

IMX 35 Series

35 Watt DC-DC Converters



Wide input voltage ranges up to 75 V DC
2...4 outputs up to 60 V DC
1500 V DC I/O electric strength test voltage



- Magnetic feedback on selected models
- Synchronous rectifier on some models
- Input and output protection
- Industry standard 3" x 2.5" metal case with 10.5 mm profile

Selection chart

Output 1		Output 2		Output 3		Output 4		Input	Type	Options
$U_{o \text{ nom}}$ [V DC]	$I_{o \text{ nom}}$ [A]	$U_{o \text{ nom}}$ [V DC]	$I_{o \text{ nom}}$ [A]	$U_{o \text{ nom}}$ [V DC]	$I_{o \text{ nom}}$ [A]	$U_{o \text{ nom}}$ [V DC]	$I_{o \text{ nom}}$ [A]	U_i [V DC]		
5	2.7	5	2.7	-	-	-	-	9...36	20 IMX 35-05-05-9	-8, Z, i
5	2.8	5	2.8	-	-	-	-	18...75	40 IMX 35-05-05-9	-8, Z, i
12	1.3	12	1.3	-	-	-	-	9...36	20 IMX 35-12-12-9	-8, Z, i
12	1.4	12	1.4	-	-	-	-	18...75	40 IMX 35-12-12-9	-8, Z, i
15	1.1	15	1.1	-	-	-	-	9...36	20 IMX 35-15-15-9	-8, Z, i
15	1.2	15	1.2	-	-	-	-	18...75	40 IMX 35-15-15-9	-8, Z, i
3.3	4.25	5	1.3	5	1.3	-	-	9...36	20 IMX 35-03D05-9	-8, Z, i
3.3	4.25	5	1.35	5	1.35	-	-	18...75	40 IMX 35-03D05-9	-8, Z, i
3.3	4.25	12	0.65	12	0.65	-	-	9...36	20 IMX 35-03D12-9	-8, Z, i
3.3	4.25	12	0.7	12	0.7	-	-	18...75	40 IMX 35-03D12-9	-8, Z, i
3.3	4.25	15	0.55	15	0.55	-	-	9...36	20 IMX 35-03D15-9	-8, Z, i
3.3	4.25	15	0.6	15	0.6	-	-	18...75	40 IMX 35-03D15-9	-8, Z, i
5.1	3.3	5	1.35	5	1.35	-	-	9...36	20 IMX 35-05D05-9	-8, Z, i
5.1	3.4	5	1.4	5	1.4	-	-	18...75	40 IMX 35-05D05-9	-8, Z, i
5.1	3.3	12	0.65	12	0.65	-	-	9...36	20 IMX 35-05D12-9	-8, Z, i
5.1	3.4	12	0.7	12	0.7	-	-	18...75	40 IMX 35-05D12-9	-8, Z, i
5.1	3.3	15	0.55	15	0.55	-	-	9...36	20 IMX 35-05D15-9	-8, Z, i
5.1	3.4	15	0.6	15	0.6	-	-	18...75	40 IMX 35-05D15-9	-8, Z, i
5	1.35	5	1.35	5	1.35	5	1.35	9...36	20 IMX 35 D05D05-9	-8, Z, i
5	1.4	5	1.4	5	1.4	5	1.4	18...75	40 IMX 35 D05D05-9	-8, Z, i
12	0.65	12	0.65	12	0.65	12	0.65	9...36	20 IMX 35 D12D12-9	-8, Z, i
12	0.7	12	0.7	12	0.7	12	0.7	18...75	40 IMX 35 D12D12-9	-8, Z, i
15	0.55	15	0.55	15	0.55	15	0.55	9...36	20 IMX 35 D15D15-9	-8, Z, i
15	0.6	15	0.6	15	0.6	15	0.6	18...75	40 IMX 35 D15D15-9	-8, Z, i

Input

Input voltage range	20 IMX 35	9...36 V DC
	40 IMX 35	18...75 V DC

Output

Output voltage setting accuracy	$U_{i \text{ nom}}, 50\% I_{o \text{ nom}}$	$\pm 1\% U_{o \text{ nom}}$
Minimum load	recommended for tracking outputs	$10\% I_{o \text{ nom}}$
Line/load regulation	$U_{i \text{ min}} \dots U_{i \text{ max}}, 50\% I_{o \text{ nom}},$ (outputs with magn. feedb.)	$\pm 0.5\% U_{o \text{ nom}}$
Line regulation	$U_{i \text{ min}} \dots U_{i \text{ max}}, 50\% I_{o \text{ nom}},$ (tracking outputs)	$\pm 1\% U_{o \text{ nom}}$
Load regulation	$U_{i \text{ nom}}, 10 \dots 100\% I_{o \text{ nom}},$ (tracking outputs)	$\pm 3\% U_{o \text{ nom}}$
Output voltage switching noise	$U_{i \text{ nom}}, 0 \dots 100\% I_{o \text{ nom}},$ peak-peak, total	max. $1 \dots 2\% U_{o \text{ nom}}$
Efficiency	$U_{i \text{ nom}}, I_{o \text{ nom}}$	up to typ 88%

Control and protection

Remote shut down	TTL-compatible input	disabled with ≤ 0.7 V
Input undervoltage lock-out	programmable	
Trim input for U_o		80...105%
Frequency synchronisation	twice the switching frequency	480...540 kHz
Reference output		5 V ± 0.1 V
Overload protection	$U_{i \text{ min}} \dots U_{i \text{ max}},$ hiccup mode	
No-load protection	$U_{i \text{ min}} \dots U_{i \text{ max}}$	
Temperature protection	by thermistor	

Safety and EMC

Electric strength test voltage	I/O, I/case	1500 V DC
Electromagnetic interference	conducted (with external filter)	class B radiated
		class A

Environmental

Operating ambient temperature	$U_{i \text{ nom}}, I_{o \text{ nom}}$	$-40 \dots 71^\circ\text{C}$
Storage temperature	non operational	$-40 \dots 100^\circ\text{C}$
Relative humidity	non condensing	93%

Options

Extended temperature range	$-40 \dots 85^\circ\text{C}$ (derating above 71°C), ambient, operating	-8
Open version	no housing, not lacquered	Z
Inhibit input (reverse logic)	TTL-compatible, disabled with ≥ 2.4 V or open-circuit	i

IMX 35 Series

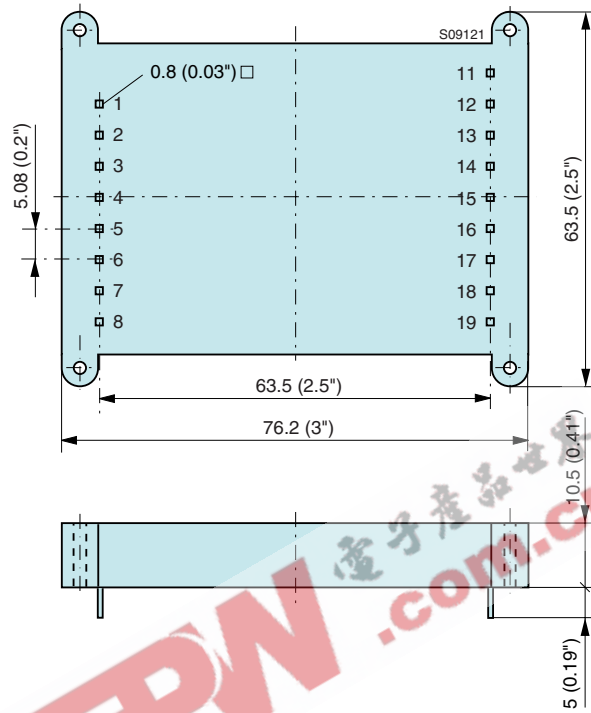
35 Watt DC-DC Converters

Mechanical data

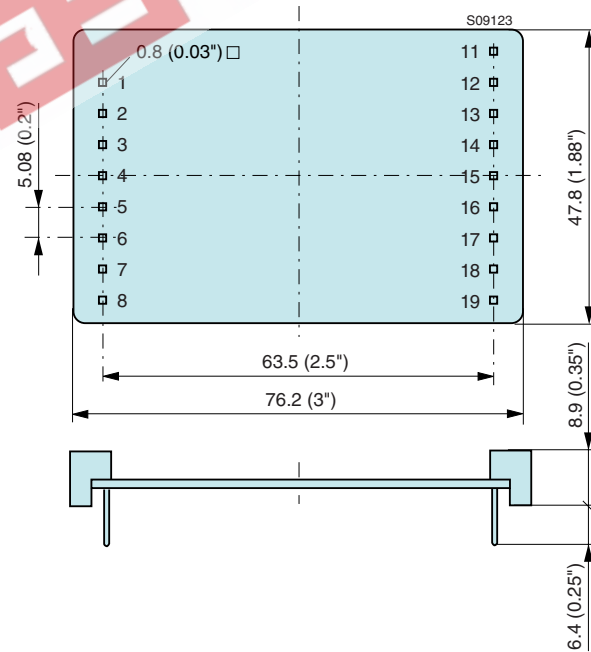
Tolerances ± 0.3 mm (0.012") unless otherwise indicated.



IMX 35



IMX 35 (option Z)

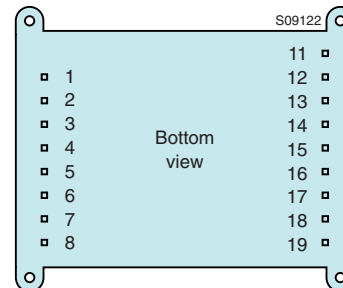


Board Mountable

IMX 35 Series

Pin allocation

Pin	Dual output	Triple output	Quadruple outp.
1	PUL	PUL	PUL
2	Vi-	Vi-	Vi-
3	n.c.	n.c.	n.c.
4	Vi+	Vi+	Vi+
5	Trim/n.c.	-	Trim
6	W	W	W
7	Ref	Ref	Ref
8	\overline{SD} or i	\overline{SD} or i	\overline{SD} or i
11	Vo2-	Vo3-	Vo3-
12	n.c.	Vo3+	Vo3+
13	Vo2+	Vo2+	Vo2+
14	n.c.	Vo2-	Vo2-
15	Vo1-	Vo1-	Vo1-
16	n.c.	n.c.	Vo1+
17	Vo1+	Vo1+	Vo4+
18	Trim1/n.c.	Trim1	Vo4-
19	n.c.	n.c.	n.c.



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