



Modular Devices, Inc.

Your Reliable Domestic Manufacturer



BASIC BUILDING BLOCK DC-DC CONVERTERS



3700 Series:

- Specifically designed for demanding military and aerospace applications where best value is critical.
- Compact standalone hermetically sealed solution
- Easily incorporated into existing or new system designs.
- Choice of PCB or Chassis mount packages
- Several grade/screening levels available to suit any reliability requirements
- Available in popular bus voltages.
- Higher efficiency
- No external components required
- Fully Isolated design
- Magnetic feedback - No optocouplers
- Input ripple current reduction
- Output common mode spike filter
- Inhibit-not function
- Power on Soft Start
- Short Circuit protection
- Cost Competitive

3700 SERIES BASIC CONVERTERS - By nominal input voltage

	12V Nominal Input	28V Nominal Input	270V Nominal Input
2 Watts	—	3715	—
6 Watts	3718	3716	—
12.5 Watts	—	3721/3735	—
15 Watts	—	3721/3722	—
30 Watts	—	3724/3736*	—
40 Watts	—	3735/3729*	—
50 Watts	—	3737	—
65+ Watts	—	3719	3270

*WITH INTERNAL EMI FILTER

SCREENING FLOW				Level I	Level II	Level III	Operational Parameters
				Standard	Military M	Enhanced E	MDI Grade
				-55°C to +85°C	-55°C to +85°C	-55°C to +125°C	Temp Range
				115°C	115°C	135°C	Derates to Zero at --- °C
Test	MIL-STD-883	MIL-STD-883	Detail				
Procedure	Rev/Method	Condition	Requirements				
Internal Visual	K 2017	—	—	Performed	Performed	Performed	
Temperature Cycling	K 1010	B	-55°C to +125°C 10 Cycles	Not Performed	Performed	Performed	
Constant Acceleration	K 2001	A1 Y1 Only	500 G's	Not Performed	Performed	Performed	
PIND	K 2020	B	10 G's, 60 Hz	Not Performed	Performed	Performed	
Burn-in	K 1015	B	Nominal Vin, Max. Load	85°C Tcase 24 hrs	85°C Tcase 160 hrs	125°C Tcase 160 hrs	
Electrical Test	—	—	Functional Test	Performed w/ data 25C Tcase	Performed w/ data -55C, 25C, 85C Tcase	Performed w/ data -55C, 125C Tcase	
Fine Leak	F 1014	A1 or A2	Fixed Method 5e-8	Performed	Performed	Performed	
Gross Leak	F 1014	C1	—	Performed	Performed	Performed	
External Visual	K 2009	—	—	Performed	Performed	Performed	

“THE FLATSO”



“THE MINI”



3700 SERIES COMPETITORS' CROSS REFERENCE GUIDE

MDI	Crane/Interpoint*	Infineon/IR*	VPT*
3715	MCH	-	DVCH2800
3716	MSA	ASAP28,ASA28	DVSA2800
3723	-	ASF461	DVMA28
3721D	-	-	DVSB2800D
3721T	-	-	DVGF+2800T
3721S	MHF+	AHF28	DVAB2800
3729 S,D	-	-	DVETR2800
3735S,D	MHV2800	AHV2800	-
3735D	-	-	DVTR2800S,D
3722T	-	ATO28T	DVEHF2800T
3735D	MTR2800	ATR2800T	-
3737S	MFH	-	-
3737S	-	-	DVHE2800S
3721T	MHF+T	AHV28T	DVHF2800T
3724	MHF, MHF+	AHF	DVHF2800S,D
3724	MFH,MFH+	-	-
3717T	MHV2800T	AHV2800T	-
3717T	-	-	DVWR2800T
3717T	MTR2800T	ATR2800T	DVTR2800T
3736	FMTR	-	-
3719	MFL	-	-
3719	MOR	AHP28	DVFL2800
3270	MHP270	AHP270	-
3738	FMCE-1528	AME28461	DVME28
3739	FME270	AME270461	-

* TRADEMARKS OF RESPECTIVE COMPANIES

3700 Series EMI Filters :

- Meets the latest MIL-STD-461D,E,F,G CE102 requirements when used with most unfiltered DC-DC Converters
- Compact standalone hermetically sealed solution
- Easily incorporated into existing or new system designs.
- Choice of PCB or Chassis mount packages
- Several grade/screening levels available to suit any reliability requirements
- Available in popular bus voltages.
- Low Attenuation/ Low I²R Loss Solution for maximum efficiency and low power dissipation

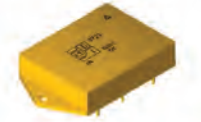
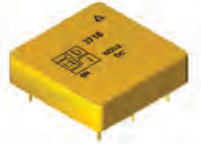
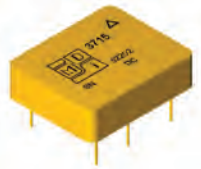


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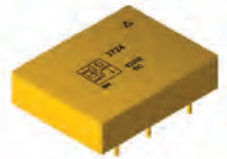
"THE MOAF"
(MOTHER OF ALL FILTERS)

3700 SERIES BASIC CONVERTERS

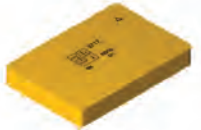
MDI	Length	Width	Height
3715S,D	0.975"	0.800"	0.270"
3716	1.080"	1.080"	0.270"
3718	1.080"	1.080"	0.270"
3723	1.080"	1.080"	0.270"
3721D	1.463"	1.130"	0.330"
3721T	1.463"	1.130"	0.330"
3721S	1.463"	1.130"	0.330"
3721T	1.463"	1.130"	0.330"
3724	1.463"	1.130"	0.330"
3724	1.463"	1.130"	0.330"



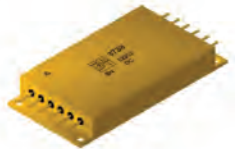
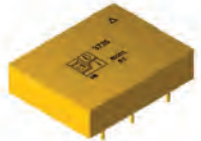
MDI	Length	Width	Height
3717T	1.350"	1.950"	0.415"
3729 S,D	1.350"	1.950"	0.415"



3735S,D	2.125"	1.125"	0.405"
3735D	2.120"	1.120"	0.415"
3722T	2.125"	1.125"	0.405"
3735D	2.120"	1.120"	0.415"
3737S	2.120"	1.120"	0.423"
3737S	2.120"	1.120"	0.423"



3736	3.000"	1.500"	0.400"
3719	3.000"	1.500"	0.400"
3719	3.000"	1.500"	0.400"
3270	3.000"	1.500"	0.400"
3738	3.000"	1.500"	0.400"
3739	3.000"	1.500"	0.400"



3700 SERIES BASIC CONVERTERS - By nominal input voltage

12V Nominal Input 28V Nominal Input 270V Nominal Input

2 Watts	3717	3715	-
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28V Max Output

7A	3723
15A	3738
50A	3727

270V Max Output

5A	3739
50A	23727

	50V	70V	100V	120V
50A	53727	73727	83727	93727

Since 1973

The year 2018 marks our forty-fifth as a pre-eminent supplier of high reliability DC-DC power converters for some of the industry's most discriminating customers in the most demanding applications: International Space Station, any number of specialty satellites and constellations operating on orbit or in deep space, supporting our troops with major defense contractors in military applications in current deployment, and powering scientific experiments and monitoring equipment in some of the toughest radiation environments on earth. The products we make that do this - reliably, dependably, day in, day out without maintenance - are all designed, engineered, developed, built, manufactured and tested right here in Shirley, New York, USA.

The New Basic

We've leveraged this experience, talent and knowledge gained over the years into a new product line, introduced here that we call "Basic DC-DC Converters" - our 3700 series. There's nothing "basic" about the series in the sense that its "stripped down", "lesser quality" or "no frills" compared with our other product lines. Rather, the 3700 designs have been carefully contemplated, developed, and executed—from concept to completion—to be the best value for customers currently. We do this by using or considering competitors converters manufactured overseas. Our New Basic may include such advantages as gallium nitride HEMT technology for faster more efficient power processing, magnetically coupled RF feedback for precise dynamic voltage regulation without optoelectronic devices, conducted noise suppression on inputs and outputs, on-off control, a soft output ramp and short circuit protection. And they're not "basic" quality; every 3700 model is housed in a rugged glass-to-metal sealed hermetic steel package so the electronics are always protected no matter what the outside environment. They're one hundred percent screened to the reliability level of your choice. Basic means better value, wider availability and shorter lead times for you.

Not Just Converters

There're 3700 series EMI filters too. For those of you who need to meet MIL-STD-461 and other EMI standards, pair the converter you select with an EMI filter to optimize quiet performance. Our EMI filters can serve multiple converters, so if you are designing a power system keep their generous current ratings in mind to minimize packaging volume.

You Name It

Take a good look at the Competitor's Cross Reference we've built; if you're using an internationally sourced competitor's product, you could replace it pin-for-pin with a better converter sourced domestically here in the USA at a great price. And notice a few of the endearing names we've given our products; the Flatso, the Mini and MOAF (Mother of All Filters - a 50A rated compact low loss EMI filter). Remember too, we can modify any of the listed 3700 designs to suit your particular requirements - different output voltages, different output voltage combinations, different control or paralleling functions - all no problem. Maybe we can name a model after you!

Henry F. Striegl, Jr.

Vice President and General Manager



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Power Conversion for Military/Commercial Space/Aerospace

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Modular Devices, Inc. is an ISO 9001:2008 company.

We proudly manufacture our products in Shirley, NY.