SILICON
MOLDED ASSEMBLY RECTIFIER BRIDGES

Single-Phase Full-Wave Bridge

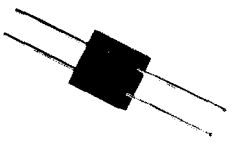
MDA942 SERIES (1.5 AMPS DC)

MDA972 SERIES (16.0 AMPS DC)

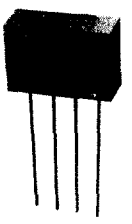
MDA1591 SERIES (4.0 AMPS DC)

Three-Phase Full-Wave Bridge

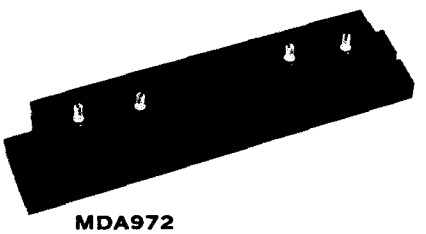
MDA1505 SERIES (8.0 AMPS DC)



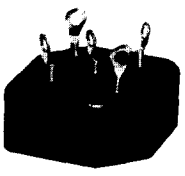
MDA942
CASE 110



MDA942A
CASE 111



MDA972
CASE 116



MDA1591
CASE 112

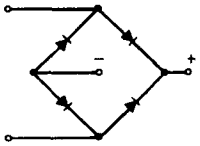
Molded assembly rectifier bridges are individual hermetically sealed rectifiers interconnected and encapsulated in molded assemblies for use as single-phase and three-phase full-wave bridge configurations, with output current from 1.5 to 16 amps, peak reverse voltage from 50 to 600 volts.

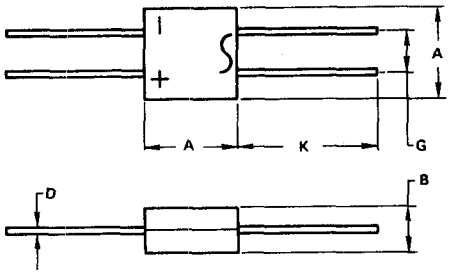
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Value	Unit
Maximum Forward Voltage Drop per Cell		V_F		Vdc
(I_F = 0.75 Adc)	MDA942 series		1.1	
(I_F = 5.0 Adc)	MDA972 series		1.0	
(I_F = 4.0 Adc)	MDA1505 series		1.0	
(I_F = 2.0 Adc)	MDA1591 series		1.0	
Maximum Reverse Current per Cell		I_R		mAdc
(V_R = Rated V_{RM})	MDA942 series		0.01	
	MDA972 series		1.0	
	MDA1505 series		1.0	
	MDA1591 series		1.0	

RECTIFIER BRIDGES (continued)

SINGLE-PHASE FULL-WAVE BRIDGE



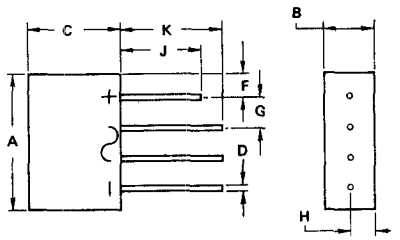


DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	–	14.35	–	0.565
B	–	7.24	–	0.285
D	0.76	0.86	0.030	0.034
G	6.22	6.48	0.245	0.255
K	–	27.94	–	1.100

MDA942

CASE 110-01

1

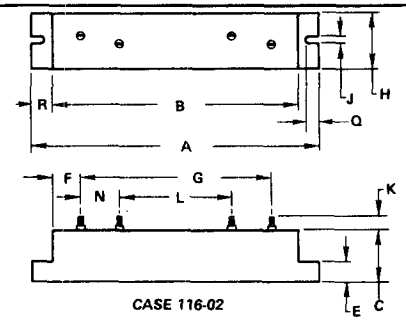


NOTE:
1. POLARITY INK MARKED ON CASE.

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	–	17.45	–	0.687
B	–	6.60	–	0.260
C	–	11.89	–	0.468
D	0.74	0.89	0.029	0.035
F	2.90 NOM		0.114 NOM	
G	3.73	3.89	0.147	0.153
H	3.18 NOM		0.125 NOM	
J	12.70	–	0.500	–
K	19.05	–	0.750	–

MDA942A

CASE 111-01

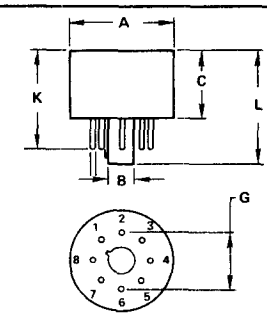


CASE 116-02

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	176.28	177.80	6.940	7.000
B	150.88	152.40	5.940	6.000
C	28.96	34.29	1.140	1.350
E	10.67	12.70	0.420	0.500
F	14.61	15.88	0.575	0.625
G	116.84	121.92	4.600	4.800
H	32.26	34.29	1.270	1.350
J	3.66 NOM		0.144 NOM	
K	7.11	8.13	0.280	0.320
L	66.04	68.58	2.600	2.700
N	25.40	26.67	1.000	1.050
Q	8.89	9.40	0.350	0.370
R	11.68	12.70	0.460	0.500

NOTES:
1. TERMINALS HAVE MILLED SLOTS 1.17 mm (0.046) WIDE AND 4.37 mm (0.172) DEEP.

2



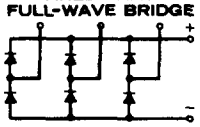
STYLE 1:
PIN 1. +
2. OPEN
3. AC
4. OPEN
5. –
6. OPEN
7. AC
8. OPEN
COLOR CODED

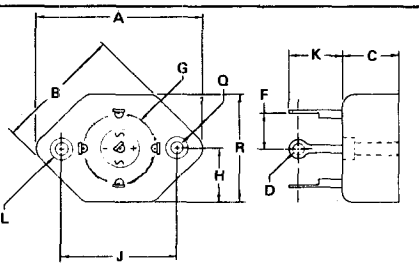
DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	–	32.13	–	1.265
B	7.75	8.00	0.305	0.315
C	20.32	21.72	0.800	0.855
G	17.32	17.58	0.682	0.692
K	31.27	32.89	1.231	1.295
L	34.24	35.31	1.348	1.390

CASE 112-03

3

THREE-PHASE FULL-WAVE BRIDGE





CASE 114-01

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	–	57.66	–	2.270
B	43.18	44.45	1.700	1.750
C	21.08	22.10	0.830	0.870
D	3.56	–	0.140	–
F	13.84	14.48	0.545	0.570
G	28.58 BSC		1.125 BSC	
H	–	22.10	–	0.870
J	43.94 BSC		1.730 BSC	
K	5.08	–	0.200	–
L	6.22	6.48	0.245	0.255
Q	3.30	3.81	0.130	0.150
R	–	44.20	–	1.740

NOTES:
1. DIM "L" IS 3.18 mm (0.125) DEEP; DIM "Q" IS THRU HOLE

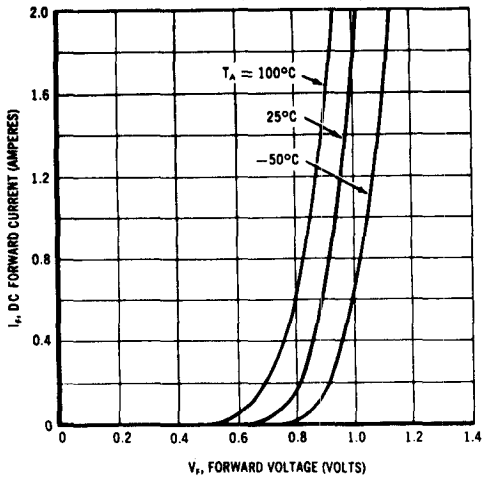
4

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

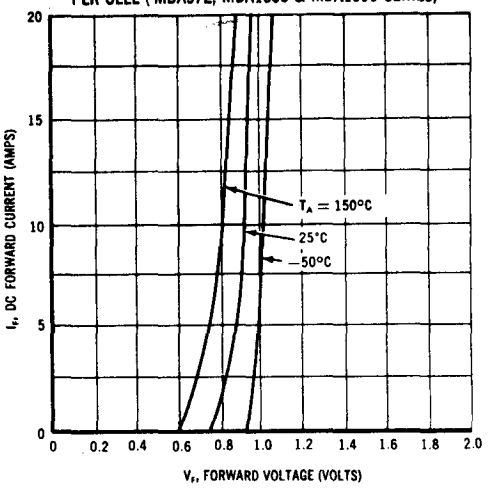
	TYPE NO.	PEAK REVERSE VOLTAGE PER CELL (DC or RECURRENT) Volts	SINE WAVE RMS INPUT VOLTAGE (LINE to LINE) Volts	DC OUTPUT VOLTAGE Res. Load Volts	DC OUTPUT VOLTAGE Cap. Load Volts	DC OUTPUT CURRENT @ 55°C AMBIENT Amps	PEAK FULL WAVE ONE CYCLE SURGE CURRENT (60 Hz) Amps	PEAK FULL WAVE RECURRENT FORWARD CURRENT (60 Hz) Amps
	MDA942-1	50	35	30	50	1.50	25	6.0
	-2	100	70	62	100	1.50	25	6.0
1	-3	200	140	124	200	1.50	25	6.0
	-4	300	210	185	300	1.50	25	6.0
	-5	400	280	250	400	1.50	25	6.0
	-6	600	420	380	600	1.50	25	6.0
	MDA972-1	50	35	30	50	16.0	250	60
	-2	100	70	62	100	16.0	250	60
2	-3	200	140	124	200	16.0	250	60
	-4	300	210	185	300	16.0	250	60
	-5	400	280	250	400	16.0	250	60
	MDA1591 -1	50	35	30	50	4.00	100	25
	-2	100	70	62	100	4.00	100	25
3	-3	200	140	124	200	4.00	100	25
	-4	300	210	185	300	4.00	100	25
	-5	400	280	250	400	4.00	100	25
	-6	600	420	380	600	4.00	100	25
	MDA1505 -1	50	35	47	50	8.00	200	45
	-2	100	70	95	100	8.00	200	45
4	-3	200	140	190	200	8.00	200	45
	-4	300	210	285	300	8.00	200	45
	-5	400	280	380	400	8.00	200	45
	-6	600	420	570	600	8.00	200	45

Maximum Operating and Storage Temperature: -65°C to +150°C (All Types)

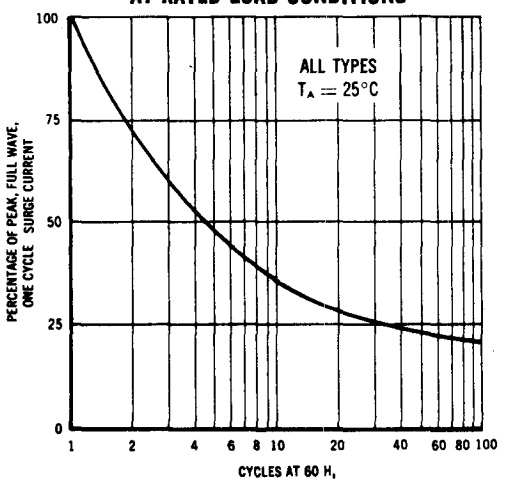
TYPICAL FORWARD CHARACTERISTICS
PER CELL (MDA942 SERIES)



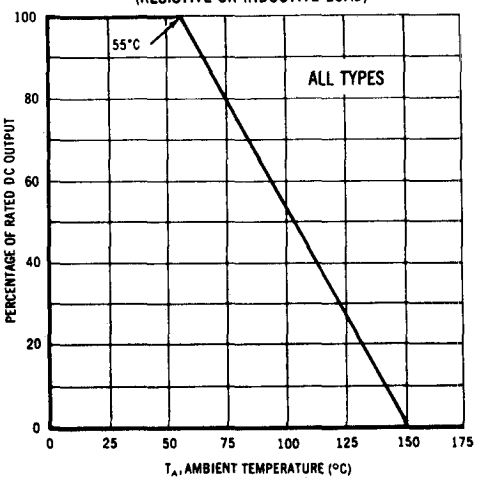
TYPICAL FORWARD CHARACTERISTICS
PER CELL (MDA972, MDA1505 & MDA1591 SERIES)



MAXIMUM ALLOWABLE FULL WAVE SURGE CURRENT AT RATED LOAD CONDITIONS



MAXIMUM ALLOWABLE DC OUTPUT
(RESISTIVE OR INDUCTIVE LOAD)



MECHANICAL CHARACTERISTICS

CASE: Molded plastic encapsulation.

FINISH: All external surfaces are corrosion-resistant, terminals are readily solderable.

POLARITY: Terminal designation by color dots:
AC input — yellow
+DC output — red
−DC output — not marked

MOUNTING POSITION: Any

WEIGHT: (approx.) MDA942, MDA942A — 3.8 grams
MDA972 — 340 grams
MDA1591 — 39 grams