

C-Series Half Control Thyristor Modules

$I_T(AV) @ T_C$ (Amps)	T_C (°C)	V_{DRM}/V_{RRM} (Volts)	t_q (μ sec)	I_{gr} (mA)	V_{gr} (Volts)	di/dt (A/ μ sec)	dv/dt (V/ μ sec)	I_{TSM} (Amps)	V_{IOL} (V _{RMS})	Package	Type No.
25	93	800	—	50	3	100	500	500	2000	M42	CM4208A2**
40	102	400	100	100	3	800	300	1200	2500	CD4	CD420440
40	102	600	100	100	3	800	300	1200	2500	CD4	CD420640
40	102	800	100	100	3	800	300	1200	2500	CD4	CD420840
40	102	1200	100	100	3	800	300	1200	2500	CD4	CD421240
40	102	1400	100	100	3	800	300	1200	2500	CD4	CD421440
40	102	400	100	100	3	800	300	1200	2500	CD4	CD470440
40	102	600	100	100	3	800	300	1200	2500	CD4	CD470640
40	102	800	100	100	3	800	300	1200	2500	CD4	CD470840
40	102	1400	100	100	3	800	300	1200	2500	CD4	CD471440
55	86	800	—	100	3	100	500	1100	2000	M42	CM420855**
55	81	1200	—	100	3	100	500	1100	2500	M-2	CM421255**
55	81	1600	—	100	3	100	500	1100	2500	M-2	CM421655**
60	89	400	100	100	3	800	300	1800	2500	CD4	CD420460
60	89	600	100	100	3	800	300	1800	2500	CD4	CD420660
60	89	800	100	100	3	800	300	1800	2500	CD4	CD420860
60	89	1200	100	100	3	800	300	1800	2500	CD4	CD421260
60	89	1400	100	100	3	800	300	1800	2500	CD4	CD421460
60	89	400	100	100	3	800	300	1800	2500	CD4	CD470460
60	89	600	100	100	3	800	300	1800	2500	CD4	CD470660
60	89	800	100	100	3	800	300	1800	2500	CD4	CD470860
60	89	1200	100	100	3	800	300	1800	2500	CD4	CD471260
60	89	1400	100	100	3	800	300	1800	2500	CD4	CD471460
90	87	400	100	100	3	800	300	1800	2500	CD4	CD420490
90	87	600	100	100	3	800	300	1925	2500	CD4	CD420690
90	87	800	100	100	3	800	300	1925	2500	CD4	CD420890
90	87	1200	100	100	3	800	300	1925	2500	CD4	CD421290
90	87	1400	100	100	3	800	300	1925	2500	CD4	CD421490
90	87	400	100	100	3	800	300	1925	2500	CD4	CD470490
90	87	600	100	100	3	800	300	1925	2500	CD4	CD470690
90	87	800	100	100	3	800	300	1925	2500	CD4	CD470890
90	87	1200	100	100	3	800	300	1925	2500	CD4	CD471290
90	87	1400	100	100	3	800	300	1925	2500	CD4	CD471490
90	86	800	—	100	3	100	500	1800	2000	M42	CM420890**
90	82	1200	—	100	3	100	500	1800	2500	M-2	CM421290**
90	82	1600	—	100	3	100	500	1800	2500	M-2	CM421690**
130	85	800	—	100	3	100	500	2600	2000	M52	CM520813**
130	78	1200	—	100	3	100	500	2600	2500	M52	CM521213**
130	78	1600	—	100	3	100	500	2600	2500	M52	CM521613**
200	65	800	—	100	3	100	500	4000	2000	M52	CM520820**
200	63	1200	—	100	3	100	500	4000	2500	M52	CM521220**
200	63	1600	—	100	3	100	500	4000	2500	M52	CM521620**

**New product or under development



CD42/CM42



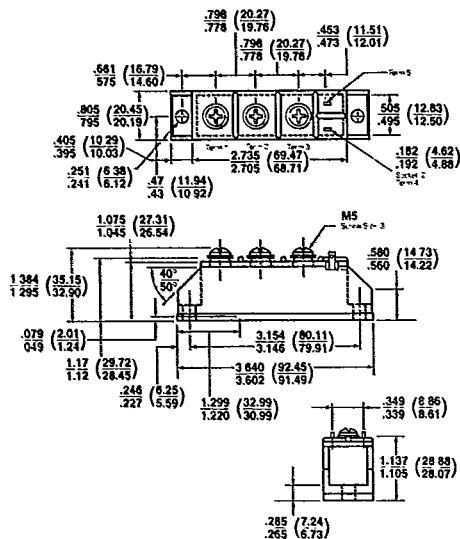
CD47/CM52



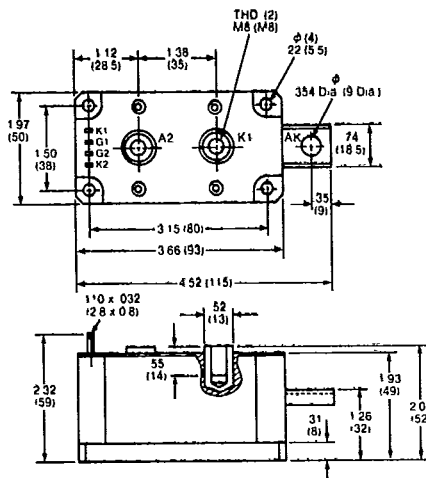
CD42

Thyristor and Diode Modules Outline Drawings

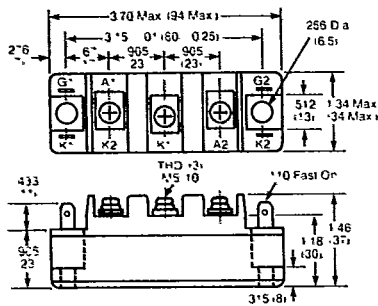
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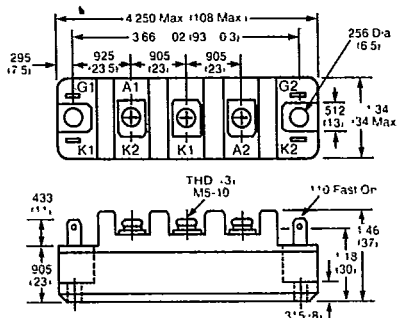
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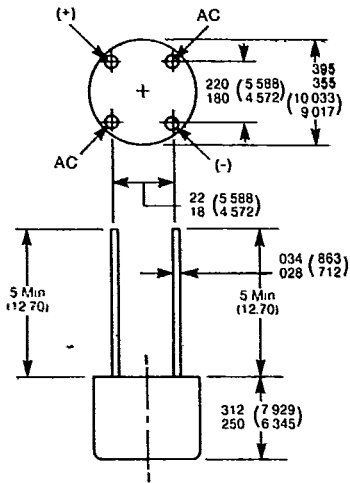
GDM-1210



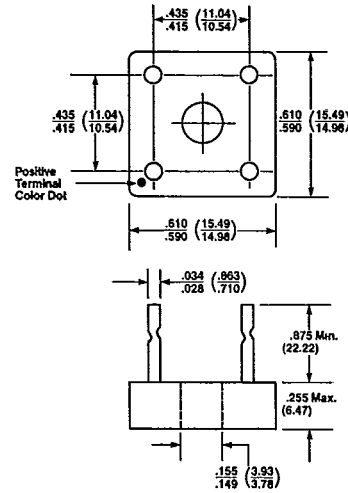
GDM-1220



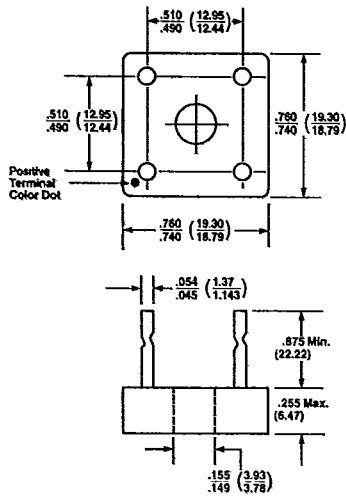
MB11A01



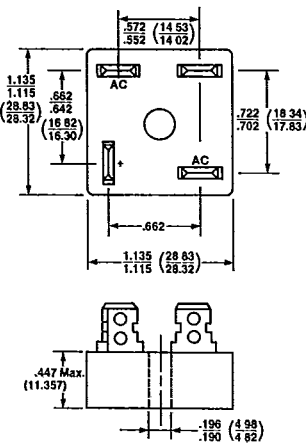
MB11A02



MB11A06



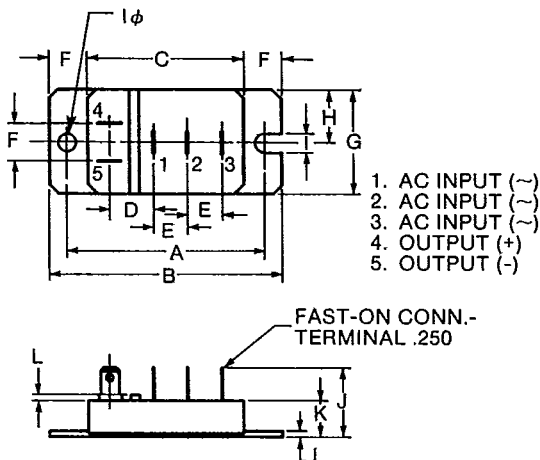
MB12



Thyristor and Diode Modules Outline Drawings

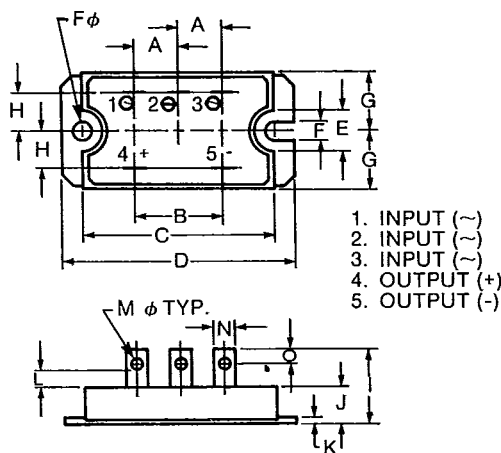
ME10

Dim	Inches	Metric
A	2.68±.020	68.0±0.5
B	3.15±.020	80.0±0.5
C	2.126	54.0
D	.591	15.0
E	.472	12.0
F	.512±.020	13.0±0.5
G	1.42±.020	29.0±0.5
H	.571	14.5
I	.256	6.5
J	1.102 MAX.	28.0 MAX.
K	.512	13.0
L	.079	2.0



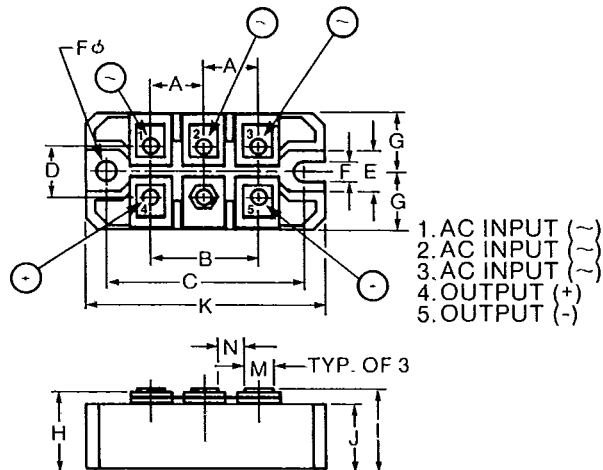
ME20

Dim	Inches	Metric
A	.591±.020	15±0.5
B	1.181±.020	30±0.5
C	2.60±.008	66±0.2
D	3.15	80 Max.
E	.551	14.0
F	.256	6.5
G	.787	20.0
H	.512	13.0
I	1.004±.020	25.5±0.5
J	.492±.020	12.5±0.5
K	.079±.012	2.0±0.3
L	.197	5 Min.
M	.165	4.2
N	.295	7.5
O	.177	4.5



ME30

Dim	Inches	Metric
A	.709±.012	18±0.3
B	1.417±.020	36±0.5
C	2.60±.008	66±0.2
D	.670	16.0
E	.551	14.0
F	.256	6.5
G	.787	20.0
H	1.063	27 Max.
I	1.102	28 Max.
J	.906	23 Max.
K	3.15	80 Max.
M	.374	9.5
N	.315	8.0 Min.





T-91-01

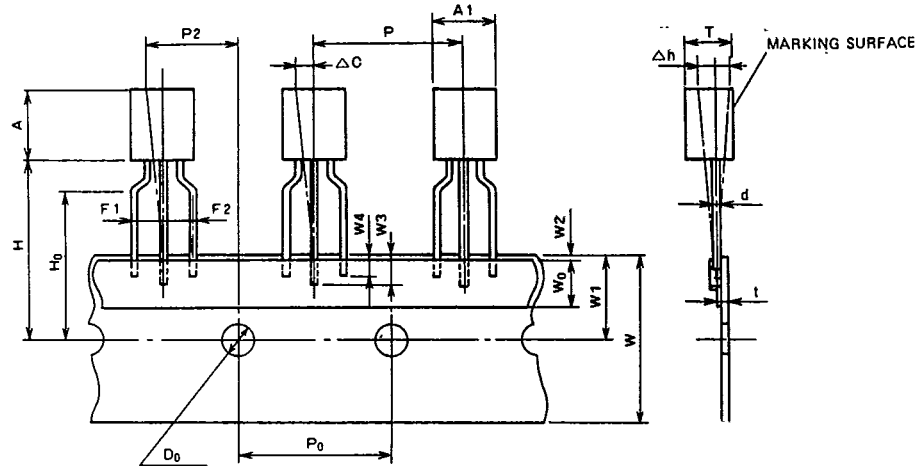
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 Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

Taping

STANDARD SPECIFICATIONS FOR TAPING OF MOLDED PACKAGE THYRISTORS AND TRIACS

TO-92 Package

Thyristor
CR02AM, CR03AM, CR04AM
Triac
BCR1AM



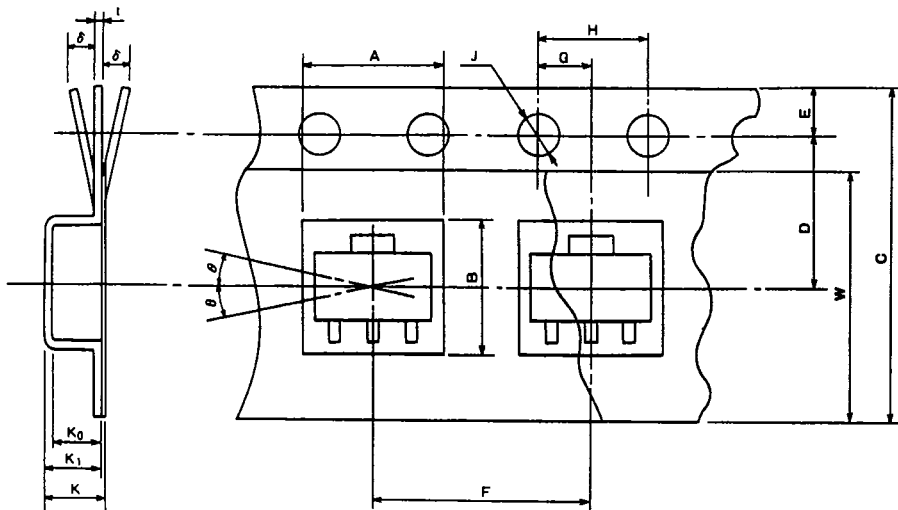
Taping dimensions

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