

Excellent Integrated System Limited

Stocking Distributor

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[Murata Power Solutions Inc.](#)
[THR-30185](#)


For any questions, you can email us directly:

sales@integrated-circuit.com

REV	DESCRIPTION	DATE/APPD
A	DRAWING UNDER CHANGE CONTROL	9/17/04 GEC

IMPACT ASSESSMENT

REQUIRED PRIOR TO CHANGE

DRAWN J. LEVRAULT	DATE 11/12/2002	Standard Part - THR-5/3000-15/500-D12			
CHECKED D. DEROSA	DATE 9/15/2004	Special Part - Input Over Voltage Shutdown Disabled			
MARKETING B. SMITH	DATE 9/3/2004				
QA T. BROWN	DATE 9/14/2004				
MFG. D. PAILLE	DATE 9/3/2004	PRODUCT SPECIFICATION THR-30185			
PROJ. ENG. M. ZELFAND	DATE 9/7/2004	SIZE A	CODE IDENT. NO. 50721	DWG. NO. 43869	REV A
APPD E. WILCOX	DATE 9/3/2004				SHEET 1 OF 4

MODEL: THR-30185	DC-DC CONVERTER PRODUCT SPECIFICATIONS				
9/7/2004					
INPUT:	MIN.	TYP.	MAX.	UNITS	TEST
VOLTAGE RANGE:	9.00	24.00	36.00	V	100%
FILTER TYPE:	L-TYPE				GBD
BACK RIPPLE CURRENT:		TBD		mA	GBD
NO LOAD CURRENT @24Vin:		25	75	mA	100%
FULL LOAD CURRENT @24Vin: For typical loads		874	974	mA	100%
EFFICIENCY AT F. LOAD @24Vin:	80.0	81.0		%	100%
OVERVOLTAGE SHUTDOWN:		NA			
OUTPUT:	MIN.	NOM.	MAX.		
TOTAL OUTPUT POWER For all possible combinations of output voltages and their loads	2.70	17.000	17.85	W	GBD
For product test use nominal currents for each output unless specified					
VOLTAGE(1):	4.900	5.00	5.100	VDC	100%
CURRENT RANGE(1):	275.0	2,200	3,000	mA	100%
VOLTAGE(2):	13.50	15.00	16.50	VDC	100%
CURRENT RANGE(2):	50.0	200.0	500.0	mA	100%
VOLTAGE(3):	-13.50	-15.00	-16.50	VDC	100%
CURRENT RANGE(3):	-50.0	-200.0	-500.0	mA	100%
VOLTAGE SETTING ACCURACY: Measured at 24Vin , 1.5A load		within 2% of 5.00V		%	100%
LINE REGULATION AT 5V:		2% SLOPE(± 1%)		%	100%
LOAD REGULATION AT 5V:		4% SLOPE(± 2%)		%	100%
LOAD REGULATION AT ±12V: 20-100% Load, 5V @ Nominal Load		10% SLOPE(± 5%)		%	100%
LINE REGULATION AT ±12V: Measured at 5Vo @ 2.75A,		2% SLOPE(± 1%)		%	100%
TEMPERATURE COEFFICIENT @5V:		0.02		%/°C	GBD
OVER-VOLTAGE PROTECTION @5V: Voltage Clamp (TransZorb)			NA		
RIPPLE/NOISE AT 20 MHz BANDWIDTH:	5V	50	85	mV Pk/Pk	100%
	15V	75	150	mV Pk/Pk	100%
	(-)15V	75	150	mV Pk/Pk	100%
	DWG. No.	43869	REV.	A	SHT 2 of 4

MODEL: THR-30185	DC-DC CONVERTER PRODUCT SPECIFICATIONS				
9/7/2004					
CURRENT LIMIT INCEPTION @5V:	3.50	3.70	4.10	A	100%
At .985Vout, 24V in, ± loads @ typical currents					
SHORT CIRCUIT CURRENT @5V:		6		A	100%
Vo Recovery Test Only, 24 Vin					
DYNAMIC LOAD RESPONSE					
RECOVERY TIME @5V:		150	300	µSec	100%
5V load switched from 1.35A to 2.7A,±2% of Vo					
GENERAL:	MIN.	TYP.	MAX.		
ISOLATION VOLTAGE:	750	1000		VDC	100%
ISOLATION RESISTANCE:		TBD		MOHM	GBD
ISOLATION CAPACITANCE:		500		pF	GBD
SWITCHING FREQUENCY:	150	165	180	KHZ	GBD
SYNC-ON/OFF CONTROL PIN:	PROVIDED, FUNCTION TESTED				
MEETS REQUIREMENTS OF:					
UL-1950		YES			GBD
CSA-C22.2 No234		YES			GBD
VDE		N/A			
CALCULATED MTBF:		200,000		HOURS	GBD
MECHANICAL:	MIN.	TYP.	MAX.		
DIMENSIONS(NOMINAL):		2" x 2" x .45"		INCHES	GBD
WEIGHT (NOMINAL):		2		OUNCES	GBD
		56		GRAM	
CASE MATERIAL:	BAKED ENAMEL STEEL, NON CONDUCTIVE BASE				GBD
EMI/RFI SHIELDING:	FIVE SIDED				GBD
ENVIRONMENTAL:	MIN.	TYP.	MAX.		
OPERATING AMBIENT TEMPERATURE Ta					
WHERE NO DERATING REQUIRED:	-25		55	°C	GBD
Natural Convection,Vertical mount.					
STORAGE TEMPERATURE	-55		125	°C	GBD
DERATING	AS PER DERATING CURVE				GBD
DWG. No.	43869	REV.	A	SHT 3 of 4	

