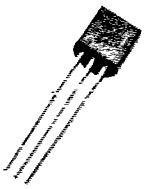
TRIACS

$I_{T(RMS)}$ T_C=80° C 360° Conduction (Amps)	I_{TSM} (Amps) 50 Hz	60 Hz	I^2t for Fusing @ 8.3 ms (A^2sec)	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)
.8 Tc=48°C	7.3	8	.27	1	400-600	1.2	1.6	65	−40 to 125	2	.2
1 Tc=56°C	9.1	10	.4	1	200-600	1.5	1.6	50	−40 to 125	2	.1
3 Tc=71°C	27.3	30	3.7	1	200-600	4.5	1.5	10	−40 to 110	1.5 ×	.2
5 Tc=60°C	45.6	50	10.4	2	400-600	7	1.8	3	−40 to 125	1.5 ×	.2
5 Tc=103°C	45.6	50	10.4	2	400-600	7	1.8	3	−40 to 125	1.5 ×	.2
5 Tc=95°C	45.6	50	10.4	2	400-600	7	1.8	4	−40 to 125	1.5 ×	.2
6 Tc=103°C	55	60	15	2	200-600	9	1.7	2.5	−40 to 125	1.5 ×	.2
6	74	80	26.5	.5	200-600	8.5	1.83	2.22	−40 to 100	3.5	.2
6 Tc=82°C	74	80	26.5	.5	200-600	8.5	1.83	2.8	−40 to 100	3.5	.2
6	74	80	26.5	.5	200-600	8.5	1.83	2.95	−40 to 100	3.5	.2
6	74	80	26.5	.5	200-600	8.5	1.83	2.95	−40 to 100	3.5	.2
6 Tc=79°C	74	80	26.5	.5	200-600	8.5	1.83	3.10	−40 to 100	3.5	.2
6	74	80	26.5	.5	200-600	8.5	1.83	2.95	−40 to 100	3.5	.2
6 Tc=82°C	74	80	26.5	.5	200-600	8.5	1.83	2.80	−40 to 100	3.5	.2
6.5	74	80	26.5	.5	200-600	9.2	1.85	3.1	−40 to 100	3.5	.2
8 Tc=75°C	104	110	50	.5	200-600	11.5	1.75	3.3	−40 to 100	3.5	.2
8	110	120	60	.5	200-600	11.5	1.55	3.2	−40 to 100	3.5	.2
8 Tc=105°C	74	80	26	2	200-600	12	1.5	2	−40 to 125	1.5 ×	.2
8 Tc=94°C	74	80	26	2	200-600	12	1.5	3	−40 to 125	1.5 ×	.2
10 Tc=103°C	91	100	41.6	2	200-600	15	1.5	1.8	−40 to 125	1.5 ×	.2
10 Tc=93°C	91	100	41.6	2	200-600	15	1.5	2.7	−40 to 125	1.5 ×	.2
10	110	120	60	.5	200-600	14	1.65	2.2	−40 to 100	3.5	.2

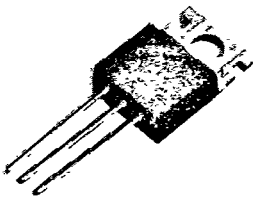
* = Isolated Tab
° = Tentative Specifications
× = 25°C Value

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.
—	2	—	—	—	10 4Q=10	Surface Mount	SOT-89	°BCRO8AS
—	2	—	—	—	5 4Q=10	Plastic Encapsulated	TO-92	°BCR1AM
—	6	—	—	—	30	Plastic Encapsulated	TO-202	°BCR3AM
—	5	—	—	—	30	Surface Mount	MP-3	°BCR5AS
—	5	—	—	—	15	Flat Pak	TO-220	°BCR5AM
—	5	—	—	—	15	Flat Pak	TO-220	°BCR5DM
—	6-10	—	—	—	30	Flat Pak	TO-220	°BCR6AM
30	4	50-100	100-400	80	50	Power Pak Non-Isolated Tab	TO-220AB	SC141
30	4	50-100	100-400	80	50	Non-Isolated Stud	—	SC240
30	4	50-100	100-400	80	50	Isolated Stud With Press or MT2 Terminal	—	SC240-2
30	4	50-100	100-400	80	50	Isolated Stud With Solder Ring MT2 Terminal	—	SC240-3
30	4	50-100	100-400	80	50	Isolated TO-3 Flange	—	SC240-4
30	4	50-100	100-400	80	50	Non-Isolated TO-3 Flange	—	SC240-5
30	4	50-100	100-400	80	50	Press Fit	—	SC241
30	4	50-100	100-400	80	50	Power Pak Isolated Tab	TO-220AB	SC140*
50	4	50-100	100-400	80	50	Power Pak Isolated Tab	TO-220AB	SC142*
50	4	50-100	100-400	80	50	Power Pak Non-Isolated Tab	TO-220AB	SC143
—	6-10	38-200 Typical	—	120 Typical	50 Typical	Flat Pak	TO-220	BCR8CM
—	6-10	38-200 Typical	—	120 Typical	50 Typical	Flat Pak	TO-220	BCR8DM
—	6-10	38-200 Typical	—	180 Typical	50 Typical	Flat Pak	TO-220	BCR10CM
—	6-10	38-200 Typical	—	180 Typical	50 Typical	Flat Pak	TO-220	BCR10DM
100-150	4	50-100	100-400	80	50	Power Pak Non-Isolated Tab	TO-220AB	SC146

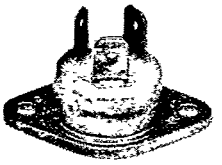


JEDEC TO-92

JEDEC TO-98



JEDEC TO-220/
JEDEC TO-220AB

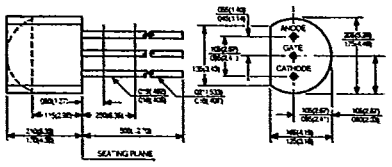


JEDEC TO-239AB

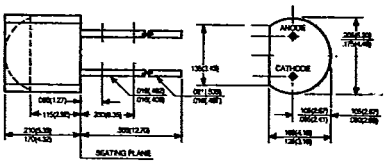
Glass axial leaded

TRIACS Outline Drawings

JEDEC TO-92



JEDEC Modified TO-92



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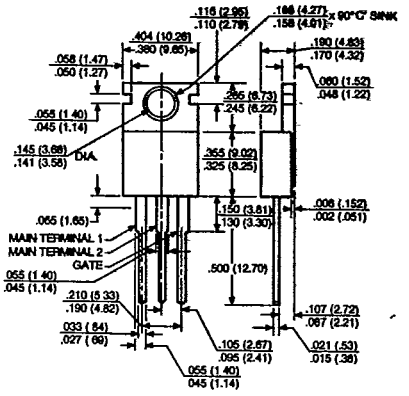
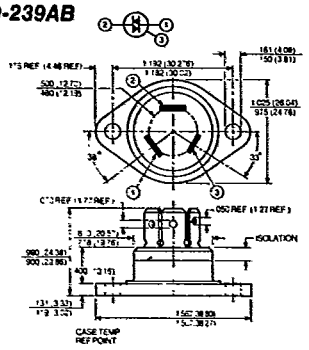
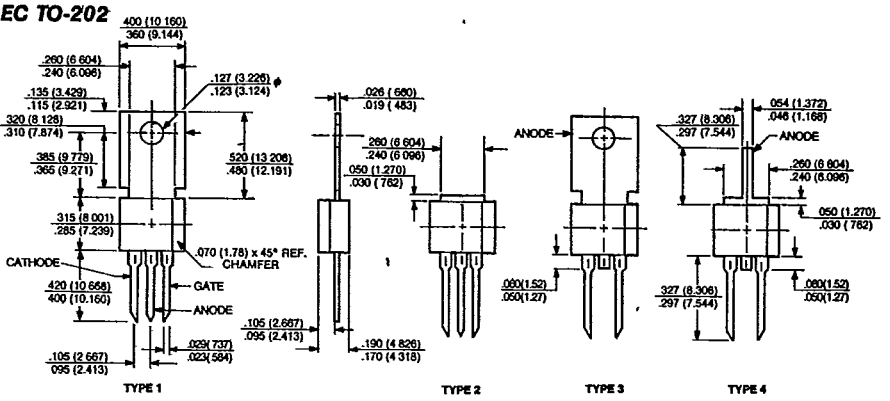


Note: TO-220 standoff distance is less.

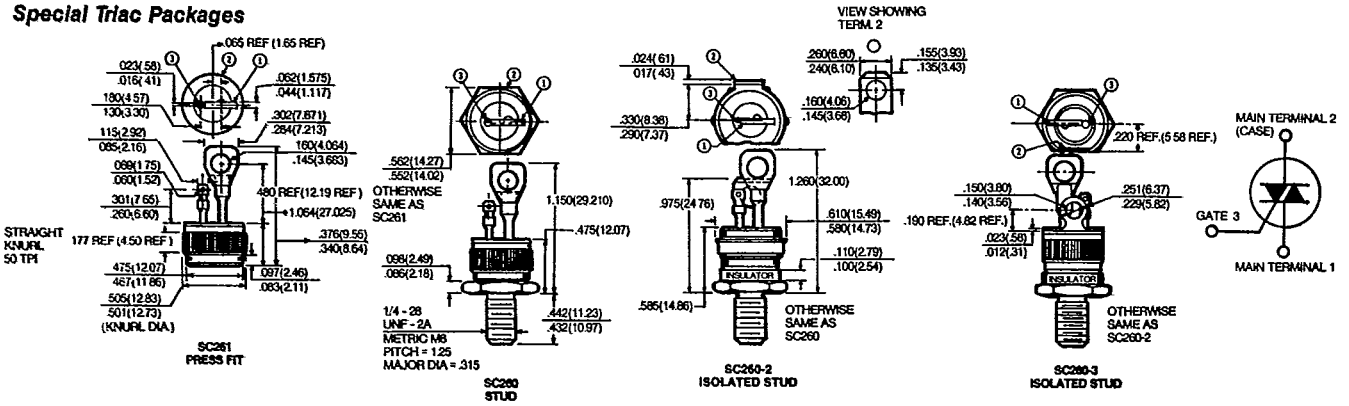
JEDEC TO-239AB



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

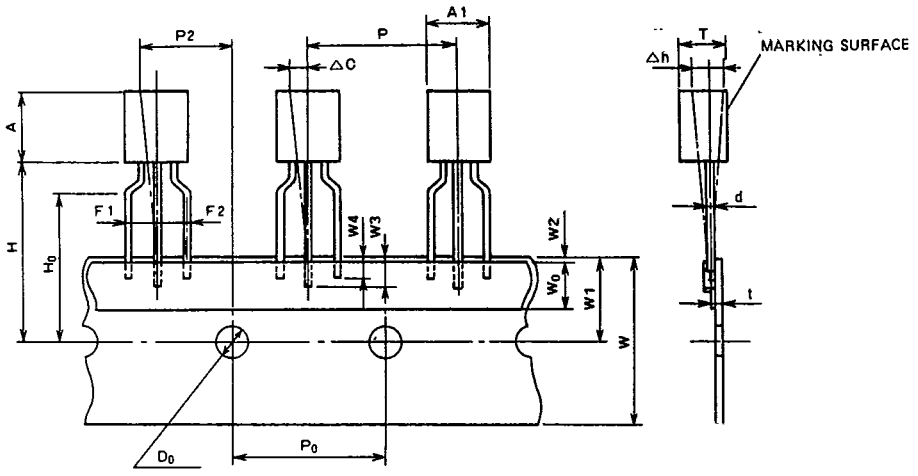
Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

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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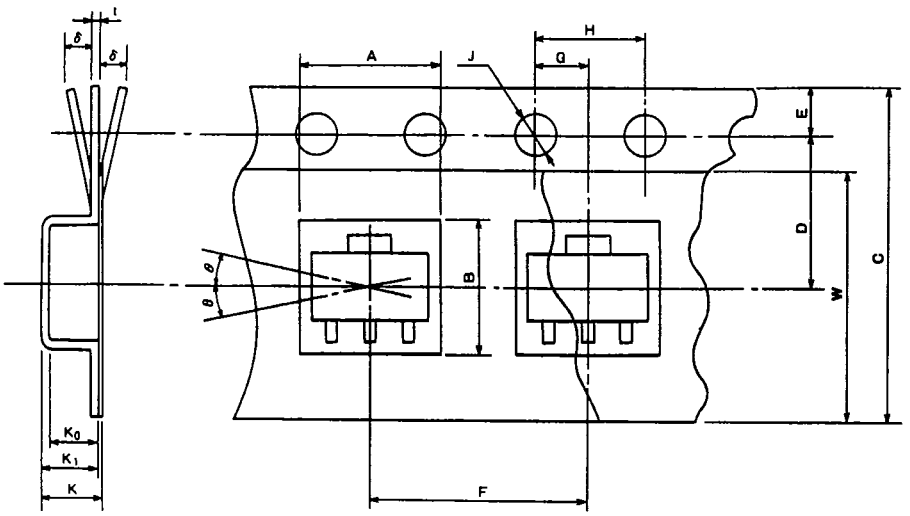
Powerex Semiconductor Data Book
Taping



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	$\phi 1.5 \pm^{0.1}_{0.05}$	
	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