

S4A DC-DC Converters are typically used in point of load (POL) applications with stable loads.

- Input/output Isolation.
- Encapsulated design.
- Used to power Operational Amplifiers.
- Input Voltage range selection from 3.3V through 24V.

Figure 1: SCHEMATIC

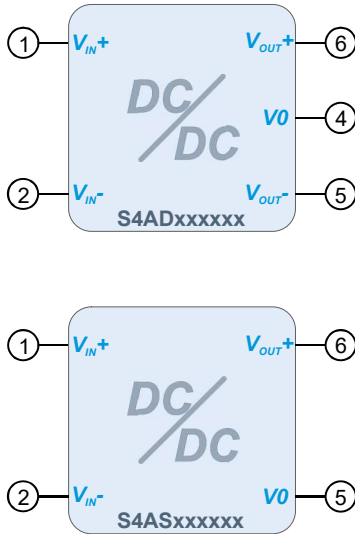


Figure 2: MECHANICAL SPECIFICATIONS (mm)

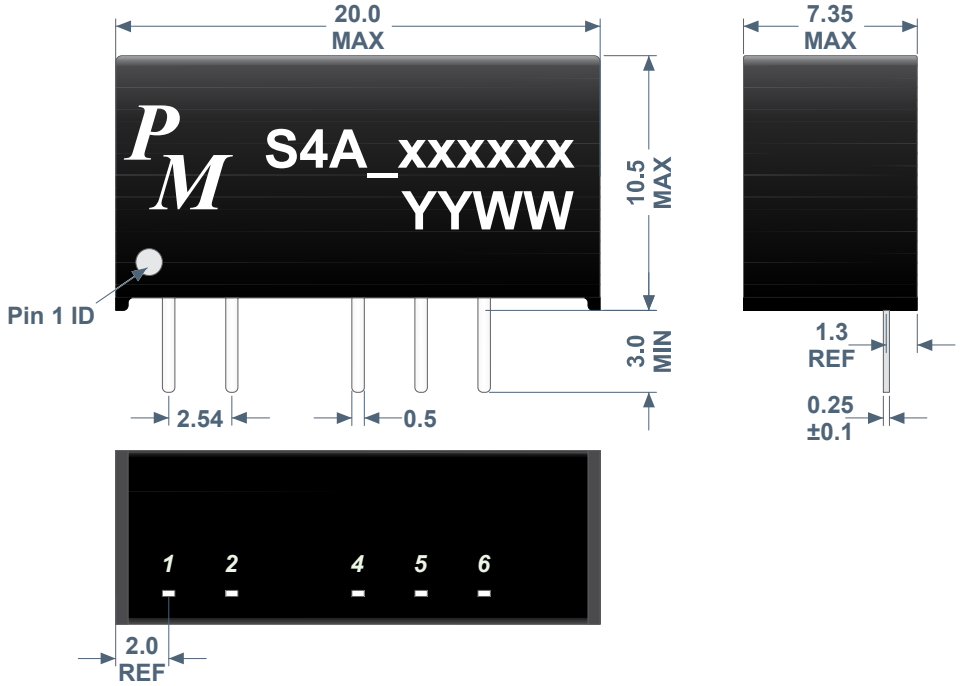


Table 1: PART NUMBER LIST.

PART NUMBER	V _{IN} (V)	V _{OUT} (V)	I _{OUT} (mA)
S4AS030361	3.3	3.3	610
S4AS030540	3.3	5.0	400
S4AD030520	3.3	±5.0	±200
S4AS030922	3.3	9.0	225
S4AS031217	3.3	12.0	170
S4AD031208	3.3	±12.0	±85
S4AS031513	3.3	15.0	135
S4AD031506	3.3	±15.0	±65
S4AS032408	3.3	24.0	85
S4AS050361	5.0	3.3	610
S4AS050540	5.0	5.0	400
S4AD050520	5.0	±5.0	±200
S4AS050922	5.0	9.0	225
S4AS051217	5.0	12.0	170
S4AD051208	5.0	±12.0	±85
S4AS051513	5.0	15.0	135
S4AD051506	5.0	±15.0	±65
S4AS052408	5.0	24.0	85

Table 1: PART NUMBER LIST.

PART NUMBER	V _{IN} (V)	V _{OUT} (V)	I _{OUT} (mA)
S4AS120361	12.0	3.3	610
S4AS120540	12.0	5.0	400
S4AD120520	12.0	±5.0	±200
S4AS120922	12.0	9.0	225
S4AS121217	12.0	12.0	170
S4AD121208	12.0	±12.0	±85
S4AS121513	12.0	15.0	135
S4AD121506	12.0	±15.0	±65
S4AS122408	12.0	24.0	85
S4AS150361	15.0	3.3	610
S4AS150540	15.0	5.0	400
S4AD150520	15.0	±5.0	±200
S4AS150922	15.0	9.0	225
S4AS151217	15.0	12.0	170
S4AD151208	15.0	±12.0	±85
S4AS151513	15.0	15.0	135
S4AD151506	15.0	±15.0	±65
S4AS152408	15.0	24.0	85
S4AS240361	24.0	3.3	610
S4AS240540	24.0	5.0	400
S4AD240520	24.0	±5.0	±200
S4AS240922	24.0	9.0	225
S4AS241217	24.0	12.0	170
S4AD241208	24.0	±12.0	±85
S4AS241513	24.0	15.0	135
S4AD241506	24.0	±15.0	±65
S4AS242408	24.0	24.0	85

FEATURES:

- 1) Operating temperature -40°C to +100°C.
- 2) Storage temperature -55°C to +125°C.
- 3) I_{OUT} is MAX.
- 4) All units comply with EU RoHS Directive requirements.
- 5) All units comply with REACH Regulation requirements.

Table 2: ELECTRICAL SPECIFICATIONS 25°C. V_{IN} =Table 1, C_{IN} =open, L_{IN} =short, C_{OUT} =open, unless otherwise noted.

PARAMETERS	TEST CONDITION	MIN	TYP	MAX	UNIT
INPUT VOLTAGE	$100\%I_{OUT}$	$V_{IN}-10\%$	V_{IN}	$V_{IN}+10\%$	V
OUTPUT VOLTAGE ACCURACY	$100\%I_{OUT}$	-5.0	-	5.0	%
OUTPUT VOLTAGE RIPPLE AND NOISE	20MHz BW, $C_{OUT}=100nF$ ceramic; $100\%I_{OUT}$	-	-	150	mVp-p
OUTPUT VOLTAGE LINE REGULATION	From $V_{IN}MAX$ to $V_{IN}MIN$; $100\%I_{OUT}$	-	1.2	-	% / $1\%V_{IN}$
OUTPUT VOLTAGE LOAD REGULATION	From $100\%I_{OUT}$ to $10\%I_{OUT}$ $V_{OUT}=3.3V$	-20	-	20	%
OUTPUT VOLTAGE LOAD REGULATION	From $100\%I_{OUT}$ to $10\%I_{OUT}$ $V_{OUT}=5.0V$	-15	-	15	%
OUTPUT VOLTAGE LOAD REGULATION	From $100\%I_{OUT}$ to $10\%I_{OUT}$ $V_{OUT}\geq 9.0V$	-10	-	10	%
EFFICIENCY	$100\%I_{OUT}$	65	85	-	%
HIPOT	1,2 to 4,5,6; 0.5mA MAX, ramp 1s,dwell 1s.	1000	-	-	V_{DC}
WEIGHT		-	2.8	-	g

Figure 3: TEST CIRCUIT

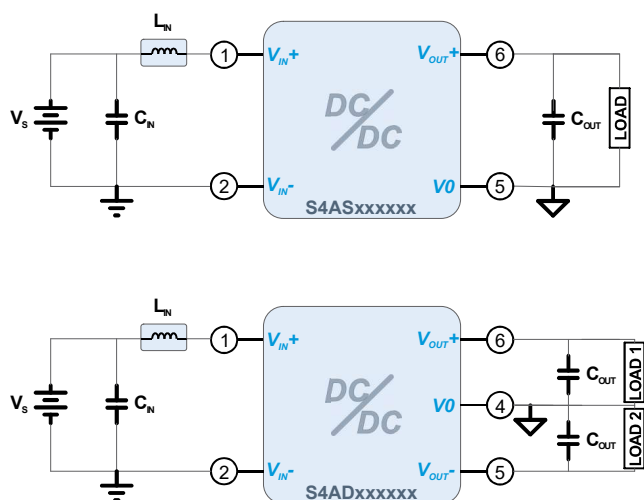
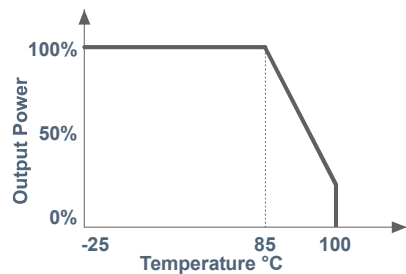


Figure 4: DERATING CURVE



NOTES:

- 1) C_{IN} , L_{IN} , C_{OUT} are optional.
- 2) C_{IN} and L_{IN} help with EMC.
- 3) $L_{IN} < 100\mu H$ see **PM-R2 series** or **SMDL10 series**.