TRIACS

SGS-THOMSON MICROELECTRONICS

HCT FAMILY : LOGIC LEVEL TRIACS

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM} @ V_{DRM} @ T_j max max (mA)	Suffix	I_{GT} (mA) max I (+ +)	II (+ –)	III (– –)	I_H max (mA)	V_{TM} @ I_{TM} max (V)	(A)	(di/dt)c @ (dv/dt)c = 0.1 V/µs @ Tj max min (A/ms)	dv/dt @ 67% V_{DRM} @ T_j max min (V/µs)	Package
6 A_{rms}/T_{case} = 90°C T_j = 110°C I^2t = 18 A^2s													
BTA / BTB 06-400 → 700	400→700	60	1	TW SW	5 10	5 10	5 10	15 25	1.75	8.5	2.7 3.5	20 50	TO220AB
8 A_{rms}/T_{case} = 80°C T_j = 110°C I^2t = 32 A^2s													
BTA / BTB 08-400 → 700	400→700	80	1	TW SW	5 10	5 10	5 10	15 25	1.75	11	3.5 4.5	20 50	TO220AB
12 A_{rms}/T_{case} = 75°C T_j = 110°C I^2t = 72 A^2s													
BTA / BTB 12-400 → 700	400→700	120	1	SW	10	10	10	25	1.75	17	5.3	50	TO220AB

Note: BTA insulated (insulating voltage = 2500 V_{RMS}). BTB uninsulated.

HCT FAMILY : AUTOMATIC VOLTAGE SWITCH

Type	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM} @ V_{DRM} @ T_j max max (mA)	Suffix		V_{TM} @ I_{TM} max (V)	(A)		Package
5 A_{rms}/T_{case} = 100°C T_j = 125°C I^2t = 21 A^2s									
AVS08	500	65	10 Tj=25°C	CB **(1)**	DEDICATED TRIAC AVS08CB WITH DRIVER AVS1BCP08	1.65	7	Monitor and TV ⩽ 200 W	TO220AB
8 A_{rms}/T_{case} = 80°C T_j = 110°C I^2t = 32 A^2s									
AVS10	600	80	0.5	CB **(1)**	DEDICATED TRIAC AVS10CB WITH DRIVER AVS1BCP08	1.75	11	Monitor and TV ⩽ 300 W	TO220AB
▲ AVS20	600	80	0.5	CB**(1)**	DEDICATED TRIAC AVS10CB WITH DRIVER AVS2ACP08	1.75	11	PC (dedicated) ⩽ 300 W	TO220AB
▲ AVS200	800	80	0.5	CB	DEDICATED TRIAC AVS100CB WITH DRIVER AVS2ACP08	1.75	11	PC (dedicated) ⩽ 300 W	TO220AB
12 A_{rms}/T_{case} = 70°C T_j = 110°C I^2t = 50 A^2s									
AVS12	600	100	0.5	CB **(1)**	DEDICATED TRIAC AV12CB WITH DRIVER AVS1ACP08	1.75	17	Monitor and TV ⩽ 500 W	TO220AB

(1): CBI insulated (insulating voltage = 2500 V_{RMS}). CB uninsulated.

▲: New product.

HCT FAMILY : SNUBBERLESS™ TRIACS

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM} @ V_{DRM} @ T_j max max (mA)	Suffix	I_{GT} (mA) max I + +	II + −	III − −	I_H max (mA)	V_{TM} @ I_{TM} max (V)	(A)	(di/dt)c Without Snubber @ T_j max min (A/ms)	dv/dt @ 67% V_{DRM} @ T_j max min (V/µs)	Suffix Pack.	Package
4 A_{rms}/T_{case} = 110°C T_j = 125°C I^2t = 4.5 A^2s														
▲ T405 T410 T435	400 → 600 400 → 800 400 → 800	30 30 30	2 2 2	05 10 35	05 10 35	05 10 35	05 10 35	10 15 35	1.75 1.75 1.75	5.5 5.5 5.5	1.8 2.7 5.3	05 50 250	D K T W	SOT 82 SOT 194 TO220AB ISOWAT-T220AB
6 A_{rms}/T_{case} = 105°C T_j = 125°C I^2t = 18 A^2s														
BTA / BTB 06-400 → 800	400 → 800	60	2	BW CW	50 35	50 35	50 35	50 35	1.75	8.5	5 3.5	500 250		TO220AB
8 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 32 A^2s														
BTA / BTB 08-400 → 800	400 → 800	80	2	BW CW	50 35	50 35	50 35	50 35	1.75	11	7 4.5	500 250		TO220AB
10 A_{rms}/T_{case} = 110°C T_j = 125°C I^2t = 50 A^2s														
BTA / BTB 10-400 → 800	400 → 800	100	2	BW CW	50 35	50 35	50 35	50 35	1.65	14	9 5.5	500 250		TO220AB
12 A_{rms}/T_{case} = 95°C T_j = 125°C I^2t = 72 A^2s														
BTA / BTB 12-400 → 800	400 → 800	120	2	BW CW	50 35	50 35	50 35	50 35	1.6	17	12 6.5	500 250		TO220AB
16 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 128 A^2s														
BTA / BTB 16-400 → 800	400 → 800	160	2	BW CW	50 35	50 35	50 35	50 35	1.6	22.5	14 8.5	500 250		TO220AB
20 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 200 A^2s														
BTA / BTB 20-400 → 800	400 → 800	200	2	BW CW	50 35	50 35	50 35	75 50	1.7	28	22 11	500 250		TO220AB
25 A_{rms}/T_{case} = 85°C T_j = 125°C I^2t = 312.5 A^2s														
▲ BTA / BTB 24-400→800	400 → 800	250	3	BW CW	50 35	50 35	50 35	75 50	1.8	35	22 13	500 250		TO220AB
25 A_{rms}/T_{case} = 85°C T_j = 125°C I^2t = 312.5 A^2s														
BTA 26-400 → 800	400 → 800	250	3	BW CW	50 35	50 35	50 35	75 50	1.8	35	26 13	500 250		TOP 3
25 A_{rms}/T_{case} = 85°C T_j = 125°C I^2t = 312.5 A^2s														
T2516.KS	400 → 800	250	3		35	35	35	35	1.5	35	12	500		RD107
T2514.KS	400 → 800	250	3		50	50	50	50	1.5	35	22	750		RD107
40 A_{rms}/T_{case} = 75°C T_j = 125°C I^2t = 450 A^2s														
T4016.KS	400 → 800	300	3		50	50	50	50	1.7	35	22	750		RD107

Note: BTA insulated (insulating voltage = 2500 V_{RMS}) BTB uninsulated.

▲ New Product.

TRIACS

SGS-THOMSON MICROELECTRONICS

HCT FAMILY : SNUBBERLESS™ TRIACS

NEW ISOWATT220AB Package

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM} @ V_{DRM} @ T_j max max (mA)	Suffix	I_{GT} (mA) max I + +	II + −	III − −	I_H max (mA)	V_{TM} @ I_{TM} max (V)	(A)	(di/dt)c Without Snubber @ T_j max min (A/ms)	dv/dt @ 67% V_{DRM} @ T_j max min (V/µs)	Suffix Pack.	Package
6 A_{rms}/T_{case} = 110°C T_j = 125°C I^2t = 28 A^2s														
T620-400 → 700	400 → 700	75	2		20	20	20	35	1.5	8.5	3.3	200	W	ISOWATT
T630-400 → 700	400 → 700	75	2		30	30	30	50	1.5	8.5	3.3	300	w	ISOWATT
8 A_{rms}/T_{case} = 95°C T_j = 125°C I^2t = 50 A^2s														
T820-400 → 700	400 → 700	100	2		20	20	20	35	1.5	11	4.5	200	W	ISOWATT
T830-400 → 700	400 → 700	100	2		30	30	30	50	1.5	11	4.5	300	W	ISOWATT
10 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 78 A^2s														
T1020-400 → 700	400 → 700	125	2		20	20	20	35	1.5	14	5.3	200	W	ISOWATT
T1030-400 → 700	400 → 700	125	2		30	30	30	50	1.5	14	5.3	300	W	ISOWATT
12 A_{rms}/T_{case} = 85°C T_j = 125°C I^2t = 120 A^2s														
T1220-400 → 700	400 → 700	155	2		20	20	20	35	1.5	17	6.3	200	W	ISOWATT
T1230-400 → 700	400 → 700	155	2		30	30	30	50	1.5	17	6.3	300	W	ISOWATT
16 A_{rms}/T_{case} = 75°C T_j = 125°C I^2t = 190 A^2s														
T1620-400 → 700	400 → 700	190	2		20	20	20	35	1.5	22.5	9	200	W	ISOWATT
T1630-400 → 700	400 → 700	190	2		30	30	30	50	1.5	22.5	9	300	W	ISOWATT

Note: BTA Insulated (Insulating voltage = 2500 V_{RMS}) BTB uninsulated

(5) D = 400V M = 600V S = 700V N = 800V ex: ZO405ME

HCT FAMILY : SNUBBERLESS™ TRIACS

SENSITIVE GATE TRIACS

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM} @ V_{DRM} @ T_j max max (mA)	Suffix	I_{GT} (mA) max I + +	II + −	III − −	IV − +	I_H max (mA)	IL typ (mA)	V_{TM} @ I_{TM} max (V)	(A)	dv/dt @ 67% V_{DRM} @ T_j max min Typ* (V/µs)	Suffix Pack.	Package
0.8 A_{rms}/T_{lead} = 70°C T_j = 125°C I^2t = 0.32 A^2s															
Z0103 • A Z0107 • A Z0109 • A Z0110 • A	400 → 800 (5)	8	0.2		3 5 10 25	3 5 10 25	3 5 10 25	5 7 10 25	7 10 10 25	7 10 10 25	1.5	1.1	10 20 50 100		TO92
1 A_{rms}/T_a = 70°C T_j = 125°C I^2t = 0.32 A^2s															
Z0103 • N Z0107 • N Z0109 • N Z0110 • N	400 → 800 (5)	8	0.2		3 5 10 25	3 5 10 25	3 5 10 25	5 7 10 25	7 10 10 25	7 10 10 25	1.5	1.1	10 20 50 100		SOT223
3 A_{rms}/T_{lead} = 40°C T_j = 110°C I^2t = 4.5 A^2s															
TLC226 → 386	400 → 700	30	0.75	T D S A	5 5 10 10	5 5 10 10	5 5 10 10	5 10 10 25	15 15 25 25	15 15 25 25	1.85	4	10 10 20 20		TL
4 A_{rms}/T_C = 75°C T_j = 125°C I^2t = 2 A^2s															
Z0402 • E Z0405 • E Z0409 • E	400 → 800 (5)	20	0.2		3 5 10	3 5 10	3 5 10	3 5 10	3 5 10	3 5 10	2	5.5	10 20 100		TO202-1
4 A_{rms}/T_C = 75°C T_j = 125°C I^2t = 2 A^2s															
Z0402 • F Z0405 • F Z0409 • F	400 → 800 (5)	20	0.2		3 5 10	3 5 10	3 5 10	3 5 10	3 5 10	3 5 10	2	5.5	10 20 100		TO202-2
4 A_{rms}/T_C = 90°C T_j = 110°C I^2t = 8 A^2s															
BTA/BTB 04-400→700	400 → 700	40	0.75	T D S A	5 5 10 10	5 5 10 10	5 5 10 10	5 10 10 25	15 15 25 25	10 10 20 20	1.65	5.5	10		TO220AB

Note: BTA Insulated (Insulating voltage = 2500 V_{RMS}) BTB uninsulated

(5) D = 400V M = 600V S = 700V N = 800V ex: ZO405ME

TRIACS

SGS-THOMSON MICROELECTRONICS

SENSITIVE GATE TRIACS (Cont'd)

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM} @ V_{DRM} @ T_j max max (mA)	Suffix	I_{GT} (mA) max I + +	II + –	III – –	IV – +	I_H max (mA)	IL typ (mA)	V_{TM} @ I_{TM} max (V)	@ I_{TM} (A)	dv/dt @ 67% V_{DRM} @ T_j max min Typ* (V/µs)	Suffix Pack.	Package
5 A_{rms}/T_C = 100°C T_j = 125°C I^2t = 8 A^2s															
T0505 • H T0509 • H	400 → 800 (5)	40	1.5		5 10	5 10	5 10	5 10	5 10	5 10	1.65	7.1	10* 20		TO220AB
6 A_{rms}/T_C = 100°C T_j = 125°C I^2t = 18 A^2s															
T0605 • H T0609 • H	400 → 800 (5)	60	2		5 10	5 10	5 10	5 10	5 10	5 10	1.65	8.5	10* 20		TO220AB
6 A_{rms}/T_{case} = 90°C T_j = 110°C I^2t = 18 A^2s															
BTA / BTB 06-400 → 700	400 → 700	60	0.75	T D S A	5 5 10 10	5 5 10 10	5 5 10 10	5 10 10 25	15 15 25 25	10 10 20 20	1.65	8.5	10		TO220AB
8 A_{rms}/T_{case} = 80°C T_j = 110°C I^2t = 32 A^2s															
BTA / BTB 08-400 → 700	400 → 700	80	0.75	S A	10 10	10 10	10 10	10 25	25 25	20 20	1.75	11	10		TO220AB
8 A_{rms}/T_C = 95°C T_j = 125°C I^2t = 24 A^2s															
T0805 • H T0809 • H	400 → 800 (5)	70	2		5 10	5 10	5 10	5 10	5 10	5 10	1.65	11	10* 20		TO220AB

Note: BTA Insulated (Insulating voltage = 2500 V_{RMS}) BTB uninsulated

(5) D = 400V M = 600V S = 700V N = 800V ex: TO509MH

STANDARD TRIACS IN PLASTIC PACKAGE

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM}* @ V_{DRM} max (mA)	Suffix	I_{GT} (mA) max I (+ +)	II (+ –)	III (– –)	IV (– +)	I_H max (mA)	V_{TM} @ I_{TM} max (V)	@ (A)	$(dv/dt)_c$* min (V/µs)	dv/dt* @ 67% V_{DRM} min (V/µs)	Package
3 A_{rms}/T_{lead} = 40°C T_j = 110°C I^2t = 4.5 A^2s														
TLC 116 → 386	200 → 700	30	0.75	B	25	25	25	50	8 typ	1.85	4	5	20	TL
4 A_{rms}/T_C = 75°C T_j = 125°C I^2t = 2 A^2s														
Z0410 • E	400 → 800 (5)	20	0.2		25	25	25	25	25	2	5.5	5	200	TO202-1
4 A_{rms}/T_C = 75°C T_j = 125°C I^2t = 2 A^2s														
Z0410 • F	400 → 800 (5)	20	0.2		25	25	25	25	25	2	5.5	5	200	TO202-2
5 A_{rms}/T_C = 100°C T_j = 125°C I^2t = 8 A^2s														
T0510 • H T0512 • H	400 → 800 (5)	40	1.5		25 50	25 50	25 50	25 50	25 50	1.65	7.1	2 5	100 200	TO220AB
6 A_{rms}/T_C = 100°C T_j = 125°C I^2t = 18 A^2s														
T0610 • H T0612 • H	400 → 800 (5)	60	2		25 50	25 50	25 50	25 50	25 50	1.65	8.5	2 5	200 500	TO220AB
6 A_{rms}/T_{case} = 100°C T_j = 125°C I^2t = 18 A^2s														
BTA / BTB 06-400 → 800	400 → 800	60	0.5	B C	50 25	50 25	50 25	100 50	50 25	1.65	8.5	10 5	250 100	TO220AB
8 A_{rms}/T_{case} = 95°C T_j = 125°C I^2t = 32 A^2s														
BTA / BTB 08-400 → 800	400 → 800	80	0.5	B C	50 25	50 25	50 25	100 50	50 25	1.75	11	10 5	250 100	TO220AB
8 A_{rms}/T_C = 95°C T_j = 125°C I^2t = 24 A^2s														
T0810 • H T0812 • H	400 → 800 (5)	70	2		25 50	25 50	25 50	25 50	25 50	1.65	11	2 5	200 500	TO220AB
10 A_{rms}/T_C = 95°C T_j = 125°C I^2t = 50 A^2s														
T1010 • H T1012 • H T1013 • H	400 → 800 (5)	100	2		25 50 50	25 50 50	25 50 50	25 50 75	25 50 75	1.5	14	2 5 10	200 500 500	TO220AB

Note: BTA Insulated (Insulating voltage = 2500 V_{RMS}) BTB uninsulated

* @ Tj max

(5) D = 400V M = 600V S = 700V N = 800V ex: T1013MH

TRIACS

SGS-THOMSON MICROELECTRONICS

STANDARD TRIACS IN PLASTIC PACKAGE (cont'd)

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM}* @ V_{DRM} max (mA)	Suffix	I_{GT} (mA) max I (+ +)	II (+ –)	III (– –)	IV (– +)	I_H max (mA)	V_{TM} @ I_{TM} max (V)	@ I_{TM} (A)	$(dv/dt)_c$* min (V/µs)	dv/dt* @ 67% V_{DRM} min (V/µs)	Package
10 A_{rms}/T_{case} = 95°C T_j = 125°C I^2t = 50 A^2s														
BTA / BTB 10-400 → 800	400 → 800	100	0.5	B C	50 25	50 25	50 25	100 50	50 25	1.5	14	10 5	250 100	TO220AB
12 A_{rms}/T_{case} = 95°C T_j = 125°C I^2t = 72 A^2s														
BTA / BTB 12-400 → 800	400 → 800	120	0.5	B C	50 25	50 25	50 25	100 50	50 25	1.5	17	10 5	250 100	TO220AB
12 A_{rms}/T_C = 90°C T_j = 125°C I^2t = 60 A^2s														
T1210 • H T1212 • H T1213 • H	400 → 800 (5)	110	2		25 50 50	25 50 50	25 50 50	25 50 75	25 50 75	1.5	17	2 5 10	200 500 500	TO220AB
16 A_{rms}/T_C = 90°C T_j = 125°C I^2t = 112 A^2s														
T1612 • H T1613 • H	400 → 800 (5)	150	2.5		50 50	50 50	50 50	50 75	50 75	1.5	22.5	5 10	500 500	TO220AB
16 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 128 A^2s														
BTA / BTB 16-400 → 800	400 → 800	160	2	B	50	50	50	100	50	1.6	22.5	10	250	TO220AB
25 A_{rms}/T_C = 80°C T_j = 125°C I^2t = 312 A^2s														
T2512 • H T2513 • H	400 → 800 (5)	250	3		50 50	50 50	50 50	50 75	50 75	1.5	35	5 10	500 500	TO220AB
25 A_{rms}/T_{case} = 80°C T_j = 125°C I^2t = 200 A^2s														
BTB 24-400 → 800	400 → 800	200	2	B	50	50	50	100	50	1.8	35	10	250	TO220AB
25 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 312.5 A^2s														
BTA 26-400 → 800	400 → 800	250	6	B A	50 100	50 100	50 100	100 150	80 100	1.7	35	10	250	TOP 3
30 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 312.5 A^2s														
BTB 26-400 → 800	400 → 800	250	6	B	50	50	50	100	80	1.7	35	10	250	TOP 3
30 A_{rms}/T_{case} = 80°C T_j = 125°C I^2t = 312.5 A^2s														
BTA 25-400 → 800	400 → 800	250	6	B A	50 100	50 100	50 100	100 150	80 100	1.8	42	10	250	RD 91

Note: BTA Insulated (Insulating voltage = 2500 V_{RMS}) BTB uninsulated
* @ Tj max
(5) D = 400V M = 600V S = 700V N = 800V ex: T1013MH

STANDARD TRIACS IN PLASTIC PACKAGE (cont'd)

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM}* @ V_{DRM} max (mA)	Suffix	I_{GT} (mA) max I (+ +)	II (+ –)	III (– –)	IV (– +)	I_H max (mA)	V_{TM} @ I_{TM} max (V)	@ (A)	$(dv/dt)_c$* min (V/µs)	dv/dt* @ 67% V_{DRM} min (V/µs)	Package
25 A_{rms}/T_C = 85°C T_j = 125°C I^2t = 312 A^2s														
T2512 • KS T2513 • KS	400 → 800 (5)	250	3		50 50	50 50	50 50	50 75	50 75	1.5	35	5 10	500 500	RD107
40 A_{rms}/T_C = 75°C T_j = 125°C I^2t = 450 A^2s														
T4012 • KS T4013 • KS	400 → 800 (5)	300	3		50 50	50 50	50 50	50 75	50 75	1.7	56	5 10	500 500	RD107
40 A_{rms}/T_{case} = 75°C T_j = 125°C I^2t = 450 A^2s														
BTA 40-400 → 800	400 → 800	300	6	B A	50 100	50 100	50 100	100 150	80 100	1.8	60	10	250	RD 91
40 A_{rms}/T_{case} = 75°C T_j = 125°C I^2t = 450 A^2s														
BTA 41-400 → 800	400 → 800	300	6	B A	50 100	50 100	50 100	100 150	80 100	1.8	60	10	250	TOP 3
45 A_{rms}/T_{case} = 85°C T_j = 125°C I^2t = 450 A^2s														
BTB 41-400 → 800	400 → 800	300	6	B	50	50	50	100	80	1.8	60	10	250	TOP 3

Note: BTA insulated(insulating voltage = 2500 V_{RMS}) BTB uninsulated.

* @ Tj max.

(5) D = 400V M = 600V S = 700V N = 800V ex: T2512MKS

SPECIAL TRIACS FOR LIGHT DIMMERS

Type (See Note)	V_{DRM} ± (V)	I_{TSM} (A)	I_{DRM}* @ V_{DRM} max (mA)	Suffix	I_{GT} (mA) max I (+ +)	II (+ –)	III (– –)	IV (– +)	I_H max (mA)	V_{TM} @ I_{TM} max (V)	@ (A)	$(dv/dt)_c$* typ (V/µs)	dv/dt* @ 67% V_{DRM} min (V/µs)	Package
6 A_{rms}/T_{case} = 105°C T_j = 125°C I^2t = 50 A^2s														
BTA 06-400 → 600	400 → 600	100	0.5	GP	50	50	50	75	13	1.4	8.5	10	30	TO220AB
10 A_{rms}/T_{case} = 90°C T_j = 125°C I^2t = 72 A^2s														
BTA 10-400 → 600	400 → 600	120	0.5	GP	50	50	50	75	13	1.5	14	10	30	TO220AB

Note: BTA insulated (insulating voltage = 2500 V_{RMS}).

* @ Tj max.