

Phase Control Thyristors (SCRs)

$I_T(AV)$ $T_c=65^\circ\text{C}$ 50% Duty Cycle, Half Sine (Amps)	I_{TSM} (Amps $\times 10^3$) 50 Hz 60 Hz		I_{DRM}/I_{RRM} @ Rated V_{DRM}/V_{RRM} and $T_{J(Max)}$ (mA)	I^2t for Fusing @ 8.3 ms ($A^2\text{ sec}$) ($\times 10^4$)	V_{DRM}/V_{RRM} Range (Volts)	V_{TM} @ I_{TM} and $T_c=25^\circ\text{C}$ I_{TM} V_{TM} (Amps) (Volts)	Chip Size (mm)	Junction Temp. Range ($^\circ\text{C}$)	$R_{\theta JC}$ ($^\circ\text{C/W}$)	Typical t_q @ $T_{J(Max)}$ (μsec)	
460	5.9	6.5	60	6.5	500-1800	3000	3.6	30	-40 to 150	.045	75
490	7.6	8	45	26.5	1300-1800	3000	2.65	30	-40 to 125	.06	125
550	7.6	8	45	26.5	500-1400	3000	2.4	30	-40 to 125	.06	125
550	9	10	30	41.6	800-1600	625	1.4	33	-40 to 125	.06	150
550	9	10	30	41.6	800-600	625	1.4	33	-40 to 125	.06	150
560	9	10	30	42	200-1400	1500	1.75 $\times$	33	-40 to 125	.05	—
575	6.8	7.5	30	23.4	100-2200	625	1.8	33	-40 to 125	.035	150
590 @ 80 $^\circ\text{C}$	7.6	8	65	26.5	500-1300	3000	2.4	30	-40 to 150	.06	90
600	7.3	8	45	26.5	500-1800	3000	2.62	30	-40 to 150	.045	200
620 @ 80 $^\circ\text{C}$	8.2	9	50	33.5	100-400	3000	1.9	30	-40 to 150	.06	125
640	9	10	50	41.5	100-600	3000	1.9	30	-40 to 125	.06	125
670	8.2	9	30	33.8	100-1800	625	1.5	33	-40 to 125	.035	150
680	7.6	8	45	26.5	500-1400	3000	2.4	30	-40 to 125	.04	100
750	9.6	10.5	30	46	100-1600	625	1.4	33	-40 to 125	.035	150
760	7.6	8	50	26.5	500-1300	3000	2.4	30	-40 to 150	.045	100
800	10	11	35	50	500-1800	3000	2	40	-40 to 125	.04	125
800 @ 90 $^\circ\text{C}$	8.5	9	50	33.5	100-400	3000	1.9	30	-40 to 150	.04	125
800	9	10	45	33.5	100-600	3000	1.9	30	-40 to 125	.04	100
830	12.8	14	30	82	200-1200	2500	1.5 $\times$	33	-40 to 125	.045	—
860	11.8	13	150	70	2400-4000	1500	2	50	-40 to 125	.023	400
900	13.7	15	35	93.5	100-1400	625	1.35	38	-40 to 125	.037	200
920	13.7	15	150	93.5	2400-3400	1500	1.85	50	-40 to 125	.023	400
1000	12	13	35	70	200-1400	3000	1.65	40	-40 to 125	.04	125

* = $25^\circ C$ Value

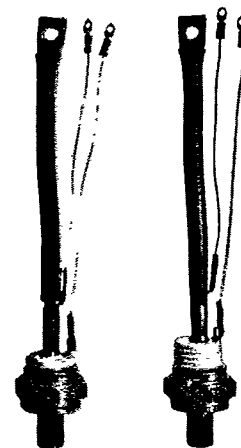
° = Tentative

× = Rating @ $T_{J(Max)}$ () = t_d

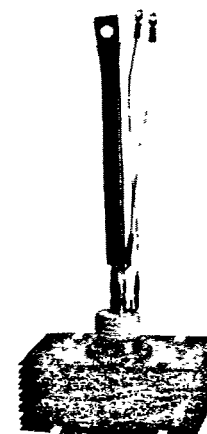
Typical ton (μ sec)	Min di/dt Repetitive on-state (A/ μ sec)	Min dv/dt @ T _J (Max) (V/ μ sec)	Max V _{GT} (V)	Max I _{GT} (mA)	PACKAGE INFORMATION			
					Max Mounting Force or Torque	Outline	JEDEC Number	TYPE NO.
—	150	200	5	300	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AB	C431-2
—	75	200	5	300	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AC	C391
—	500	200	5	300	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AC	C390
7	150	300	3*	150*	$\frac{2400 \text{ lb}}{10.7 \text{ KN}}$	Press Pak	T72	T720__55
7	150	300	3*	150*	$\frac{2400 \text{ lb}}{10.7 \text{ KN}}$	Press Pak	T72	T730__55
—	200	200	1.75*	250*	$\frac{4000 \text{ lb}}{17.8 \text{ KN}}$	Press Pak	14.5 x 60 mm	°FT500DL
7	150	300	3*	150*	$\frac{2400 \text{ lb}}{10.7 \text{ KN}}$	Press Pak	T7S	T7S0__55
—	500	200	5	300	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AC	C390X555
—	150	200	5	300	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AB	C431-1
—	500	100	5	400	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AC	C390X550
—	500	200	5	400	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AC	C390X500
7	300	300	3*	150*	$\frac{2400 \text{ lb}}{10.7 \text{ KN}}$	Press Pak	T7S	T7S0__65
—	500	200	5	300	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AB	C430
7	150	300	3*	150*	$\frac{2400 \text{ lb}}{10.7 \text{ KN}}$	Press Pak	T7S	T7S0__75
—	500	100	5	400	$\frac{2500 \text{ lb}}{11.1 \text{ KN}}$	Press Pak	TO-200AB	C430X555
—	75	200	5	300	$\frac{3500 \text{ lb}}{15.6 \text{ KN}}$	Press Pak	TO-200AC	C441
—	500	100	5	400	$\frac{2200 \text{ lb}}{9.82 \text{ KN}}$	Press Pak	TO-200AB	C430X550
—	500	200	5	300	$\frac{2200 \text{ lb}}{9.82 \text{ KN}}$	Press Pak	TO-200AB	C430X500
—	200	200	2.5*	250*	$\frac{4000 \text{ lb}}{17.8 \text{ KN}}$	Press Pak	14.5 x 60 mm	°FT800DL
5	150	300	3*	200*	$\frac{5500 \text{ lb}}{24.55 \text{ KN}}$	Press Pak	T9G	T9G0__08
5	150	300	3*	150*	$\frac{3500 \text{ lb}}{15.60 \text{ KN}}$	Press Pak	T82	T820__90
5	150	300	3*	200*	$\frac{5500 \text{ lb}}{24.55 \text{ KN}}$	Press Pak	T9G	T9G0__09
—	400	200	5	300	$\frac{3000 \text{ lb}}{13.4 \text{ KN}}$	Press Pak	TO-200AC	C440



T62



T70



T76



T-91-01

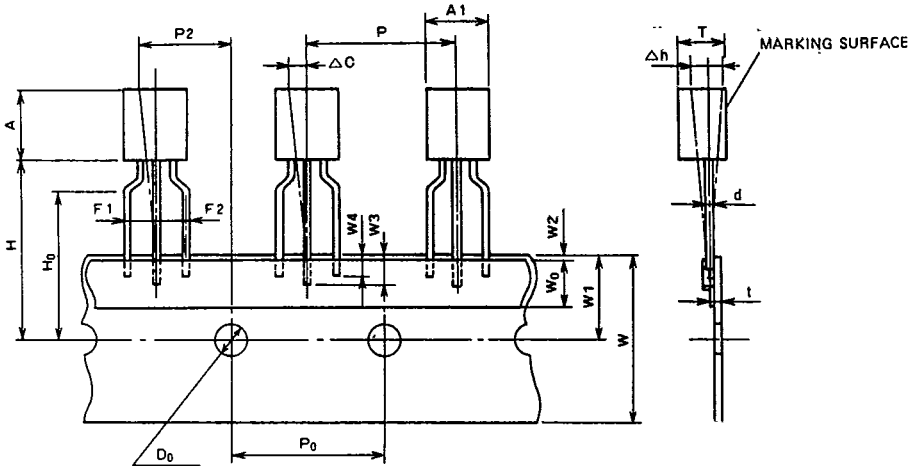
Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

Taping

STANDARD SPECIFICATIONS
FOR TAPING OF MOLDED
PACKAGE THYRISTORS AND
TRIACS

TO-92 Package

Thyristor
CR02AM, CR03AM, CR04AM
Triac
BCR1AM



Taping dimensions

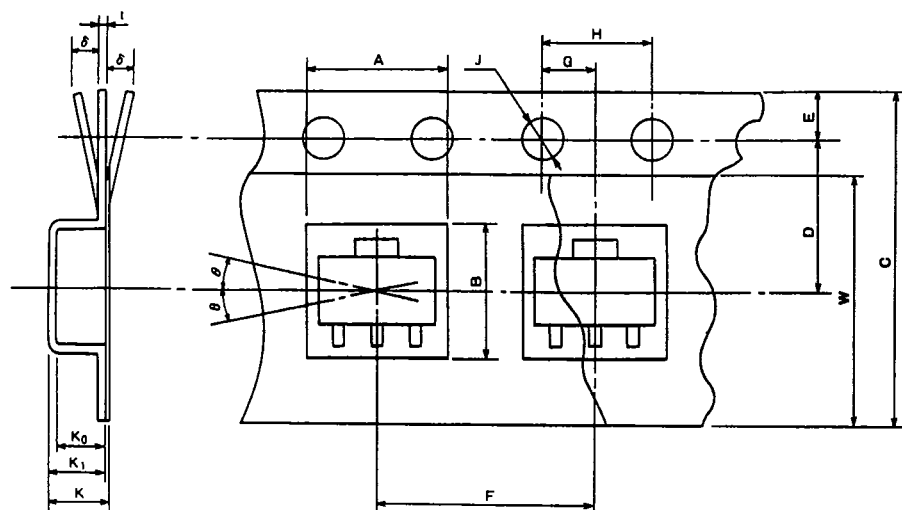
Description of symbol	Symbol	Dimensions (Unit:mm)	Remark
Product width	A1	5.0 MAX	
Product height	A	5.0 MAX	
Product thickness	T	3.7 MAX	
Lead wire diameter	d	0.6 MAX	
Sticker lead wire length (1)	W3	2.5 MIN	
Sticker lead wire length (2)	W4	2.0 MIN	
Pitch between products	P	12.7 ± 1.0	
Feed hole pitch	P0	12.7 ± 0.3	The cumulative pitch error is ± 1mm per 20 pitches.
Feed hole deviation (1)	P2	6.35 ± 1.3	
Distance between lead wires	F1, F2	2.5 ± 0.4	
Defective product (1)	Δh	0 ± 2.0	
Tape width	W	18.0 ± 1.0 0.5	
Sticker tape width	W0	6.0 ± 0.5	
Feed hole deviation (2)	W1	9.0 ± 0.5	
Sticker tape deviation	W2	0.5 MAX	
Position of product bottom surface	H	17.5 MIN	
Lynch height of lead wire	H0	16.0 ± 0.5	
Feed hole diameter	D0	4.0 ± 0.2	
Tape thickness	t	0.7 ± 0.2	
Defective product (2)	ΔC	0 ± 1.0	



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Powerex Semiconductor Data Book
Taping



SOT-89 Package

Thyristor
CR08AS

Taping dimensions

Description of symbol		Symbol	Dimensions/angles Unit:mm	Remark
Parts Insertion	Height	A	5.0 ± 0.1	Cross-section of the surface 0.5mm above the inner bottom
	Width	B	4.6 ± 0.1	Cross-section of the surface 0.5mm above the inner bottom
Concave square hole	Depth	K ₀	1.8 ± 0.1	Inner space
	Pitch	F	8.0 ± 0.1	Cumulative error +0.1/-0.3 MAX/10 pitches
Round feed hole	Diameter	J	$\phi 1.5 \pm 0.05$	
	Pitch	H	4.0 ± 0.1	Cumulative error +0.1/-0.3 MAX/10 pitches
	Position	E	1.5 ± 0.1	Distance between the tape edge and the hole center
Distance between center lines	Vertical	G	2.0 ± 0.5	Center line of concave square hole and round feed hole
	Horizontal	D	5.65 ± 0.05	Center line of concave square hole and round feed hole
Cover tape	Width	W	$9.5 + 0.3/-0$	Thickness: 0.1 MAX
Carrier tape	Width	C	12 ± 0.2	Warp ± 0.3 MAX
	Thickness	t	0.3 ± 0.05	
	Package hole depth	K ₁	2.1 ± 0.1	
Device	Package dimensions	—	—	As shown in (e)
	Inclination	θ	30° MAX.	
Total Thickness		K	2.3 ± 0.1	Total thickness including cover and carrier tapes