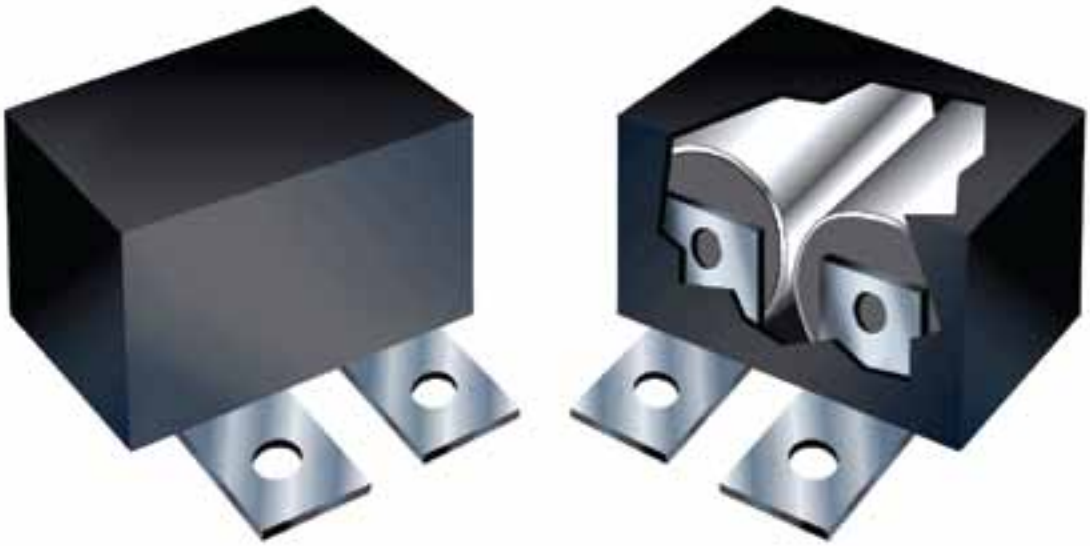
Electronic Concepts

"Film Capacitor Innovation without Limits"

MP88-PT88

Metallized Polypropylene and Polypropylene & Foil Constructions

Snubber capacitors - Key dual element design with no internal wires lowers inductance up to 70%, with higher reliability. ESR as low as 0.0019OHMS; less than 15nH; ripple current to 46.2amps; dv/dt to 13,174v/µs.



FEATURES

- No internal wire connections improve frequency response
- Direct-to-element tab attachnment
- Terminals spacing 23-28mm
- Reversed current through unique dual element design minimizes ESL

STANDARD CONFIGURATION

- Straight terminals (A)
- Offset terminals (B)

Specification Summary

Capacitance Range
0.10µF to 2.5µF

Capacitance Tolerance
Standard capacitance tolerance is ±10%. Tolerances of ±5%, and ±20% also available. NOTE: Capacitance is measured at 25°C, and at a frequency of 1kHz for all values.

Operating Temperature Range
-55°C to +105°C

Enclosure/Construction
Extended foil

Voltage Rating
VDC: 800 VDC to 3000 VDC
VAC: 460 VAC to 920 VAC

Quality Control
Capacitors are tested 100% for:

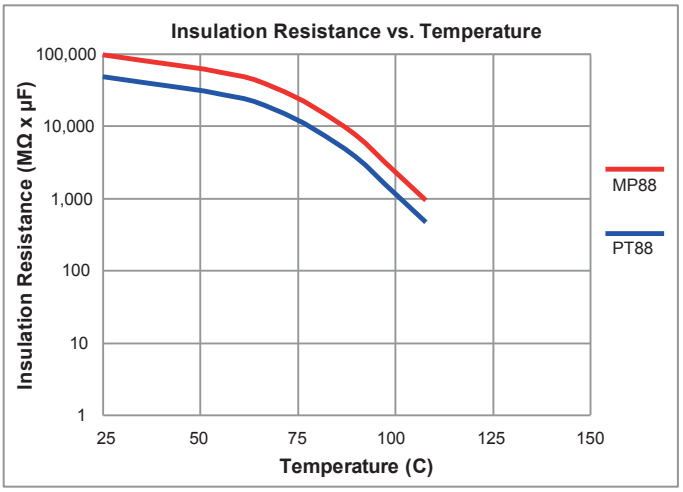
- Capacitance
- Tolerance
- Dissipation Factor
- Dielectric withstanding voltage
- Insulation Resistance
- Equivalent Series Resistance (ESR)

Process and inspection data are maintained on file and available upon special request.

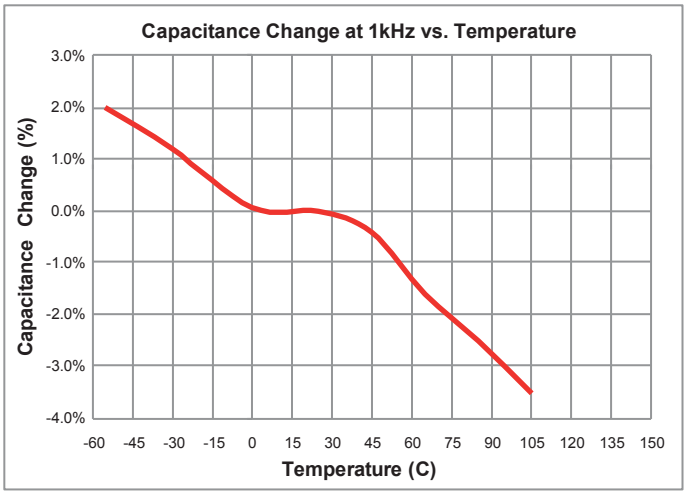
Environmental

Parameter	Method	Condition
Vibration	204	D
Shock	213	I
Humidity	106	-
Life	108	F
Reference MIL-STD-202		

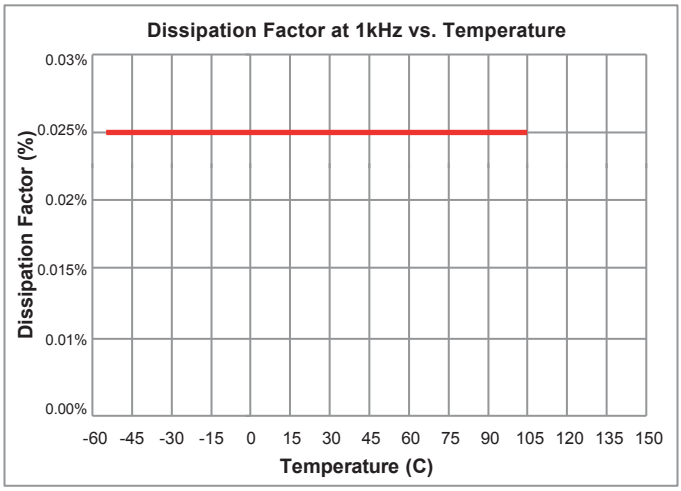
Characteristics



Dielectric Strength
Capacitors withstand a DC potential of 1.5 x rated voltage for one (1) minute without damage or break-down. Test voltage is applied and discharged through a minimum resistance of 100 OHM per volt minimum.



Dissipation Factor
When measured at the frequency specified for capacitance measurement, the dissipation factor will not exceed 0.10% for style MP88 or 0.05% for style PT88.



Detail Data

PART NUMBER	CAP µF	VDC	VAC	ESR (100 kHz)	25°C (Arms)	50°C (Arms)	85°C (Arms)	I PEAK (Amps)	DV/DT (v/µs)	ESL (nH)	Fres (kHz)	CASE NO.
PT88BG104-	0.10	800	460	0.0036	26.4	21.9	13.5	1317	13174	<15	4062	1
PT88BG124-	0.12	800	460	0.0032	27.9	23.2	14.2	1475	12295	<15	3708	1
PT88BG154-	0.15	800	460	0.0029	29.4	24.5	15.0	1581	10539	<15	3317	1
PT88BG184-	0.18	800	460	0.0026	30.8	25.6	15.7	1739	9661	<15	3028	1
PT88BG224-	0.22	800	460	0.0024	32.2	26.8	16.5	1932	8782	<15	2739	1
PT88BG274-	0.27	800	460	0.0022	33.7	28.0	17.2	2134	7904	<15	2472	1
PT88BG334-	0.33	800	460	0.0020	34.9	29.0	17.8	2319	7026	<15	2236	1
PT88BG394-	0.39	800	460	0.0023	41.6	34.6	21.3	2157	5531	<25	1613	2
PT88BG474-	0.47	800	460	0.0022	43.0	35.8	22.0	2363	5029	<25	1469	2
PT88BG564-	0.56	800	460	0.0020	44.2	36.7	22.6	2534	4526	<25	1346	2
PT88BG684-	0.68	800	460	0.0019	45.9	38.1	23.4	2907	4274	<25	1222	2
PT88BG754-	0.75	800	460	0.0019	46.2	38.4	23.6	2923	3897	<25	1163	2
PT88BL104-	0.10	1000	460	0.0036	26.4	21.9	13.5	1317	13174	<15	4062	1
PT88BL124-	0.12	1000	460	0.0032	27.9	23.2	14.2	1475	12295	<15	3708	1
PT88BL154-	0.15	1000	460	0.0029	29.4	24.5	15.0	1581	10539	<15	3317	1
PT88BL184-	0.18	1000	460	0.0026	30.8	25.6	15.7	1739	9661	<15	3028	1
PT88BL224-	0.22	1000	460	0.0024	32.2	26.8	16.5	1932	8782	<15	2739	1
PT88BL274-	0.27	1000	460	0.0022	33.7	28.0	17.2	2134	7904	<15	2472	1
PT88BL334-	0.33	1000	460	0.0025	40.3	33.6	20.6	1991	6034	<25	1753	2
PT88BL394-	0.39	1000	460	0.0023	41.6	34.6	21.3	2157	5531	<25	1613	2
PT88BL474-	0.47	1000	460	0.0022	43.0	35.8	22.0	2363	5029	<25	1469	2
PT88BL564-	0.56	1000	460	0.0020	44.2	36.7	22.6	2534	4526	<25	1346	2
PT88BN104-	0.10	1200	460	0.0036	26.4	21.9	13.5	1317	13174	<15	4062	1
PT88BN124-	0.12	1200	460	0.0032	27.9	23.2	14.2	1475	12295	<15	3708	1
PT88BN154-	0.15	1200	460	0.0029	29.4	24.5	15.0	1581	10539	<15	3317	1
PT88BN184-	0.18	1200	460	0.0026	30.8	25.6	15.7	1739	9661	<15	3028	1
PT88BN224-	0.22	1200	460	0.0024	32.2	26.8	16.5	1932	8782	<15	2739	1
PT88BN274-	0.27	1200	460	0.0026	39.1	32.6	20.0	1901	7040	<25	1939	2
PT88BN334-	0.33	1200	460	0.0025	40.3	33.6	20.6	1991	6034	<25	1753	2
PT88BN394-	0.39	1200	460	0.0023	41.6	34.6	21.3	2157	5531	<25	1613	2
PT88BN474-	0.47	1200	460	0.0022	43.0	35.8	22.0	2363	5029	<25	1469	2

PART NUMBER	CAP µF	VDC	VAC	ESR (100 kHz)	25°C (Arms)	50°C (Arms)	85°C (Arms)	I PEAK (Amps)	DV/DT (v/µs)	ESL (nH)	Fres (kHz)	CASE NO.
MP88BG394-	0.39	800	460	0.0077	18.0	14.9	9.2	295	758	<15	2057	1
MP88BG474-	0.47	800	460	0.0073	18.6	15.4	9.5	320	682	<15	1874	1
MP88BG564-	0.56	800	460	0.0069	19.0	15.8	9.7	339	606	<15	1717	1
MP88BG684-	0.68	800	460	0.0063	19.9	16.6	10.2	386	568	<15	1558	1
MP88BG754-	0.75	800	460	0.0062	20.1	16.7	10.3	398	530	<15	1483	1
MP88BG824-	0.82	800	460	0.0058	20.7	17.2	10.6	435	530	<15	1419	1
MP88BG105-	1.00	800	460	0.0056	21.1	17.5	10.8	455	455	<15	1285	1
MP88BG125-	1.20	800	460	0.0073	23.4	19.5	12.0	452	377	<25	920	2
MP88BG145-	1.40	800	460	0.0068	24.2	20.2	12.4	496	354	<25	851	2
MP88BG155-	1.50	800	460	0.0065	24.8	20.7	12.7	532	354	<25	822	2
MP88BG185-	1.80	800	460	0.0063	25.3	21.0	12.9	558	310	<25	751	2
MP88BG205-	2.00	800	460	0.0061	25.6	21.3	13.1	576	288	<25	712	2
MP88BG225-	2.20	800	460	0.0060	25.7	21.4	13.1	585	266	<25	679	2
MP88BG255-	2.50	800	460	0.0056	26.8	22.3	13.7	664	266	<25	637	2

NOTE: The tenth character of the part number represents terminal configuration (A or B). See diagram.

Detail Data

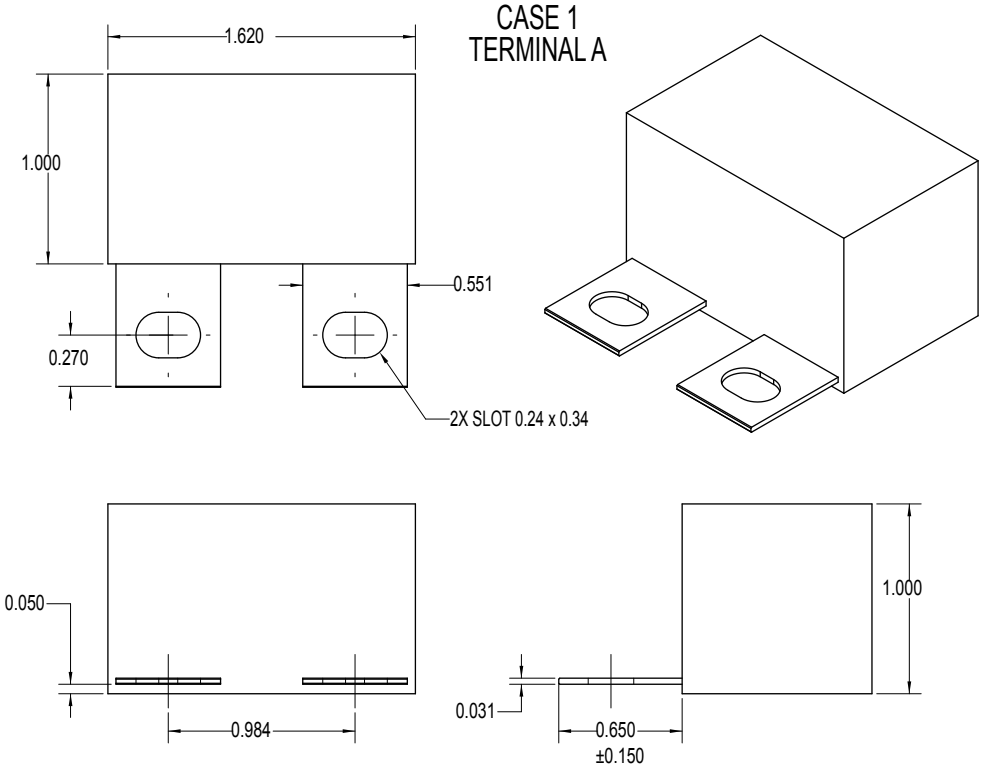
PART NUMBER	CAP µF	VDC	VAC	ESR (100 kHz)	25°C (Arms)	50°C (Arms)	85°C (Arms)	I PEAK (Amps)	DV/DT (v/µs)	ESL (nH)	Fres (kHz)	CASE NO.
MP88BL334-	0.33	1000	460	0.0082	17.4	14.5	8.9	275	833	<15	2236	1
MP88BL394-	0.39	1000	460	0.0077	18.0	14.9	9.2	295	758	<15	2057	1
MP88BL474-	0.47	1000	460	0.0073	18.6	15.4	9.5	320	682	<15	1874	1
MP88BL564-	0.56	1000	460	0.0069	19.0	15.8	9.7	339	606	<15	1717	1
MP88BL684-	0.68	1000	460	0.0063	19.9	16.6	10.2	386	568	<15	1558	1
MP88BL754-	0.75	1000	460	0.0062	20.1	16.7	10.3	398	530	<15	1483	1
MP88BL824-	0.82	1000	460	0.0089	21.2	17.6	10.8	345	421	<25	1112	2
MP88BL105-	1.00	1000	460	0.0080	22.4	18.6	11.4	399	399	<25	1007	2
MP88BL125-	1.20	1000	460	0.0073	23.4	19.5	12.0	452	377	<25	920	2
MP88BL145-	1.40	1000	460	0.0068	24.2	20.2	12.4	496	354	<25	851	2
MP88BL155-	1.50	1000	460	0.0065	24.8	20.7	12.7	532	354	<25	822	2
MP88BL185-	1.80	1000	460	0.0063	25.3	21.0	12.9	558	310	<25	751	2
MP88BN274-	0.27	1200	460	0.0090	16.7	13.9	8.5	245	909	<15	2472	1
MP88BN334-	0.33	1200	460	0.0082	17.4	14.5	8.9	275	833	<15	2236	1
MP88BN394-	0.39	1200	460	0.0077	18.0	14.9	9.2	295	758	<15	2057	1
MP88BN474-	0.47	1200	460	0.0073	18.6	15.4	9.5	320	682	<15	1874	1
MP88BN564-	0.56	1200	460	0.0069	19.0	15.8	9.7	339	606	<15	1717	1
MP88BN684-	0.68	1200	460	0.0096	20.4	17.0	10.4	316	465	<25	1222	2
MP88BN754-	0.75	1200	460	0.0092	20.8	17.3	10.6	332	443	<25	1163	2
MP88BN824-	0.82	1200	460	0.0089	21.2	17.6	10.8	345	421	<25	1112	2
MP88BN105-	1.00	1200	460	0.0080	22.4	18.6	11.4	399	399	<25	1007	2
MP88BN125-	1.20	1200	460	0.0073	23.4	19.5	12.0	452	377	<25	920	2
MP88BN145-	1.40	1200	460	0.0068	24.2	20.2	12.4	496	354	<25	851	2
MP88BT104-	0.10	1600	920	0.0086	17.0	14.2	8.7	313	3125	<15	4062	1
MP88BT124-	0.12	1600	920	0.0080	17.7	14.7	9.0	338	2813	<15	3708	1
MP88BT154-	0.15	1600	920	0.0073	18.5	15.4	9.5	375	2500	<15	3317	1
MP88BT184-	0.18	1600	920	0.0069	19.0	15.8	9.7	394	2188	<15	3028	1
MP88BT224-	0.22	1600	920	0.0062	20.0	16.6	10.2	447	2031	<15	2739	1
MP88BT274-	0.27	1600	920	0.0057	20.9	17.4	10.7	506	1875	<15	2472	1
MP88BT334-	0.33	1600	920	0.0072	23.5	19.5	12.0	488	1478	<25	1753	2
MP88BT394-	0.39	1600	920	0.0070	23.9	19.9	12.2	504	1293	<25	1613	2
MP88BT474-	0.47	1600	920	0.0062	25.5	21.2	13.0	608	1293	<25	1469	2
MP88BT564-	0.56	1600	920	0.0060	25.7	21.4	13.2	621	1109	<25	1346	2
MP88CA104-	0.10	2000	920	0.0086	17.0	14.2	8.7	313	3125	<15	4062	1
MP88CA124-	0.12	2000	920	0.0080	17.7	14.7	9.0	338	2813	<15	3708	1
MP88CA154-	0.15	2000	920	0.0073	18.5	15.4	9.5	375	2500	<15	3317	1
MP88CA184-	0.18	2000	920	0.0069	19.0	15.8	9.7	394	2188	<15	3028	1
MP88CA224-	0.22	2000	920	0.0084	21.8	18.1	11.1	406	1848	<25	2148	2
MP88CA274-	0.27	2000	920	0.0078	22.7	18.9	11.6	449	1663	<25	1939	2
MP88CA334-	0.33	2000	920	0.0072	23.5	19.5	12.0	488	1478	<25	1753	2
MP88CA394-	0.39	2000	920	0.0070	23.9	19.9	12.2	504	1293	<25	1613	2
MP88CB104-	0.10	2400	920	0.0086	17.0	14.2	8.7	313	3125	<15	4062	1
MP88CB124-	0.12	2400	920	0.0080	17.7	14.7	9.0	338	2813	<15	3708	1
MP88CB154-	0.15	2400	920	0.0073	18.5	15.4	9.5	375	2500	<15	3317	1
MP88CB184-	0.18	2400	920	0.0092	20.8	17.3	10.6	366	2032	<25	2374	2
MP88CB224-	0.22	2400	920	0.0084	21.8	18.1	11.1	406	1848	<25	2148	2
MP88CB274-	0.27	2400	920	0.0078	22.7	18.9	11.6	449	1663	<25	1939	2
MP88CB334-	0.33	2400	920	0.0072	23.5	19.5	12.0	488	1478	<25	1753	2
MP88CD104-	0.10	3000	920	0.0086	17.0	14.2	8.7	313	3125	<15	4062	1
MP88CD124-	0.12	3000	920	0.0080	17.7	14.7	9.0	338	2813	<15	3708	1
MP88CD154-	0.15	3000	920	0.0100	19.9	16.6	10.2	333	2217	<25	2601	2
MP88CD184-	0.18	3000	920	0.0092	20.8	17.3	10.6	366	2032	<25	2374	2
MP88CD224-	0.22	3000	920	0.0084	21.8	18.1	11.1	406	1848	<25	2148	2
MP88CD274-	0.27	3000	920	0.0078	22.7	18.9	11.6	449	1663	<25	1939	2

NOTE: The tenth character of the part number represents terminal configuration (A or B). See diagram.

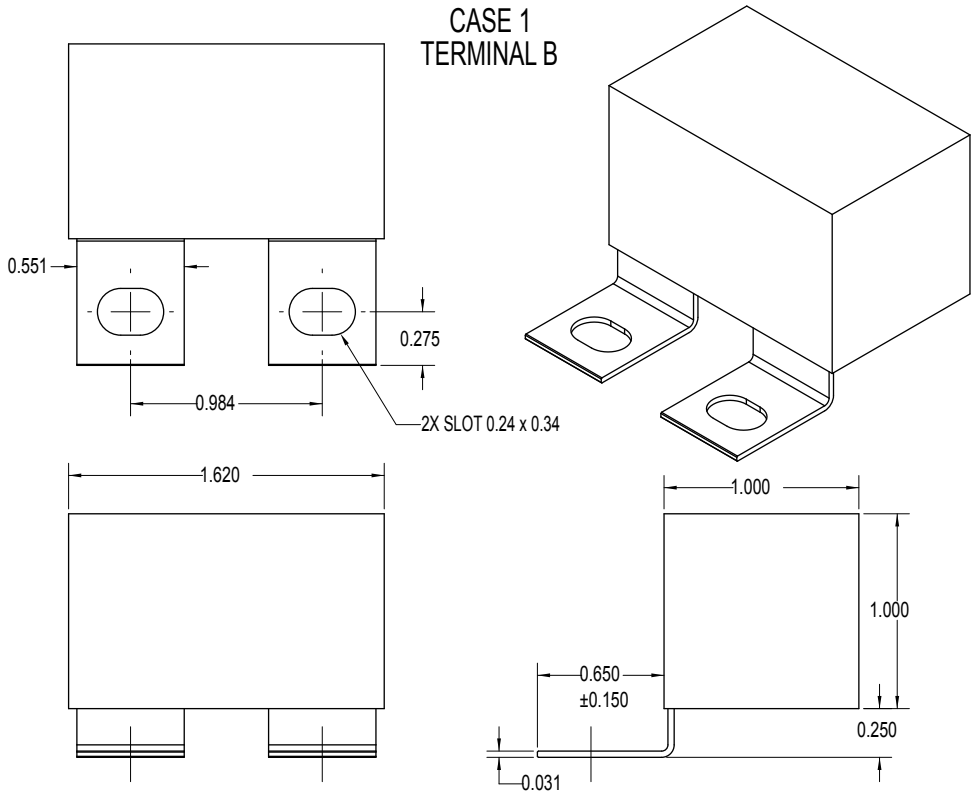
STYLE

CASE	L	W	H
1	1.62 (41.1mm)	1.00 (25.4mm)	1.00 (25.4mm)
2	1.67 (42.4mm)	1.38 (35.0mm)	1.27 (32.3mm)

CASE 1
TERMINAL A



CASE 1
TERMINAL B



ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED. TOLERANCE ON DIMENSIONS IS +/- 0.030”

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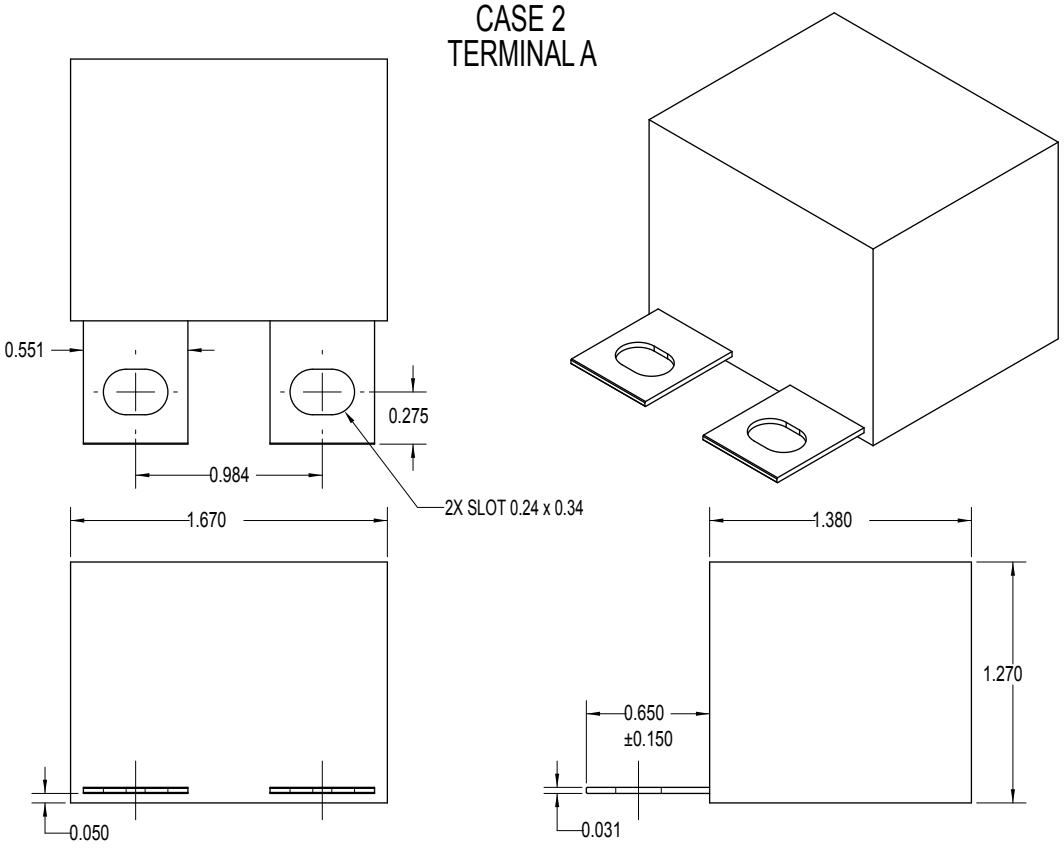
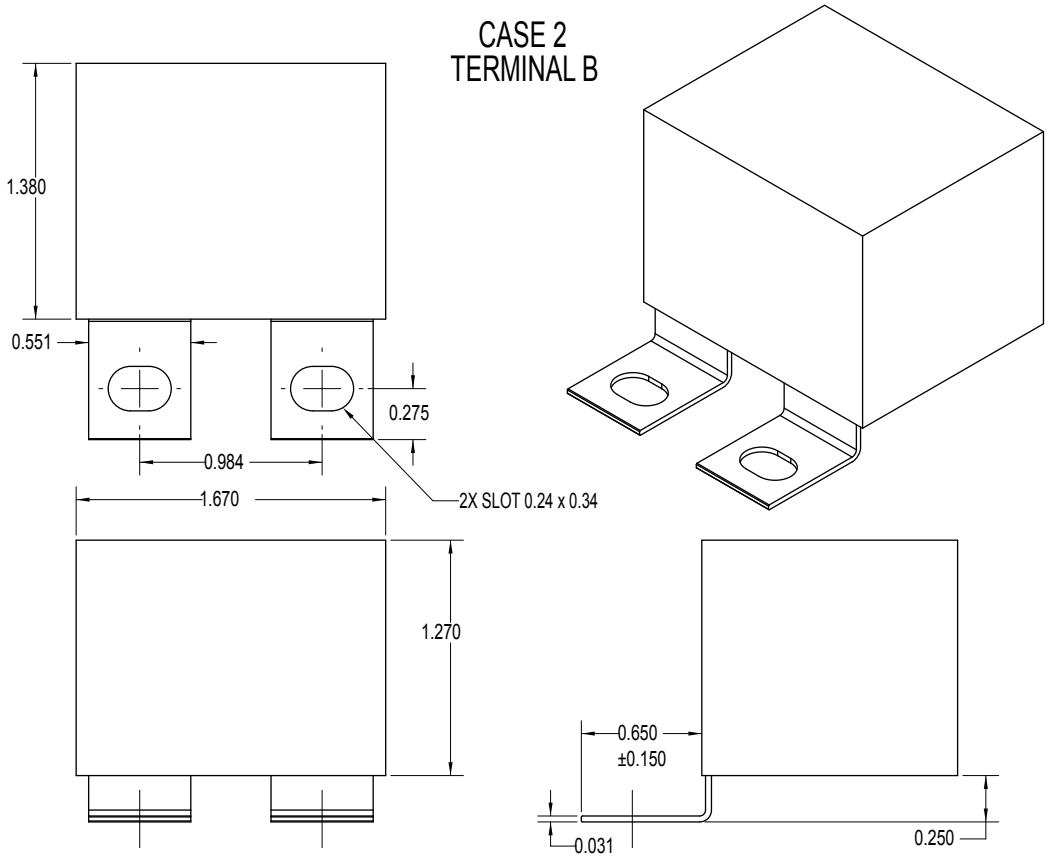
CASE 2
TERMINAL A



CASE 2
TERMINAL B



Electronic Concepts

Rev. 6

Additional Information

A performance alternative to conventional capacitors for across-the-buss power applications including motors, electric vehicles, controllers, high power converters and power conditioning systems.

The MP88/PT88 SERIES provides the marketplace with a high performance snubber capacitor within a conventional package. The MP88/PT88's dual element design with no internal wire connections provides a higher degree of in-the-field reliability. Uses encompass a wide range of motor applications, electric vehicles, controllers, high power converters and power conditioning systems.

How to Order

TYPE MP: Metallized Polypropylene PT: Film Foil →	**MP88**
VOLTAGE BG = 800VDC, BL = 1000VDC, etc. →	**BG**
CAPACITANCE IN PICOFARADS The first two digits are significant figures, the third digit represents the number of zeros to follow to express the capacitance in picofarads. →	**394**
TERMINAL STYLE A - Straight, B - Offset →	**A**

Marking And Date Code
All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type MP88/PT88, capacitance, tolerance, rated DC working voltage and date code. The first two digits of the date code represent the year, the second two digits the week, i.e., 1252 is the 52nd week of 2012, 1202 is the second week of 2012.

Quality Assurance
Major emphasis is placed on quality assurance. EC is an ISO 9001 and AS9100 Certified Company. Raw material inspection and the use of SPC manufacturing procedures assure the highest quality standards. Procedures are fully described in the EC Quality Control Manual. Electronic Concepts will continue to advance the state-of-the-art by utilizing leading edge technology, compact capacitor designs and establishing reliability procedures.

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