

TRIACS**Triac Triggers**

The ST2 (diac) is a silicon bi-directional diode which may be used for triggering triacs or SCRs. It has a three layer structure with negative resistance switching characteristics in both directions.

The ST4 is an asymmetrical AC trigger integrated circuit for use in triac phase control applications. This device

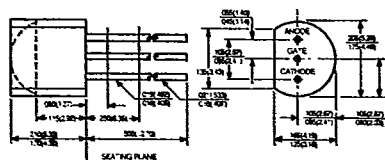
reduces the snap-on effects that are present in conventional trigger circuits by eliminating control circuit hysteresis. This performance is possible with a single RC time constant whereas a symmetrical circuit of comparable performance would require at least three more passive components.

TYPE	Vs2		Vs1		Is2, Is1 Switching Current Max. (μ A)	Pulse Output Min. (V)	PKG.
	Switching Min. (V)	Voltage Max. (V)	Switching Min. (V)	Voltage Max. (V)			
ST2	28*	36*	28*	36*	200	3.0	Glass Axial Leaded
ST4	7	9	14	18	80	3.5	TO-92

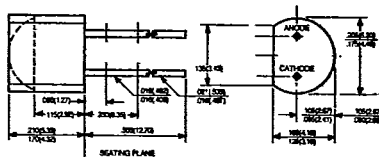
*For ST2: Vs2 = Vs $\pm$ 10%

TRIACS Outline Drawings

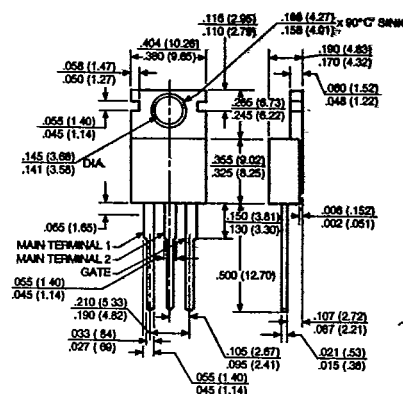
JEDEC TO-92



JEDEC Modified TO-92

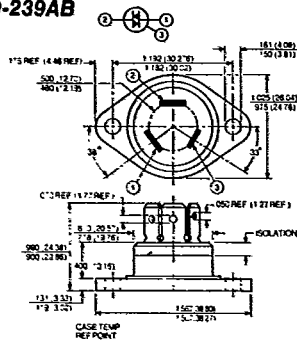


JEDEC TO-220AB

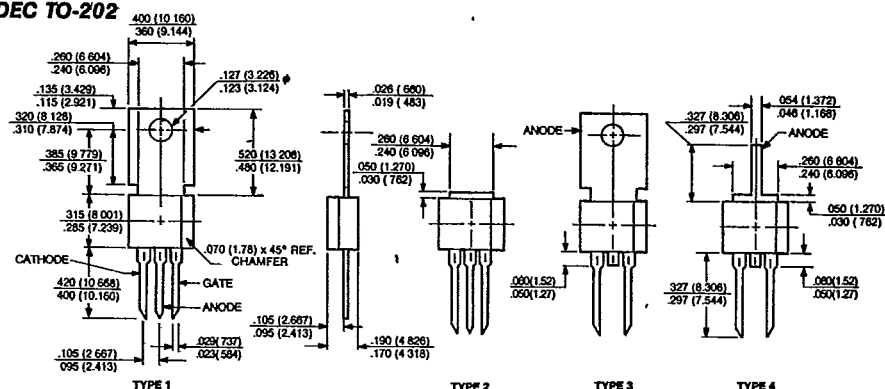


Note: TO-220 standoff distance is less.

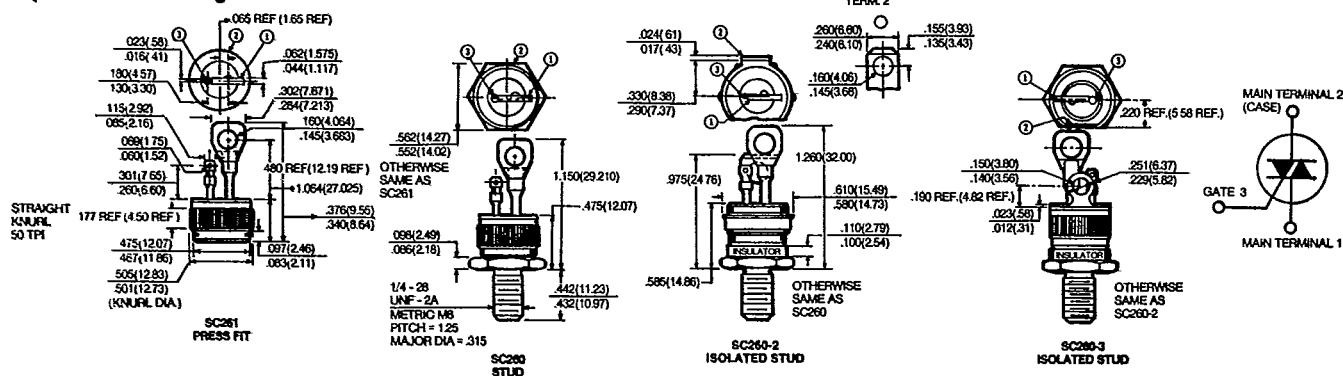
JEDEC TO-239AB



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 × 1.25

M12 × 1.5

M20 × 1.5

M24 × 1.5

Press Pak—Consult Factory

14.5mm × 43mm

14.5mm × 50 mm

Surface Mount—Consult Factory

MP-3

SOT-89



T-91-01

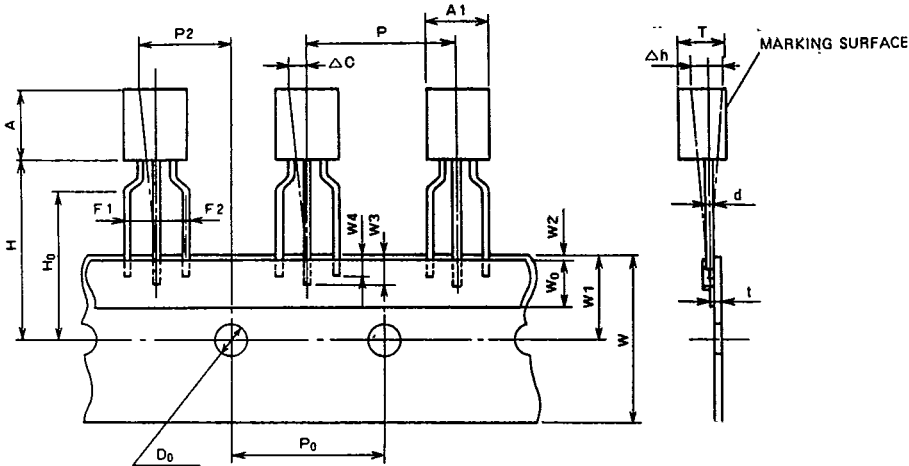
Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

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	

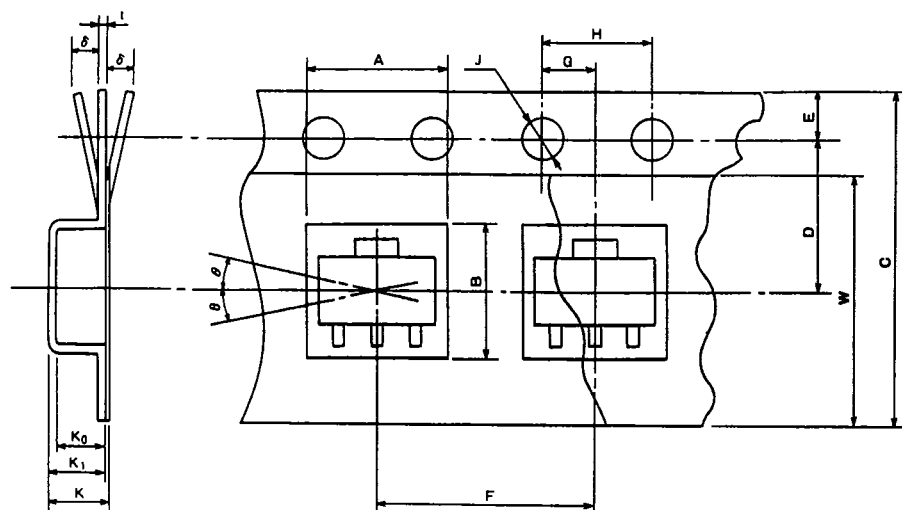


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Powerex Semiconductor Data Book

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