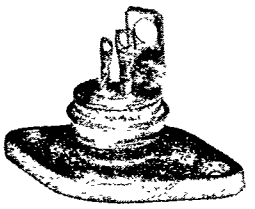
TRIACS

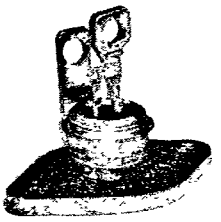
$I_{T(RMS)}$ T_C=80° C 360° Conduction (Amps)	I_{TSM} (Amps) 50 Hz	60 Hz	I^2t for Fusing @ 8.3 ms (A^2sec)	Max I_{DRM} @ V_{RRM} (mA)	V_{DRM}/V_{RRM} Range (Volts)	V_{TM} @ T_J=25°C I_{TM} (Amps)	V_{TM} (Volts)	$R_{\theta JC}$ (°C/W)	Junction Temp. Range (°C)	Max V_{GT} (Volts)	Max V_{GD} All Modes (Volts)
16 T_C=82°C	155	170	121	3	200-600	25	1.6	2	−40 to 125	1.5 ×	.2
25	230	250	260	1	200-600	35	1.58	2.4	−40 to 115	3.5	.2
25 T_C=90°C	230	250	260	2	200-600	35	1.58	1.4	−40 to 125	3.5	.2
25	230	250	260	1	200-600	35	1.58	1.8	−40 to 115	3.5	.2
25 T_C=75°C	230	250	260	1	200-600	35	1.58	1.95	−40 to 115	3.5	.2
25 T_C=75°C	230	250	260	1	200-600	35	1.58	1.95	−40 to 115	3.5	.2
25 T_C=71°C	230	250	260	1	200-600	35	1.58	2.1	−40 to 115	3.5	.2
25 T_C=75°C	230	250	260	1	200-600	35	1.58	1.95	−40 to 115	3.5	.2
25	230	250	260	1	200-600	35	1.58	1.8	−40 to 115	3.5	.2
25 T_C=70°C	240	265	375	5	400-600	45	2.5	2	−40 to 125	2.5 ×	.2
40 T_C=81°C	275	300	375	.2	200-600	57	1.38	1.65	−40 to 115	3.5	.2
40 T_C=81°C	275	300	375	1	200-600	56	1.38	1	−40 to 115	3.5	.2
40 T_C=70°C	275	300	375	1	200-600	56	1.38	1.15	−40 to 115	3.5	.2
40 T_C=70°C	275	300	375	1	200-600	56	1.38	1.15	−40 to 115	3.5	.2
40 T_C=68°C	275	300	375	1	300-600	56	1.38	1.3	−40 to 115	3.5	.2
40 T_C=74°C	275	300	375	1	200-600	56	1.38	1	−40 to 115	3.5	.2
40 T_C=81°C	275	300	375	1	200-600	56	1.38	1.15	−40 to 115	3.5	.2
50 T_C=83°C	730	800	2600	10	200-800	70	1.5 T_J=125°C	.6	−40 to 125	2.5 ×	.2
70 T_C=87°C	1000	1100	5000	15	200-1200	110	2.1 T_J=125°C	.3	−40 to 125	3 ×	.2
100 T_C=84°C	1000	1100	5000	15	200-1200	140	2.35 T_J=125°C	.2	−40 to 125	3 ×	.2
150 T_C=96°C	1820	2000	16,000	15	200-1200	220	1.8 T_J=125°C	.12	−40 to 125	3 ×	.25
150 T_C=92°C	1820	2000	16,000	15	200-1200	220	1.65 T_J=125°C	.15	−40 to 125	3 ×	.25
300 T_C=89°C	2730	3000	37,000	30	200-1200	420	1.5 T_J=125°C	.09	−40 to 125	3 ×	.25
300 T_C=89°C	2730	3000	37,000	30	200-1200	420	1.5 T_J=125°C	.09	−40 to 125	3 ×	.25

* = Isolated Tab
° = Tentative Specifications
× = 25°C Value

Critical Rate of Rise of Off State Voltage (Min) dv/dt (V/μsec)	$dv/dt_{(c)}$ (V/μsec)	Holding and Latching Current (Max) $T_{J(Min)}$ to $T_{J(Max)}$ DC Holding Current (mA)	DC Latching Current (mA)	Gate Current I_{GT} Max (mA) @ $T_{J(Min)}$	@ T_J=25°C	PACKAGE INFORMATION STYLE	Outline	TYPE NO.
—	6-10	—	—	—	30	Isolated Plastic With Fast-ons	—	°BCR16HM*
50	5	75-150	100-400	80	50	Isolated TO-3 Mounting Flange	TO-239AB	SC160
50	5	75-150	100-400	80	50	Power Pak Non-Isolated Tab	TO-220AB	SC129
50	5	75-150	100-400	150	75	Non-Isolated Stud	—	SC260
50	5	75-150	100-400	150	75	Isolated Stud With Press on MT2 Terminal	—	SC260-2
50	5	75-150	100-400	80	50	Isolated Stud With Solder Ring MT2 Terminal	—	SC260-3
50	5	75-150	100-400	80	50	Isolated TO-3 Flange	—	SC260-4
50	5	75-150	100-400	80	50	Non-Isolated TO-3 Flange	—	SC260-5
50	5	75-150	100-400	80	50	Press Fit	—	SC261
—	20	—	—	—	50	Isolated Plastic With Fast-Ons	—	°BCR30GM*
50	5	75-150	100-400	150	80	Isolated TO-3 Mounting Flange	TO-239AB	SC165
50	5	75-150	100-400	120	80	Non-Isolated Stud	—	SC265
50	5	75-150	100-400	120	80	Isolated Stud With Press on MT2 Terminal	—	SC265-2
50	5	75-150	100-400	120	80	Isolated Stud With Solder Ring MT2 Terminal	—	SC265-3
50	5	75-150	100-400	120	80	Isolated TO-3 Flange	—	SC265-4
50	5	75-150	100-400	120	80	Non-Isolated TO-3 Flange	—	SC265-5
50	5	75-150	100-400	120	80	Press Fit	—	SC266
50	20	—	—	—	100	M8 × 1.25 Stud	Metric	°BCR50A
100	20	—	—	—	200	M12 × 1.5 Stud	Metric	°BCR70B
100	20	20-65 Typical	—	—	200	Press Pak	14.5 × 43 mm	°FB100D
100	50	20-65 Typical	—	—	300	Press Pak	14.5 × 43 mm	°FB150D
100	50	15-55 Typical	—	—	300	M20 × 1.5 Stud	Metric	°BCR150B
100	100	20-60 Typical	—	—	300	M24 × 1.5 Stud	Metric	°BCR300B
100	100	—	—	—	300	Press Pak	14.5 × 50 mm	°FB300D

Non-isolated stud



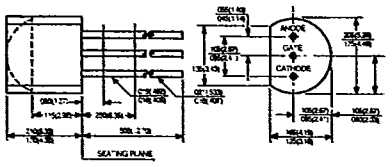


Non-isolated JEDEC TO-3 flange

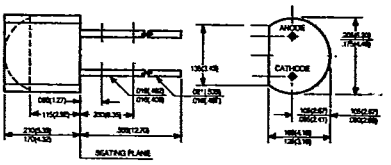
Press fit

TRIACS Outline Drawings

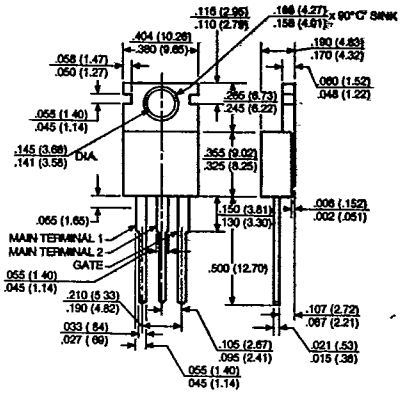
JEDEC TO-92



JEDEC Modified TO-92

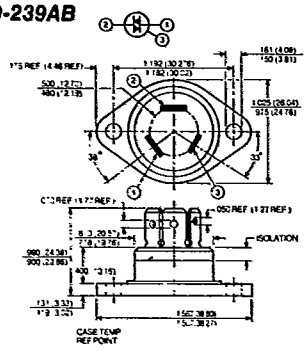


JEDEC TO-220AB

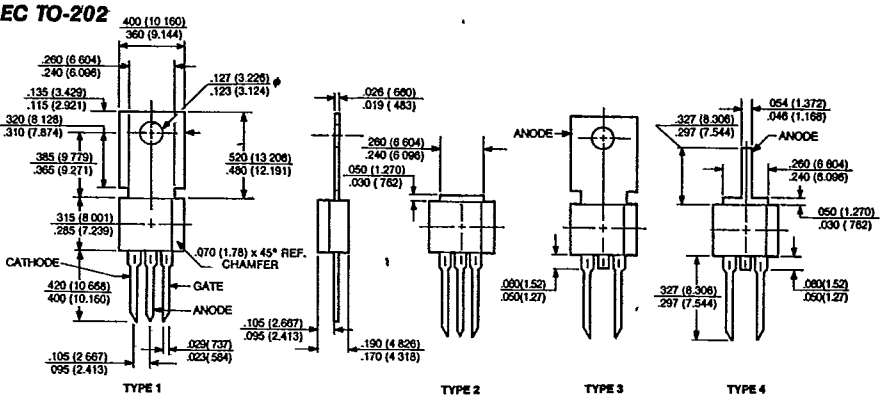


Note: TO-220 standoff distance is less.

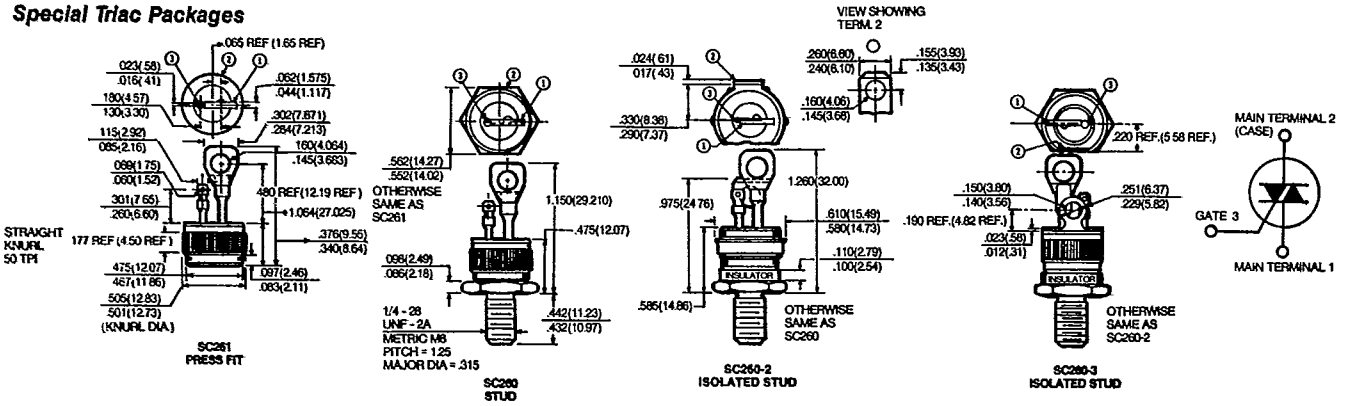
JEDEC TO-239AB



JEDEC TO-202



Special Triac Packages



(Consult factory for flange versions.)

TRIACS

Glass Axial Leaded—Consult Factory

Isolated Plastic with Fast-Ons—Consult Factory

Metric Stud—Consult Factory
M8 x 1.25
M12 x 1.5
M20 x 1.5
M24 x 1.5

Press Pak—Consult Factory
14.5mm x 43mm
14.5mm x 50 mm

Surface Mount—Consult Factory
MP-3
SOT-89

POWEREX

T-91-01

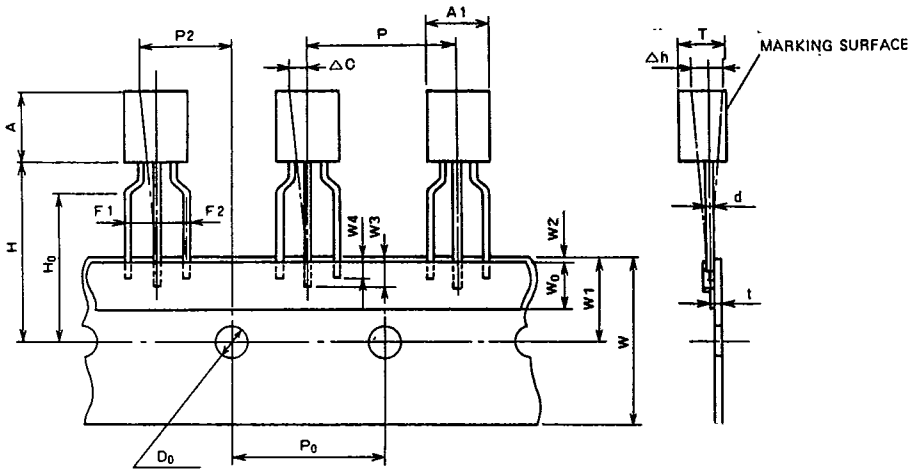
Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

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	$18.0 \pm^{1.0}_{0.5}$	
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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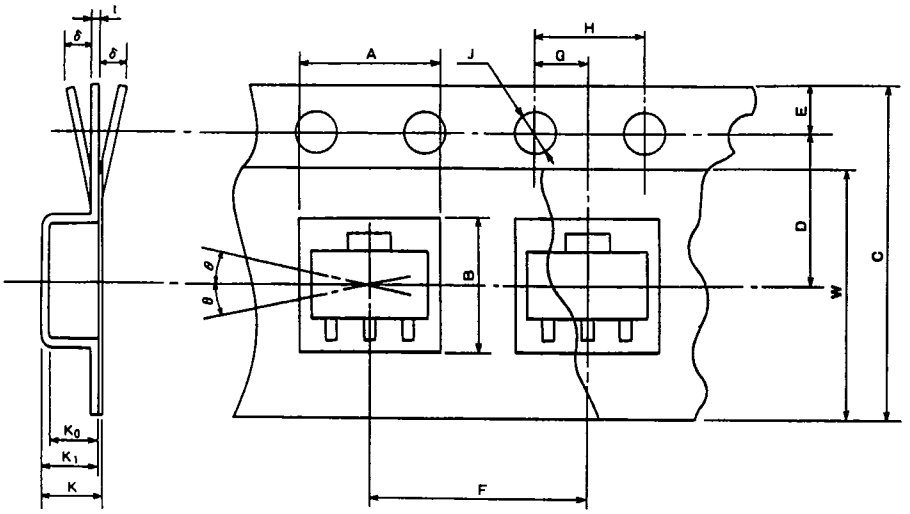
Powerex Semiconductor Data Book
Taping



SOT-89 Package

Thyristor
CR08AS

Taping dimensions

Description of symbol		Symbol	Dimensions/angles Unit:mm	Remark
Parts insertion Concave square hole	Height	A	$5.0\pm^{0.1}_{0.1}$	Cross-section of the surface 0.5mm above the inner bottom
	Width	B	$4.6\pm^{0.1}_{0.1}$	Cross-section of the surface 0.5mm above the inner bottom
	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	$\phi1.5\pm^{0.1}_{0.05}$	
	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 δ0.3 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