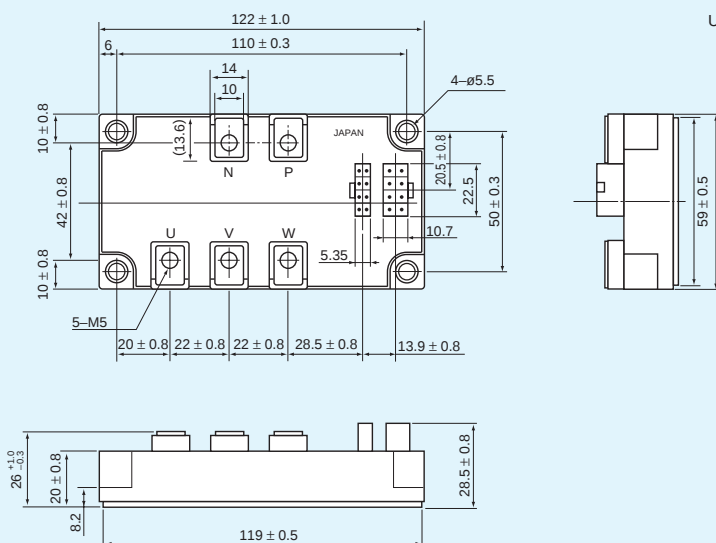
Package type A

[illegible]

Package type B

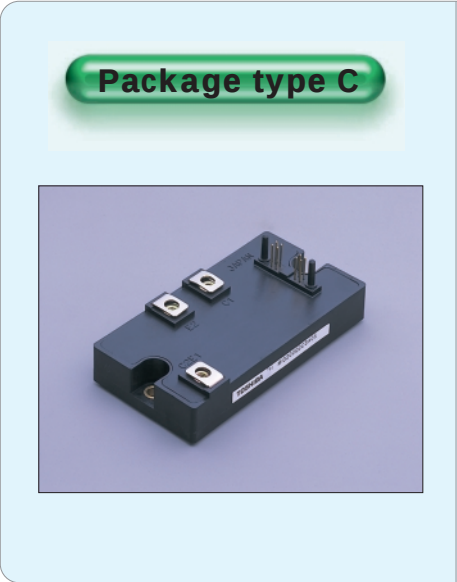
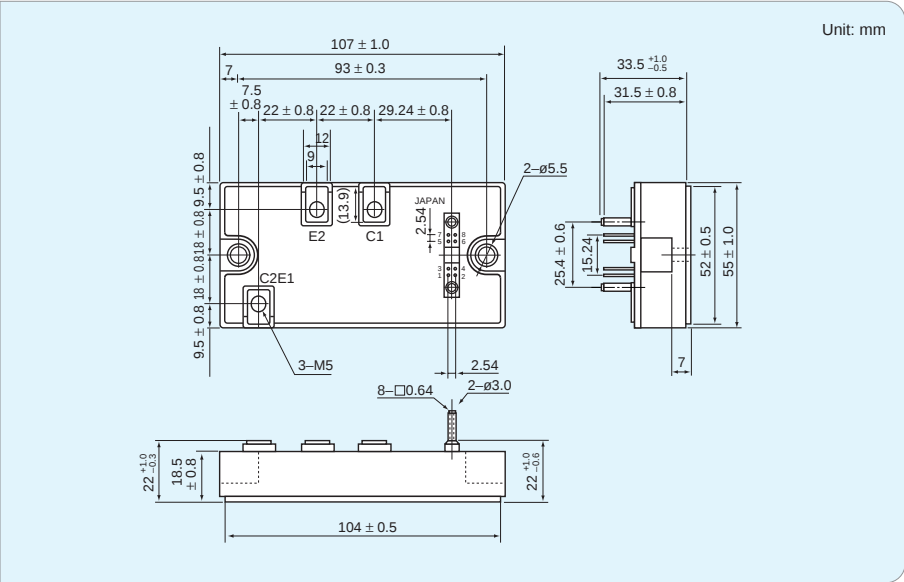
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Package type B'

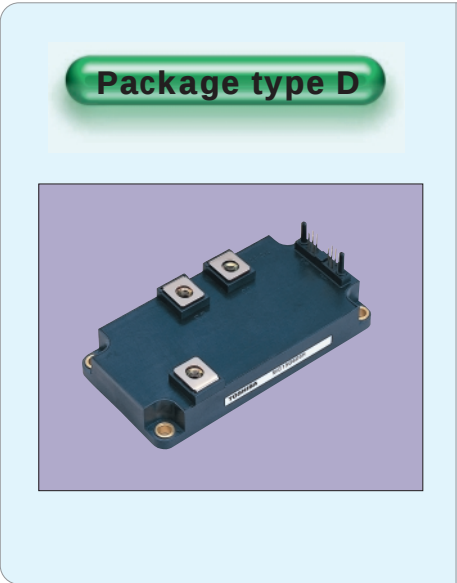
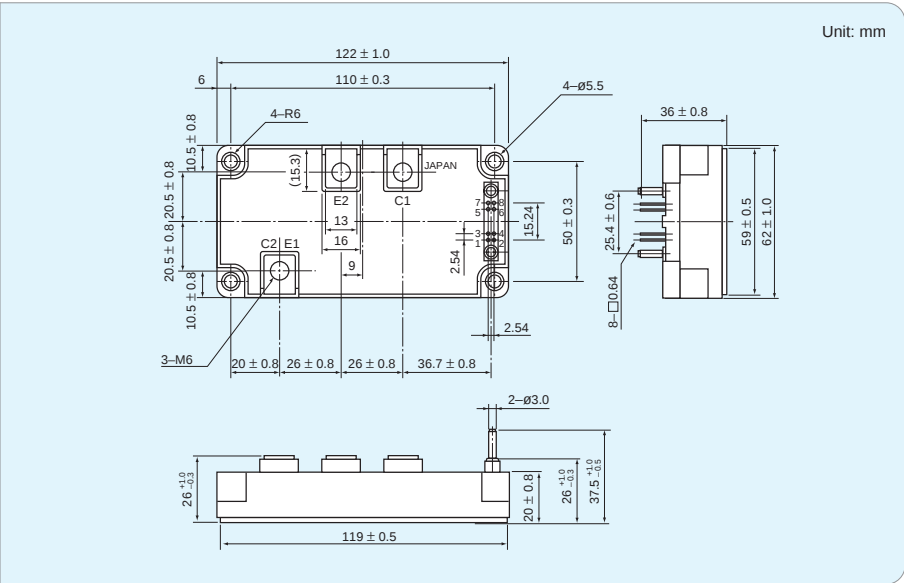
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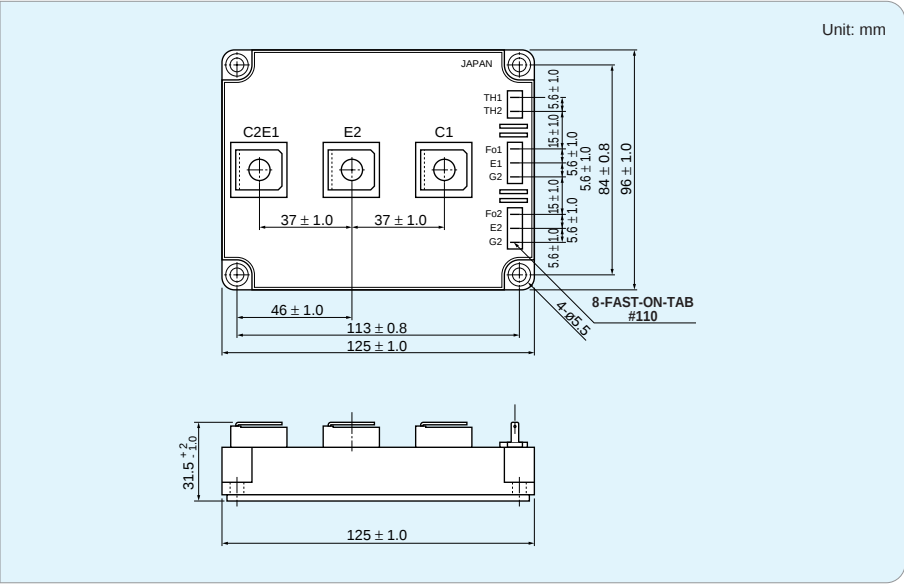
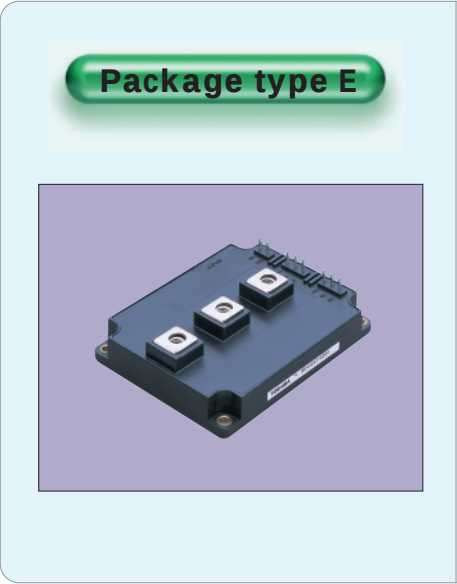
Package type C

[illegible]

Package type D

[illegible]

Package type E



**Toshiba America
Electronic Components, Inc.****Headquarters-Irvine, CA**

9775 Toledo Way, Irvine, CA 92618, U.S.A.
Tel: (949)455-2000 Fax: (949)859-3963

Boulder, CO (Denver)

3100 Arapahoe Avenue, Ste. 500,
Boulder, CO 80303, U.S.A.
Tel: (303)442-3801 Fax: (303)442-7216

Boynton Beach, FL (Orlando)

11924 W. Forest Hill Blvd., Ste. 22-337,
Wellington, FL 33414, U.S.A.
Tel: (561)733-4949 Fax: (561)733-4949

Deerfield, IL (Chicago)

One Pkwy., North, Suite 500, Deerfield,
IL 60015, U.S.A.
Tel: (847)945-1500 Fax: (847)945-1044

Duluth, GA (Atlanta)

3700 Crestwood Parkway, Ste. 460,
Duluth, GA 30196, U.S.A.
Tel: (770)931-3363 Fax: (770)931-7602

Edison, NJ

2035 Lincoln Hwy. #3000, Edison,
NJ 08817, U.S.A.
Tel: (732)248-8070 Fax: (732)248-8030

Orange County, CA

2 Venture Plaza, #500 Irvine, CA 92618, U.S.A.
Tel: (949)453-0224 Fax: (949)453-0125

Portland, OR

1700 NW 167th Place, #240,
Beaverton, OR 97006, U.S.A.
Tel: (503)629-0818 Fax: (503)629-0827

Raleigh, NC

5511 Capitol Center Dr., #114,
Raleigh, NC 27606, U.S.A.
Tel: (919)859-2800 Fax: (919)859-2898

Richardson, TX (Dallas)

777 East Campbell Rd., #650, Richardson,
TX 75081, U.S.A.
Tel: (972)480-0470 Fax: (972)235-4114

San Jose Engineering Center, CA

1060 Rincon Circle, San Jose, CA 95131, U.S.A.
Tel: (408)526-2400 Fax: (408)526-2410

Wakefield, MA (Boston)

401 Edgewater Place, #360, Wakefield,
MA 01880, U.S.A.
Tel: (781)224-0074 Fax: (781)224-1095

Toshiba Do Brasil, S.A.**Electronic Component Div.**

Estrada Dos Alvarengas 5500,
09850-550, Brasil São Bernardo do campo, S.P.
Tel: (011)4358-7144 Fax: (011)4358-7179

Toshiba Electronics Europe GmbH**Düsseldorf Head Office**

Hansaallee 181, D-40549 Düsseldorf,
Germany
Tel: (0211)5296-0 Fax: (0211)5296-400

München Office

Büro München Hofmannstrasse 52,
D-81379, München, Germany
Tel: (089)748595-0 Fax: (089)748595-42

Toshiba Electronics France S.A.R.L.

Immeuble Robert Schuman 3 Rue de Rome
F-93561, Rosny-Sous-Bois, Cédex, France
Tel: (1)48-12-48-12 Fax: (1)48-94-51-15

Toshiba Electronics Italiana S.R.L.

Centro Direzionale Colleoni,
Palazzo Perseo 3,
I-20041 Agrate Brianza, (Milan), Italy
Tel: (039)68701 Fax: (039)6870205

Toshiba Electronics España, S.A.

Parque Empresarial, San Fernando, Edificio Europa,
1ª Planta, E-28831 Madrid, Spain
Tel: (91)660-6798 Fax: (91)660-6799

Toshiba Electronics (UK) Ltd.

Riverside Way, Camberley Surrey,
GU15 3YA, U.K.
Tel: (01276)69-4600 Fax: (01276)69-4800

Toshiba Electronics Scandinavia A.B.

Gustavslundsvägen 12, 2nd Floor,
S-161 15 Bromma, Sweden
Tel: (08)704-0900 Fax: (08)80-8459

Toshiba Electronics Asia**(Singapore) Pte. Ltd.**

Singapore Head Office
438B Alexandra Road, #06-08/12 Alexandra
Technopark, Singapore 119968
Tel: (278)5252 Fax: (271)5155

Bangkok Office

135 Moo 5, Bangkadi Industrial Park, Tivanon Rd.,
Bangkadi, Amphur Muang, Pathumthai, Bangkok 12000,
Thailand
Tel: (02)501-1635 Fax: (02)501-1638

**Toshiba Electronics Trading
(Malaysia) Sdn. Bhd.****Kuala Lumpur Head Office**

Suite W1203, Wisma Consplant, No.2,
Jalan SS 16/4, Subang Jaya, 47500 Petaling Jaya,
Selangor Darul Ehsan, Malaysia
Tel: (03)731-6311 Fax: (03)731-6307

Penang Office

Suite 13-1, 13th Floor, Menara Penang Garden,
42-A, Jalan Sultan Ahmad Shah,
100 50 Penang, Malaysia
Tel: (04)226-8523 Fax: (04)226-8515

Toshiba Electronics Philippines, Inc.

26th Floor, Citibank Tower, Valero Street, Makati,
Manila, Philippines
Tel: (02)750-5510 Fax: (02)750-5511

Toshiba Electronics Asia, Ltd.**Hong Kong Head Office**

Level 11, Tower 2, Grand Century
Place, No.193, Prince Edward Road West,
Mong Kok, Kowloon, Hong Kong
Tel: 2375-6111 Fax: 2375-0969

Beijing Office

Rm 714, Beijing Fortune Building,
No.5 Dong San Huan Bei-Lu, Chao Yang District,
Beijing, 100004, China
Tel: (010)6590-8796 Fax: (010)6590-8791

Chengdu Office

Suite 403A, Holiday Inn Crown Plaza 31, Zongfu Street,
Chengdu, 610016, China
Tel: (028)675-1773 Fax: (028)675-1065

Shenzhen Office

Rm 3010-3013, Office Tower Shun Hing Square,
Di Wang Commercial Centre, 5002 ShenNan
East Road, Shenzhen, 518008, China
Tel: (0755)246-3218 Fax: (0755)246-1581

Toshiba Electronics Korea Corporation**Seoul Head Office**

14/F, KEC B/D, 275-7 Yangjae-dong,
Seocho-ku, Seoul, Korea
Tel: (02)589-4300 Fax: (02)589-4302

Gumi Office

6/F, Good morning Securities B/D,
56 Songjung-dong, Gumi-shi,
Kyeongbuk, Korea
Tel: (0546)456-7613 Fax: (0546)456-7617

**Toshiba Technology Development
(Shanghai) Co., Ltd.**

23F, HSBC Tower, 101
Yin Cheng East Road, Pudong New Area, Shanghai,
200120, China
Tel: (021)6841-0666 Fax: (021)6841-5002

**Tsurong Xiamen Xiangyu Trading
Co., Ltd.**

8N, Xiamen SEZ Bonded Goods Market Building,
Xiamen, Fujian, 361006, China
Tel: (0592)562-3798 Fax: (0592)562-3799

**Toshiba Electronics Taiwan
Corporation****Taipei Head Office**

17F, Union Enterprise Plaza Bldg. 109
Min Sheng East Rd., Section 3, 10446 Taipei,
Taiwan
Tel: (02)2514-9988 Fax: (02)2514-7892

Kaohsiung Office

16F-A, Chung-Cheng Bldg.2, Chung-Cheng 3Rd.,
Kaohsiung, 80027, Taiwan
Tel: (07)222-0826 Fax: (07)223-0046

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TOSHIBA

TOSHIBA CORPORATION**Electronic Devices Sales & Marketing Division**

1-1, Shibaura 1-chome, Minato-ku, Tokyo, 105-8001, Japan
Tel: +81-3-3457-3406 Fax: +81-3-5444-9431
E-mail: semicon@toshiba.co.jp