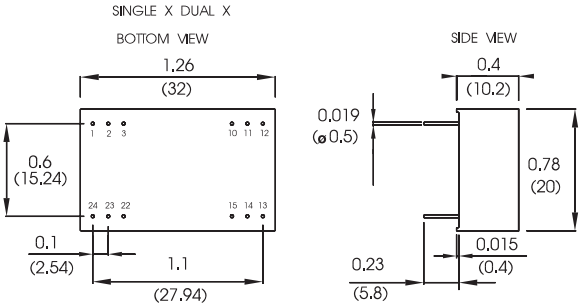
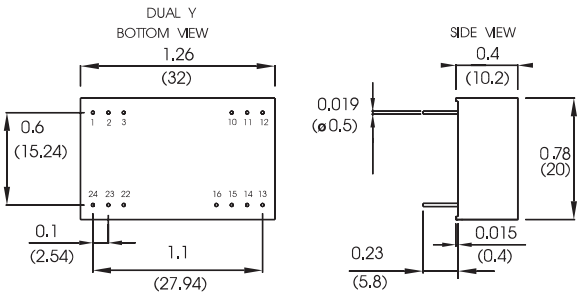
ISOLATED DC/DC CONVERTERS Industrial P.W.M.

4DCR 1.5/3 WATT



Tolerances : ± 0,004 inches (Tolerances : ± 0,1mm)
All dimensions in inches (millimeters)



Tolerances : ± 0,004 Inches (Tolerances : ± 0,1mm)
All dimensions in inches (millimeters)

SINGLE X

Pin	Single output
1	+Input
2	N/C
3	N/C
10	-Output
11	+Output
12	-Input
13	-Input
14	+Output
15	-Output
22	N/C
23	N/C
24	+Input

DUAL X

Pin	Dual output
1	+Input
2	-Output
3	Common
10	Common
11	+Output
12	-Input
13	-Input
14	+Output
15	Common
22	Common
23	-Output
24	+Input

DUAL Y*

Pin	Dual output
1	+Input
2	+Input
3	+Input
10	Common
11	Common
12	N/C
13	-Output
14	N/C
15	+Output
16	N/C
22	-Input
23	-Input
24	-Input

* All dual output are available in dual Y pinout, add the suffix Y, example : 4DCR0512DY.

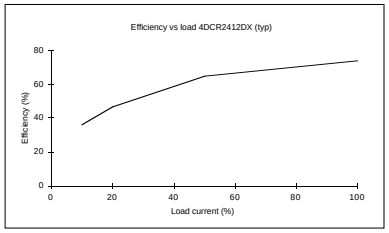
MODEL	INPUT SPECIFICATIONS			OUTPUT SPECIFICATIONS				
	minimum	maximum	nominal	Vout +	Iout +	Vout -	Iout -	power
	(Vdc)	(Vdc)	(Vdc)	(Vdc)	(mA)	(Vdc)	(mA)	(W)
4 DCR 0503 SX	4,5	6,0	5	3,3	500			1,65
4 DCR 0505 SX	4,5	6,0	5	5	500			2,50
4 DCR 0512 SX	4,5	6,0	5	12	210			2,52
4 DCR 0515 SX	4,5	6,0	5	15	170			2,55
4 DCR 1203 SX	9,0	18,0	12	3,3	500			1,65
4 DCR 1205 SX	9,0	18,0	12	5	500			2,50
4 DCR 1212 SX	9,0	18,0	12	12	250			3,00
4 DCR 1215 SX	9,0	18,0	12	15	200			3,00
4 DCR 2403 SX	18,0	36,0	24	3,3	500			1,65
4 DCR 2405 SX	18,0	36,0	24	5	500			2,50
4 DCR 2412 SX	18,0	36,0	24	12	250			3,00
4 DCR 2415 SX	18,0	36,0	24	15	200			3,00
4 DCR 4803 SX	36,0	63,0	48	3,3	500			1,65
4 DCR 4805 SX	36,0	63,0	48	5	500			2,50
4 DCR 4812 SX	36,0	63,0	48	12	250			3,00
4 DCR 4815 SX	36,0	63,0	48	15	200			3,00
4 DCR 0512 DX	4,5	6,0	5	12	105	12	105	2,52
4 DCR 0515 DX	4,5	6,0	5	15	85	15	85	2,55
4 DCR 1212 DX	9,0	18,0	12	12	125	12	125	3,00
4 DCR 1215 DX	9,0	18,0	12	15	100	15	100	3,00
4 DCR 2412 DX	18,0	36,0	24	12	125	12	125	3,00
4 DCR 2415 DX	18,0	36,0	24	15	100	15	100	3,00
4 DCR 4812 DX	36,0	63,0	48	12	125	12	125	3,00
4 DCR 4815 DX	36,0	63,0	48	15	100	15	100	3,00

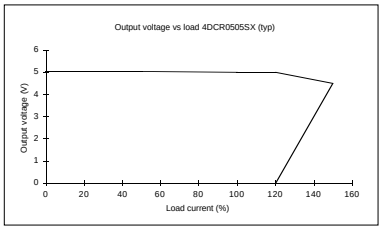
- *NOTE 1 : These converters operate without any external components. However, in low noise applications it is commended that a low ESR capacitor be placed across the output or the input pins.*
- *Conducted noise filtering to EN 55022-B, VDE0871-B may be accomplished by putting an external capacitor. For more information, please contact factory.*
- *On dual output, the outputs are not isolated from each other and may be connected to provide 24 V or 30 V.*
- *It is recommended to protect the input by fuses or other protection devices. Fuses are never supplied internally, and, without them, severe damage or even fire can occur in the event of a module failure. A slow fuse with a rating of 2X the Iin max is recommended.*

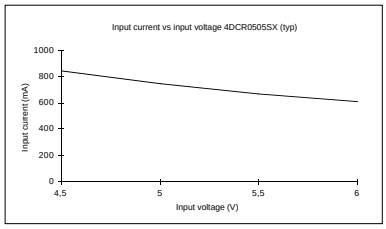
ETRI 4DCR DC/DC Converters
1.5/3W

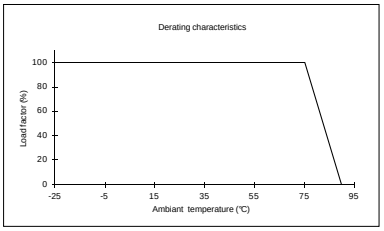
PARAMETERS	CONDITIONS	4 DCR											
Input voltage	Tc = - 25 °C to + 90 °C	5 V			12 V			24 V			48 V		
Input voltage range	Iout = 0 % to 100 %	4,5 V to 6 V			9 V to 18 V			18 V to 36 V			36 V to 63 V		
Input over voltage	0,1 second Max.	7 V			25 V			40 V			70 V		
No load input current	Iout = 0 mA : Vin = Nom.	200 mA			100 mA			30 mA			10 mA		
Output voltage	Iout = 100 % : Vin = Nom.	3,3 V/5 V	12 V	15 V	3,3 V/5 V	12 V	15 V	3,3 V/5 V	12 V	15 V	3,3 V/5 V	12 V	15 V
Output current (Single)	Vin = Min. to Max.	500 mA	210 mA	170 mA	500 mA	250 mA	200 mA	500 mA	250 mA	200 mA	500 mA	250 mA	200 mA
Output current (Dual)	Tc = - 25 °C to + 90 °C		±105 mA	±85 mA		±125 mA	±100 mA		±125 mA	±100 mA		±125 mA	±100 mA
Input current Max.	Vin = Min. : Iout = Max.	1000 mA	1100 mA		480 mA	550 mA		230 mA	260 mA		115 mA	130 mA	
Efficiency	Vin = Nom. : Iout = Max.	65 %	68 %			70 %			72 %		70 %	72 %	
Output voltage accuracy	Vin = Nom. : Iout = Max.	±2 %											
Load regulation (Iout = 10% to 100%)	Vin = Nom.	1,0%	0,5 %		1,0%	0,5 %		1,0%	0,5 %		1,0%	0,5 %	
Line regulation (Vin = Min. to Max.)	Iout = Max.	±0,25 %											
Limitation range (Vin = Min. to Max.)	Vout = Vout - 4 %	180 % of Iout Max.											
Output ripple peak to peak	BW = 10 Hz to 20 MHz	50 mV											
Input filter (see note 1)		PI filter											
Temperature coefficient	Tc = - 25 °C to + 90 °C	≤ 0,02 % per °C between - 25 °C to + 75 °C											
Input / Output isolation	1Minute	500 VDC											
Isolation resistance	Vtest = 500 VDC	>10 Gohm											
Input / Output coupling capacitor	Rh = 48 % : Tc = 25 °C	120 pF at 100 Hz											
Switching frequency	Vin = Nom. : Iout = Max.	250 KHz to 750 KHz											
Operating temperature range	Ta:	- 25 °C to + 75 °C											
Storage temperature	Ts:	- 40 °C to + 105 °C											
Maximum package temperature	Tc:	+ 90 °C											
MTBF : MIL-HDBK-217, Rev E	Ground bening, Ta = 25 °C	> 500.000 h											
Weight	Gr	12 Gr											

PERFORMANCE CURVES









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Specifications subject to change without notice.