

SM2412-10

DESCRIPTION: THE SM2412-10 IS A GENERAL PURPOSE DC-DC CONVERTER, ALLOWING OPERATING VOLTAGES AS LOW AS 18 VDC AND AS HIGH AS 55 VDC INPUT AT A REGULATED 13.8 VDC OUTPUT.

PURPOSE: OPERATING STANDARD 12 VOLT DC EQUIPMENT (LIGHTS, RADIOS, CELL PHONES, AND TWO WAY RADIO) FROM A NON STANDARD ELECTRICAL SYSTEM.

FEATURES:

SWITCHED VOLTAGE REGULATED
HIGH EFFICIENCY
10 A CONTINUOUS OUTPUT CURRENT
CURRENT LIMITED
SHORT CIRCUIT PROTECTED
THERMAL PROTECTED
UNDER VOLTAGE LOCKOUT
SOFT START (FOR STARTING INDUCTIVE LOADS)
REVERSE VOLTAGE PROTECTED
OVER VOLTAGE PROTECTED
SHIELDED AGAINST NOISE AND RF INTERFERENCE
INPUT AND OUTPUT FILTERING

ELECTRICAL CHARACTERISTICS

PARAMETER'S	MIN	MAX	AVG
INPUT VOLTAGE RANGE	18 VDC	55 VDC	24 VDC
INPUT CURRENT NO LOAD	80 MA	150 MA	100 MA
INPUT CURRENT FULL LOAD	3A @55 VDC	9.5A @18 VDC	7A @ 24 VDC
OUTPUT VOLTAGE	13.7 VDC	13.9 VDC	13.8 VDC
OUTPUT CURRENT NO LOAD	20 MA	50 MA	30 MA
OUTPUT CURRENT FULL LOAD	10.0 A	13.0 A	10.5 A
CURRENT LIMITING	10.5 A	13.0 A	11.0 A
LINE REGULATION (18-55 VDC)	.005 VDC	.015 VDC	.01 VDC
LOAD REGULATION (.5- 10 A)	.015 VDC	.250 VDC	.100 VDC
OUTPUT RIPPLE (10 A LOAD)	.025 VDC	.055 VDC	.04 VDC
SWITCHING FREQUENCY	70 KHZ	80 KHZ	75 KHZ
EFFICIENCY (1-10 A LOAD)	80%	92%	85%
THERMAL SHUT DOWN (AT SENSOR)	200' F	260' F	240' F
CASE TEMPERATURE AT SHUT DOWN	120' F	200' F	140' F
SHORT CIRCUIT VOLTAGE	.05 VDC	2.0 VDC	1.5 VDC
SHORT CIRCUIT CURRENT	.1A	1.0A	.7A
UNDER VOLTAGE LOCKOUT	11.4VDC	12.6VDC	12VDC