

**STFA60 SERIES**



**63W Open Frame Power Supply for I.T. Equipment**

- Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- Internal EMI filter
- Crowbar Mode Over Voltage Protection
- Single and Quad Output
- Input Surge Current, Over Voltage and Over Load protection
- Class I system

**3 Year Warranty**

Approvals:

**Single Output**

Model Number	Output Voltage	Output Current	Total Regulation	Max Output Power
STFA60-S01	03 ~ 05 VDC	16.6 ~ 10.0 A	±5%	50W
STFA60-S02	05 ~ 06 VDC	11.0 ~ 9.16 A	±5%	55W
STFA60-S03	06 ~ 08 VDC	10.0 ~ 7.50 A	±4%	60W
STFA60-S04	08 ~ 11 VDC	7.87 ~ 5.72 A	±3%	63W
STFA60-S05	11 ~ 13 VDC	5.72 ~ 4.84 A	±3%	63W
STFA60-S06	13 ~ 16 VDC	4.84 ~ 3.93 A	±3%	63W
STFA60-S07	16 ~ 21 VDC	3.93 ~ 3.00 A	±3%	63W
STFA60-S08	21 ~ 27 VDC	3.00 ~ 2.33 A	±2%	63W
STFA60-S09	27 ~ 33 VDC	2.33 ~ 1.90 A	±2%	63W
STFA60-S10	33 ~ 40 VDC	1.90 ~ 1.57 A	±2%	63W
STFA60-S11	40 ~ 50 VDC	1.57 ~ 1.26 A	±2%	63W

**Multi Output**

Model Number	Output 1				Output 2				Output 3				Output 4				Max Output Power
	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	
STFA60-D00	+3.3V	1.4A	7A	±7%	+12V	0.6A	3A	±5%									59.1W
STFA60-D01	+5V	0.7A	7A	±5%	+12V	0.3A	3A	±5%									63W
STFA60-D02	+5V	0.7A	7A	±5%	+15V	0.3A	3A	±5%									63W
STFA60-D03	+5V	0.7A	7A	±5%	+24V	0.4A	2A	±5%									63W
STFA60-D04	+3.3V	1.4A	7A	±7%	+5V	0.5A	5A	±5%									48.1W
STFA60-D15	+5V	0.7A	7A	±5%					-24V	0.2A	2A	±5%					63W
STFA60-D18	+3.3V	0.5A	5A	±7%	+48V	0.1A	1.25A	±5%									63W
STFA60-D19	+5V	0.1A	5A	±5%	+28V	0.2A	2A	±5%									63W
STFA60-D20	+5V	0.5A	5A	±5%	+35V	0.1A	1.5A	±5%									63W
STFA60-D21	+5V	0.5A	5A	±5%	+36V	0.1A	1.5A	±5%									63W
STFA60-T00	+3.3V	1.2A	6A	±7%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%					63W
STFA60-T00-1	+3.3V	1.2A	6A	±7%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%					63W
STFA60-T01	+5V	0.6A	6A	±5%	+12V	0.3A	3A	±5%	-5V	0A	0.8A	±5%					63W
STFA60-T01-1	+5V	0.6A	6A	±5%	+12V	0.3A	3A	±5%	+5V	0A	0.8A	±5%					63W
STFA60-T02	+5V	0.6A	6A	±5%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%					63W
STFA60-T02-1	+5V	0.6A	6A	±5%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%					63W
STFA60-T03	+5V	0.6A	6A	±5%	+15V	0.3A	3A	±5%	-15V	0A	0.8A	±5%					63W
STFA60-T03-1	+5V	0.6A	6A	±5%	+15V	0.3A	3A	±5%	+15V	0A	0.8A	±5%					63W
STFA60-T04	+5V	1.2A	6A	±5%	+24V	0.4A	2A	±5%	-24V	0A	0.5A	±5%					63W
STFA60-T04-1	+5V	1.2A	6A	±5%	+24V	0.4A	2A	±5%	+24V	0A	0.5A	±5%					63W
STFA60-T05	+5V	1.2A	6A	±5%	+24V	0.4A	2A	±5%	-12V	0A	0.8A	±5%					63W
STFA60-T05-1	+5V	1.2A	6A	±5%	+24V	0.4A	2A	±5%	+12V	0A	0.8A	±5%					63W
STFA60-T06	+3.3V	1.2A	6A	±6%	+12V	0.6A	3A	±5%	-5V	0A	0.8A	±5%					59.8W
STFA60-T06-1	+3.3V	1.2A	6A	±6%	+12V	0.6A	3A	±5%	+5V	0A	0.8A	±5%					59.8W
STFA60-T07	+5V	0.6A	6A	±5%	+10V	0.2A	2A	±5%	-10V	0A	1A	±5%					60W
STFA60-T07-1	+5V	0.6A	6A	±5%	+10V	0.2A	2A	±5%	+10V	0A	1A	±5%					60W
STFA60-T08	+3.3V	0.5A	5A	±7%	+5V	0.5A	5A	±5%	+12V	0A	1A	±5%					53.5W

### Multi Output

Model Number	Output 1				Output 2				Output 3				Output 4				Max Output Power
	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	Vonom	lomin	lomax	Regmax	
STFA60-T08-1	+3.3V	0.5A	5A	±7%	+5V	0.5A	5A	±5%	-12V	0A	1A	±5%					53.5W
STFA60-Q00	+3.3V	1.2A	6A	±7%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%	-5V	0A	0.8A	±5%	63W
STFA60-Q00-1	+3.3V	1.2A	6A	±7%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%	+5V	0A	0.8A	±5%	63W
STFA60-Q00-2	+3.3V	1.2A	6A	±7%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%	-5V	0A	0.8A	±5%	63W
STFA60-Q00-3	+3.3V	1.2A	6A	±7%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%	+5V	0A	0.8A	±5%	63W
STFA60-Q01	+5V	0.6A	6A	±5%	+12V	0.3A	3A	±5%	-12V	0A	0.8A	±5%	-5V	0A	0.8A	±5%	63W
STFA60-Q01-1	+5V	0.6A	6A	±5%	+12V	0.3A	3A	±5%	-12V	0A	0.8A	±5%	+5V	0A	0.8A	±5%	63W
STFA60-Q01-2	+5V	0.6A	6A	±5%	+12V	0.3A	3A	±5%	+12V	0A	0.8A	±5%	-5V	0A	0.8A	±5%	63W
STFA60-Q01-3	+5V	0.6A	6A	±5%	+12V	0.3A	3A	±5%	+12V	0A	0.8A	±5%	+5V	0A	0.8A	±5%	63W
STFA60-Q02	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%	+12V	0A	0.8A	±5%	63W
STFA60-Q02-1	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%	+12V	0A	0.8A	±5%	63W
STFA60-Q02-2	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%	-12V	0A	0.8A	±5%	63W
STFA60-Q02-3	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%	-12V	0A	0.8A	±5%	63W
STFA60-Q03	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%	+24V	0A	0.8A	±5%	63W
STFA60-Q03-1	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%	+24V	0A	0.8A	±5%	63W
STFA60-Q03-2	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	+12V	0A	0.8A	±5%	-24V	0A	0.8A	±5%	63W
STFA60-Q03-3	+5V	1.2A	6A	±5%	+12V	0.6A	3A	±5%	-12V	0A	0.8A	±5%	-24V	0A	0.8A	±5%	63W
STFA60-Q04	+5V	1.2A	6A	±5%	+15V	0.6A	3A	±5%	-15V	0A	0.8A	±5%	-5V	0A	0.8A	±5%	63W
STFA60-Q04-1	+5V	0.6A	6A	±5%	+15V	0.3A	3A	±5%	-15V	0A	0.8A	±5%	+5V	0A	0.8A	±5%	63W
STFA60-Q04-2	+5V	0.6A	6A	±5%	+15V	0.3A	3A	±5%	+15V	0A	0.8A	±5%	-5V	0A	0.8A	±5%	63W
STFA60-Q04-3	+5V	0.6A	6A	±5%	+15V	0.3A	3A	±5%	+15V	0A	0.8A	±5%	+5V	0A	0.8A	±5%	63W
STFA60-Q23	+5V	0.1A	1A	±5%	+24V	0.18A	1.8A	±5%	-15V	0A	0.1A	±5%	+12V	0A	0.8A	±5%	59.3W

### Electrical Characteristics

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Safety Approvals Input Voltage Range	Safety Approval & Specification in Label	100		240	VAC
Operate Voltage Range		90		264	VAC
Input Frequency	Sine wave	47		63	Hz
Output Power Range	See Rating Chart			63	W
Low Line Input Current	Full load, Vin=100VAC		1.6		A
High Line Input Current	Full load, Vin=240VAC		0.6		A
Low Line Input Inrush Current	Full load, 25°C, Cool start, Vin=100VAC			33	A
High Line Input Inrush Current	Full load, 25°C, Cool start, Vin=240VAC			79	A
Safety Ground Leakage Current	Vin=240VAC, Fi=60Hz			0.75	mA
Efficiency	Full Load, Vin=230VAC	65		80	%
Line Regulation	Full Load, Vin=100~120VAC	0.5		1	%
Load Regulation	Vin=230VAC, 10~90% Load Change at Condition	2		5	%
Over Voltage Protection	Over Voltage Protection	112		132	%
Over Load Protection	Recovers automatically after fault condition is removed	110		150	%
Time of Transient Response	Io=Full Load to Half Load, Vin=110VAC			4	ms
Hold-Up Time	Full Load, Vin=100VAC			12	ms
Start Up Time	Full Load, Vin=100~240VAC			2	s
* Ripple & Noise (Peak to Peak)			1	2	%
Temperature Coefficient	Full Load, Vin=100~240VAC			±0.04	%/°C
Dielectric Withstanding Voltage(P-S)	Primary to Secondary			4242	VDC
Dielectric Withstanding Voltage(P-G)	Primary to PE			2121	VDC
EMC Emission	Compliance to EN55022(CISPR22)			B	Class

\* The Ripple & Noise is under 3.3VDC or 5VDC at 2% max.

### Environmental

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Operating Temperature	Derate linearly from 100% load at 25 to 50% load at 70	0		70	°C
Storage Temperature	10~95% RH	-40		85	°C
Operating Humidity	non-condensing	0		95%	RH
Storage Humidity		0		95%	RH
Electro Static Discharge	Air Discharge, IEC61000-4-2			8	KV
Electro Static Discharge	Contact Discharge, IEC61000-4-2			4	KV
Mean Time Between Failure	Operation Temperature at 25 J, Calculated per MIL-HDBK-217F	100K			h
Operating Altitude (Elevation)	All Condition			4000	m
Vibration	10~500Hz,10min./1cycle, 60min.each along X, Y, Z axes			5	G
Surge Voltage	Line-Neutral			1	KV
Surge Voltage	Line-PE & Neutral-PE			2	KV

### Mechanical Diagram

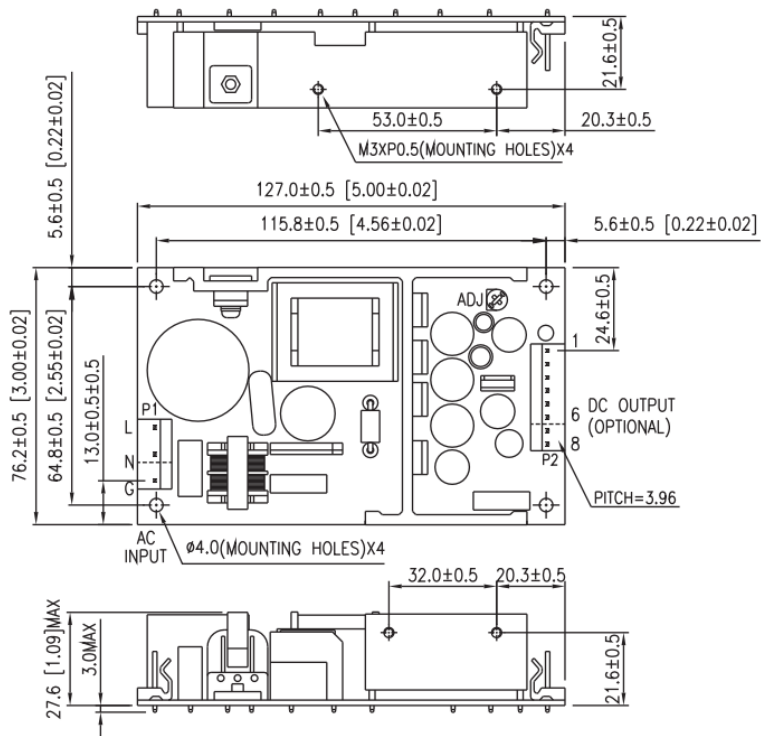
#### PIN CHART

MODEL	PIN	1	2	3	4	5	6	7	8
STFA60-SXX	OUT	OUT	OUT	RTN	RTN	RTN			
STFA60-DXX	Vo2	Vo1	Vo1	COM	COM	N/C			
STFA60-D15	N/C	Vo1	Vo1	COM	COM	Vo3			
STFA60-TXX	Vo2	Vo1	Vo1	COM	COM	Vo3			
STFA60-QXX	Vo2	Vo1	Vo1	COM	COM	Vo3	Vo4	Vo4	

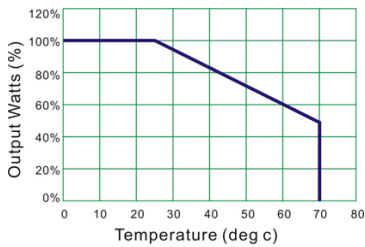
Note: Vo1: Output#1 Vo2: Output#2 Vo3: Output#3 Vo4:Output#4

#### Note:

- Dimensions are shown in inches or mm.
- Weight: 250gs approx.
- Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
- Output connector mates with Molex housing 09-50-3061 (or 09-50-3081) and Molex 2478 series crimp terminal



### Derating Chart



- Operating Temperature: 0 to 70°C
- Derate linearly from 100% load at 25°C to 50% load at 70°C