

25 to 30 Watt

2.56x3 Inch Case F
4:1 Input Range



- o Wide Input Range
- o Efficiency up to 84%
- o Single, Dual & Triple Output
- o Remote On/Off Control
- o 200 kHz Switching Frequency
- o Continuous Short Circuit Protection



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%EFF
				NO LOAD	FULL LOAD	
25FRS24X5LC	9-36 VDC	5 VDC	5000 mA	20 mA	1350 mA	77
30FRS24X12LC		12 VDC	2500 mA		1560 mA	80
30FRS24X15LC		15 VDC	2000 mA			
30FRD24X12LC		±12 VDC	±1250 mA	25 mA	1650 mA	76
30FRD24X15LC		±15 VDC	±1000 mA			
30FRT24X5/12LC		5/±12 VDC	3000/±625 mA		1450 mA	78
30FRT24X5/15LC		5/±15 VDC	3000/±500 mA		750 mA	84
30FRT24X12/5LC		+5/+12/-5 VDC	3000/600/1000 mA			
25FRS48X5LC	18-72 VDC	5 VDC	5000 mA	15 mA	670 mA	78
30FRS48X12LC		12 VDC	2500 mA		770 mA	81
30FRS48X15LC		15 VDC	2000 mA		790 mA	79
30FRD48X12LC		±12 VDC	±1250 mA	20 mA	750 mA	84
30FRD48X15LC		±15 VDC	±1000 mA		780 mA	80
30FRT48X5/12LC		5/±12 VDC	3000/±625 mA		725 mA	78
30FRT48X5/15LC		5/±15 VDC	3000/±500 mA			
30FRT48X12/5LC		+5/+12/-5 VDC	3000/600/1000 mA			

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Input Voltage Range	4:1
Input Filter	Pi Type

OUTPUT SPECIFICATIONS

Voltage Accuracy	Single	Output	±1.0% max.
	Dual	+Output	±1.0% max.
	Dual	-Output	±3.0% max.
	Triple	5V	±1.0% max.
	Triple	12V/15V	±5.0% max.
	Triple	-5V	±2.0% max.
Voltage Balance (Dual)			±1.0% max.
Transient Response Single, 25% Step Load Change Dual, Full Load to Half Load ±1% Error Band			<500 µsec.
External Trim Adj. Range			±10%
Ripple and Noise at 20MHz BW			10 mV RMS max. 75 mV p-p max.
Temperature Coefficient			±0.02%/°C
Short Circuit Protection			Continuous
Line Regulation ¹⁾	Single/Dual Triple		±0.2% max. ±1.0% max.
Load Regulation ²⁾	Single/Dual Triple		±1.0% max. ±5.0% max.

NOTE:

1. Measured from High Line to Low Line.

2. Measured from Full Load to 1/4 Load.

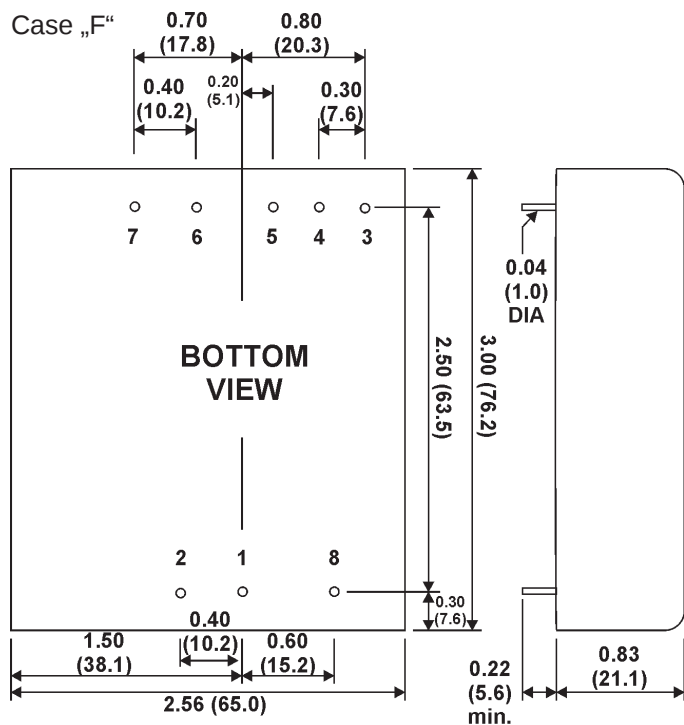
GENERAL SPECIFICATION

Efficiency	see table
Isolation Voltage	500 VDC min.
Isolation Resistance	1000 Mohms
Switching Frequency	200 kHz
Operating Temperature Range	-25°C to +71°C
Case Temperature	+100°C max.
Derating >+71°C	-3.5%/°C
Storage Temperature Range	-55°C to +105°C
Cooling	Free-Air Convection
EM/RFI	Six-Sided Continuous Shield
Case Material	Black Coated Copper with Non-Conductive Base
MTBF (MIL-HDBK-217F)	min. 584.000 hrs
Dimensions	2.56 x 3.0 x 0.83 Inches (65 x 76.2 x 21.1 mm)

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MECHANICAL SPECIFICATIONS



**All Dimensions in Inches (mm).
Tolerance x.xx = ± 0.04 , x.xxx = ± 0.010**

PIN CONNECTIONS			
PIN	SINGLE	DUAL	TRIPLE
1	+INPUT	+INPUT	+INPUT
2	-INPUT	-INPUT	-INPUT
3	+SENSE	+OUTPUT	+OUTPUT
4	OUTPUT TRIM	COMMON	COMMON
5	-SENSE	-OUTPUT	-OUTPUT
6	+OUTPUT	NO PIN	+5V OUTPUT
7	-OUTPUT	NO PIN	NO PIN
8	REMOTE ON/OFF CONTROL		

APPLICATION NOTES

OVER VOLTAGE PROTECTION	
OUTPUT VOLTAGE	O.V.P.
5VDC	6.8V
12VDC	15V
15VDC	18V

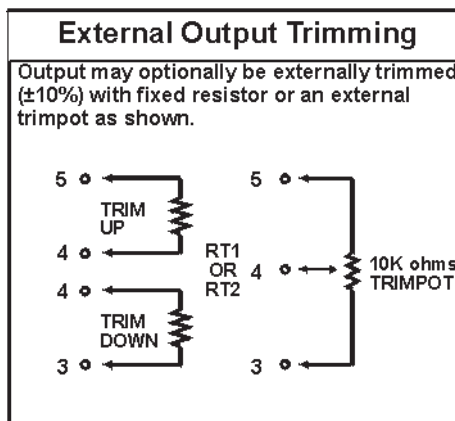
REMOTE ON/OFF CONTROL	
Logic Compatibility	CMOS or Open Collector TTL
Ec-ON	>+5.5VDC or Open Circuit
Ec-OFF	<1.8VDC
Shutdown Idle Current	10mA
Control Common	Referenced to Input Minus

TRIPLE OUTPUT LOADING ¹⁾			
OUTPUT (PIN NO.)	VOLTAGE	AMPERES	
		MIN. ²⁾	NOM.
6	+5 VDC	0.5 A	3.0 A
3 & 5	±12 VDC	0.1 A	0.625 A
3 & 5	±15 VDC	0.1 A	0.5 A
3 & 5	+12 & -5 VDC	0.1/0.1 A	0.6/1.0 A

NOTE:

1) Maximum total power from all outputs is limited to 30 watts but no output should be allowed to exceed its maximum current.

- 2) Minimum current on each output is required to maintain specified regulation.



NOTICE:

The information in this document has been carefully checked. However, no responsibility is assumed for inaccuracies! Specifications can be changed without notice. The latest and most complete information can be found on our website.