

Reverse Conducting Thyristors (Note 1)

$I_T(AV)$ $I_R(AV)$ Tc=65°C Note 2 (Amps)	I_{TSM}/I_{RSM} (Amps × 10 ³)		I_{T^2}/I_{R^2} @ 8.3 ms (A ² sec × 10 ³)	I_{DRM} @ T _{J(Max)} V _{DRM(Max)} (mA)	V _{DRM} Range (Volts)	V _{RM} @ T _{J(Max)} I _{RM} (Amps)	V _{RM} (Volts)	V _{TM} @ T _{J(Max)} I _{TM} (Amps)	V _{TM} (Volts)	t _q (Max) @ T _{J(Max)} (μsec)	Max d _i /d _t @ T _{J(Max)} (A/μsec)	Min d _v /d _t @ T _{J(Max)} (V/μsec)
	50 Hz	60 Hz										
60 @ 81°C	1.09	1.2	6									
60 @ 85°C	1.09	1.2	6	15	200-600	190	2.45	190	2	20	200	300
150 @ 77°C	2.7	3	38									
60 @ 81°C	1.09	1.2	6	15	600-1200	190	2.05	470	1.8	30	200	300
150 @ 77°C	2.7	3	38									
60 @ 81°C	1.09	1.2	6	15	200-800	190	2.05	470	1.8	20	200	300
150 @ 82°C	2.7	3	38									
60 @ 88°C	1.09	1.2	6	15	600-1200	190	2.05	470	1.8	30	200	300
150 @ 82°C	2.7	3	38									
60 @ 88°C	1.09	1.2	6	15	200-800	190	2.05	470	1.8	20	200	300
250 @ 83°C	4.6	5	110									
100 @ 85°C	1.8	2	17	30	600-1200	310	2.05	780	1.75	30	200	300
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100 @ 85°C	1.8	2	17	30	200-800	310	2.05	780	1.75	20	200	300
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100 @ 85°C	1.8	2	17	30	600-1200	310	2.05	780	1.75	30	200	300
250 @ 83°C	4.6	5	110									
100 @ 85°C	1.8	2	17	30	200-800	310	2.05	780	1.75	20	200	300
400 @ 77°C	6.4	7	200									
150 @ 103°C	3.2	3.5	50	50	600-1200	1250	2.2	1250	2.2	30	200	300
400 @ 77°C	6.4	7	200									
150 @ 103°C	3.2	3.5	50	50	200-800	1250	2.2	1250	2.2	20	200	300
400 @ 89°C	6.4	7	200									
150 @ 102°C	3.2	3.5	51	80	2500	1200	4	600	2	35	300	700
400 @ 81°C	6.4	7	200									
150 @ 102°C	3.2	3.5	51	80	2500	1200	4	600	2	50	300	700
1000 @ 60°C	12.8	14	820									
400 @ 59°C	6.4	7	200	150	2500	2400	4.5	1000	2.1	35	300	700
1000 @ 47°C	12.8	14	820									
400 @ 59°C	6.4	7	200	150	2500	2400	4.5	1000	2.1	50	300	700

Note 1: Junction Temperature Range = -40 to 125°C
 Note 2: Current Rating at 60 Hz, 180° Conduction, Half Sine

Gate Trigger Voltage and Current, T _J =25°C		PACKAGE INFORMATION				STYLE	Outline	TYPE NO.
		SCR °C/W	Rejc Diode °C/W	Max Mounting Force or Torque				
V _{gr} (Volts)	I _{gr} (mA)							
3	150	.35	.40	<u>210 lb-in</u> 180 kg-cm	M12 x 1.5 Stud	Metric	RCR70BY	
3	200	.17	.35	<u>420 lb-in</u> 360 kg-cm	M20 x 1.5 Stud	Metric	RCR150BX	
3	200	.17	.35	<u>420 lb-in</u> 360 kg-cm	M20 x 1.5 Stud	Metric	RCR150BY	
3	200	.15	.30	<u>1580 lbs</u> 7.1 KN	Press Pak	14.5 x 43 mm	FR150DX	
3	200	.15	.30	<u>1580 lbs</u> 7.1 KN	Press Pak	14.5 x 43 mm	FR150DY	
3	250	.10	.20	<u>700 lb-in</u> 600 kg-cm	M24 x 1.5 Stud	Metric	RCR300BX	
3	250	.10	.20	<u>700 lb-in</u> 600 kg-cm	M24 x 1.5 Stud	Metric	RCR300BY	
3	250	.10	.20	<u>2420 lbs</u> 10.8 KN	Press Pak	14.5 x 50 mm	FR300DX	
3	250	.10	.20	<u>2420 lbs</u> 10.8 KN	Press Pak	14.5 x 50 mm	FR300DY	
4	350	.05	.10	<u>3960 lbs</u> 17.7 KN	Press Pak	18 x 85 mm	FR500AX	
4	350	.05	.10	<u>3960 lbs</u> 17.7 KN	Press Pak	18 x 85 mm	FR500AY	
4	350	.035	.10	<u>6600 lbs</u> 30 KN	Press Pak	21 x 92 mm	FR600AX	
4	350	.035	.10	<u>6600 lbs</u> 30 KN	Press Pak	21 x 92 mm	FR600AW	
4	350	.022	.07	<u>7920 lbs</u> 35.6 KN	Press Pak	21 x 102 mm	FR1000BX	
4	350	.022	.07	<u>7920 lbs</u> 35.6 KN	Press Pak	21 x 102 mm	FR1000BW	



T-91-01

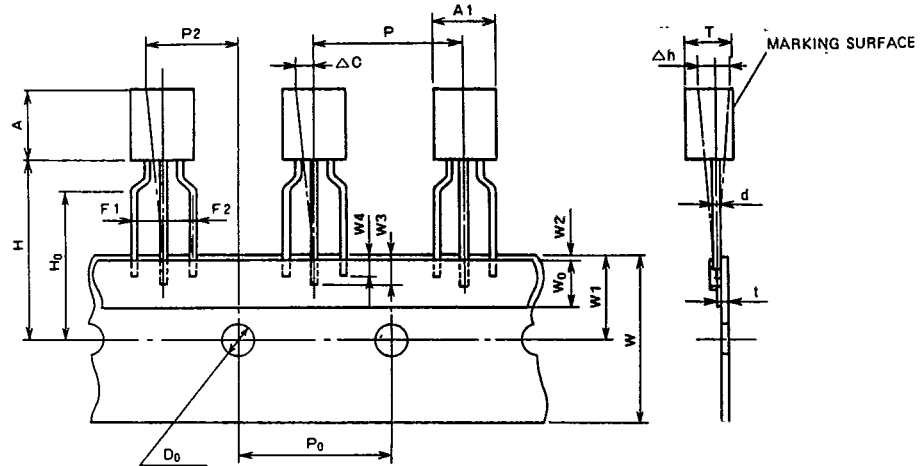
Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
 Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

Taping

STANDARD SPECIFICATIONS FOR TAPING OF MOLDED PACKAGE THYRISTORS AND TRIACS

TO-92 Package

Thyristor
CR02AM, CR03AM, CR04AM
Triac
BCR1AM



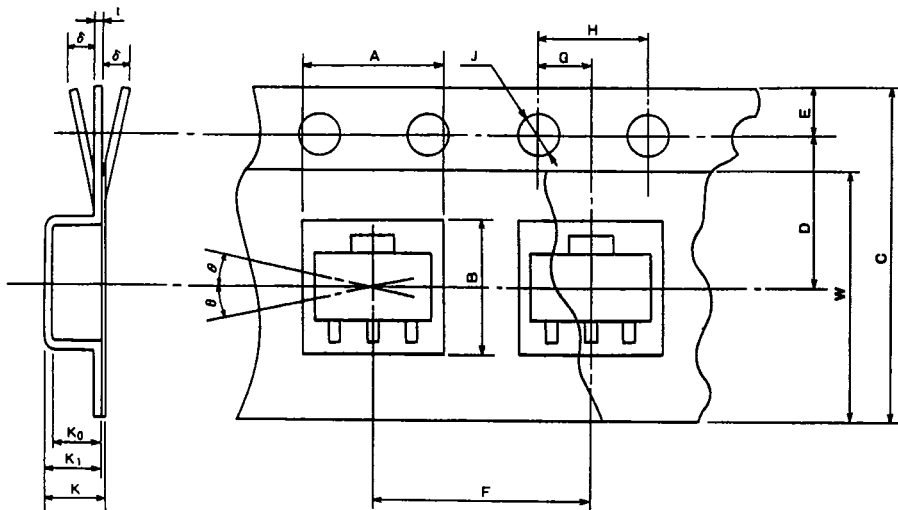
Taping dimensions

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	P ₀	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	W ₀	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	H ₀	16.0 ± 0.5	
Feed hole diameter	D ₀	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