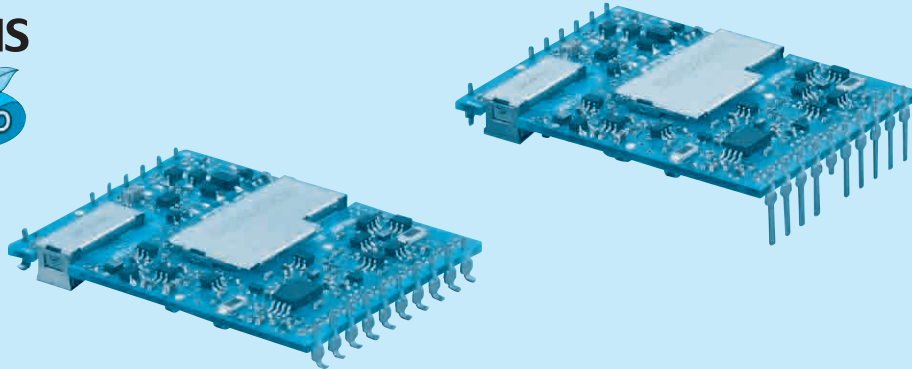
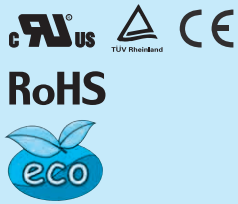


# SFS10

SF S 10 48 3R3 B

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage  
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Mounting type  
(Soldering process)  
B :SMD(Pb-free solder)  
C :DIP(Pb-free solder)

SFS/SFCS

MODEL	SFS10481R2	SFS10481R5	SFS10481R8	SFS104802	SFS10482R5	SFS10483R3	SFS104805	SFS104812	SFS104815
MAX OUTPUT WATTAGE[W]	4.2	5.25	5.4	6.0	7.5	9.9	10.0	10.8	10.5
DC OUTPUT	1.2V 3.5A	1.5V 3.5A	1.8V 3A	2V 3A	2.5V 3A	3.3V 3A	5V 2A	12V 0.9A	15V 0.7A

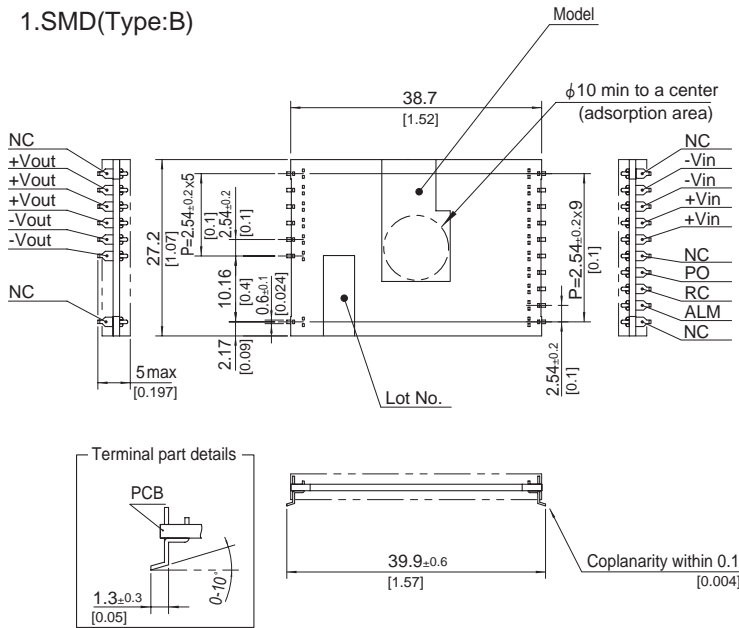
## SPECIFICATIONS

	MODEL	SFS10481R2	SFS10481R5	SFS10481R8	SFS104802	SFS10482R5	SFS10483R3	SFS104805	SFS104812	SFS104815	
INPUT	VOLTAGE[V]	DC36 - 76									
	CURRENT[A]	*1 0.11typ	0.13typ	0.13typ	0.15typ	0.18typ	0.23typ	0.23typ	0.26typ	0.25typ	
	EFFICIENCY[%]	*1 80typ	82typ	84typ	85typ	86typ	88typ	89typ	88typ	88typ	
	START-UP VOLTAGE[V]	DC32 - 36									
	HYSTERESIS VOLTAGE[V]	DC2 min									
OUTPUT	VOLTAGE[V]	1.2	1.5	1.8	2	2.5	3.3	5	12	15	
	CURRENT[A]	3.5	3.5	3	3	3	3	2	0.9	0.7	
	VOLTAGE ACCURACY[%]	+5, -3									
	RIPPLE[mVp-p]	25max							120max		
	RIPPLE NOISE[mVp-p]	50max							150max		
	START-UP TIME[ms]	20 - 200max (DCIN 48V, Io=100%)									
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING *1	±1% of rated output voltage									
	OVERCURRENT PROTECTION	Works over 103% of rating									
	OVERVOLTAGE PROTECTION	Works at 120 - 140% of rating									
	LOWVOLTAGE PROTECTION	Works at 90% max of rating									
ISOLATION	REMOTE ON/OFF	Provided(RC open : ON, short between RC and +Vin : OFF)									
ENVIRONMENT	INPUT-OUTPUT	DC1,500V 1minute, DC500V 50MΩ min (20±15°C)									
	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing), 3,000m (10,000feet) max									
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max (SMD:Refer to the Instruction Manual)									
	VIBRATION	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis									
SAFETY	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis									
	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1), EN60950-1									
OTHERS	CASE SIZE/WEIGHT	38.7 × 5.0 × 27.2mm [1.52 × 0.197 × 1.07 inches] (W × H × D) /12g max									
	COOLING METHOD	Convection									

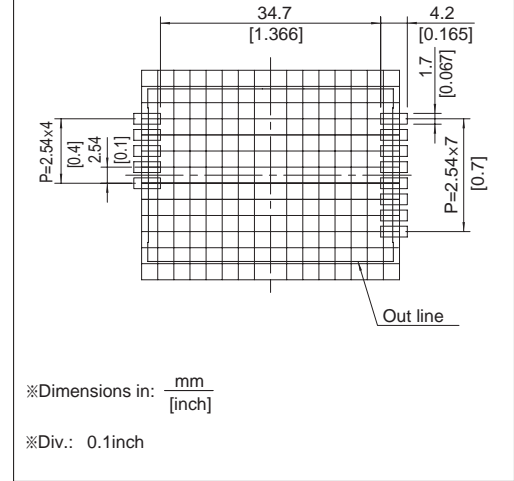
\*1 At rated input(DC48V), rated load and 25°C

External view

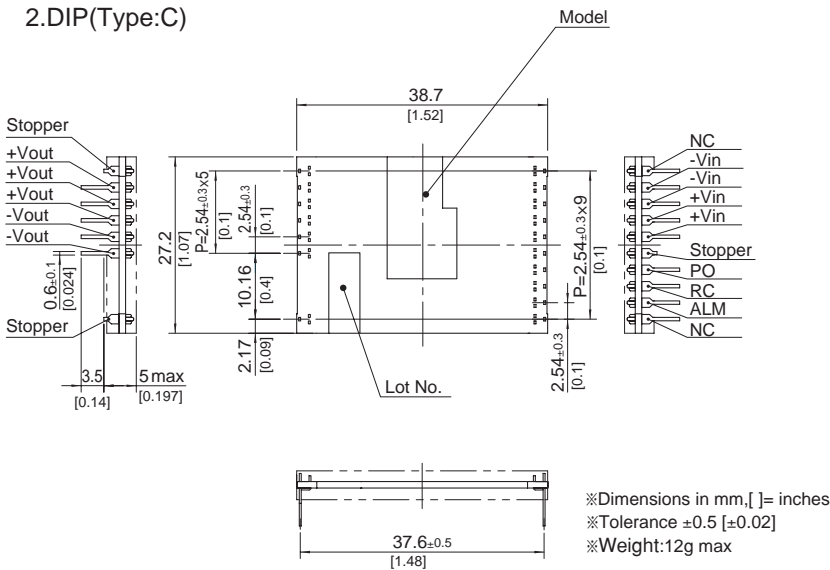
1.SMD(Type:B)



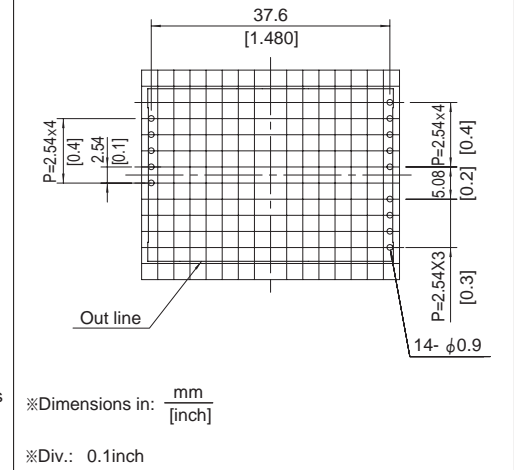
Recommended size for processing PCB (TOP VIEW)



2.DIP(Type:C)



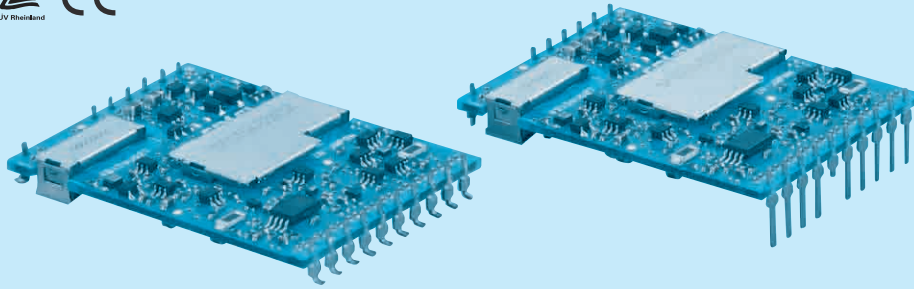
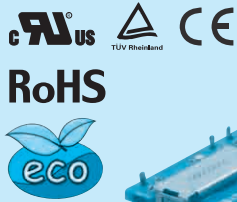
Recommended size for processing PCB (TOP VIEW)



# SFS15

SF S 15 48 3R3 B

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage  
24:DC18 - 36V  
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Mounting type  
(Soldering process)  
B : SMD(Pb-free solder)  
C : DIP(Pb-free solder)

MODEL	SFS15241R5	SFS15241R8	SFS15242R5	SFS15243R3	SFS152405	SFS152412	SFS152415
MAX OUTPUT WATTAGE[W]	7.8	8.1	11.25	14.85	15.0	15.0	15.0
DC OUTPUT	1.5V 5.2A	1.8V 4.5A	2.5V 4.5A	3.3V 4.5A	5V 3A	12V 1.25A	15V 1A

## SPECIFICATIONS

	MODEL	SFS15241R5	SFS15241R8	SFS15242R5	SFS15243R3	SFS152405	SFS152412	SFS152415	
INPUT	VOLTAGE[V]	DC18 - 36							
	CURRENT[A]	*1 0.39typ	0.4typ	0.54typ	0.7typ	0.69typ	0.7typ	0.7typ	
	EFFICIENCY[%]	*1 83typ	85typ	87typ	89typ	90typ	89typ	89typ	
	START-UP VOLTAGE[V]	DC16 - 18							
	HYSTERESIS VOLTAGE[V]	DC1 min							
OUTPUT	VOLTAGE[V]	1.5	1.8	2.5	3.3	5	12	15	
	CURRENT[A]	5.2	4.5	4.5	4.5	3	1.25	1	
	VOLTAGE ACCURACY[%]	+5, -3							
	RIPPLE[mVp-p]	25max					120max		
	RIPPLE NOISE[mVp-p]	50max					150max		
	START-UP TIME[ms]	20 - 200max (DCIN 24V, Io=100%)							
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING *1	±1% of rated output voltage							
	OVERCURRENT PROTECTION	Works over 103% of rating							
	OVERVOLTAGE PROTECTION	Works at 120 - 140% of rating							
	LOWVOLTAGE PROTECTION	Works at 90% max of rating							
	REMOTE ON/OFF	Provided(RC open : ON, short between RC and +Vin : OFF)							

MODEL	SFS15481R2	SFS15481R5	SFS15481R8	SFS154802	SFS15482R5	SFS15483R3	SFS154805	SFS154812	SFS154815
MAX OUTPUT WATTAGE[W]	6.24	7.8	8.1	9.0	11.25	14.85	15.0	15.0	15.0
DC OUTPUT	1.2V 5.2A	1.5V 5.2A	1.8V 4.5A	2V 4.5A	2.5V 4.5A	3.3V 4.5A	5V 3A	12V 1.25A	15V 1A

## SPECIFICATIONS

	MODEL	SFS15481R2	SFS15481R5	SFS15481R8	SFS154802	SFS15482R5	SFS15483R3	SFS154805	SFS154812	SFS154815	
INPUT	VOLTAGE[V]	DC36 - 76									
	CURRENT[A]	*1 0.16typ	0.2typ	0.2typ	0.22typ	0.27typ	0.35typ	0.35typ	0.35typ	0.35typ	
	EFFICIENCY[%]	*1 82typ	83typ	85typ	86typ	87typ	89typ	90typ	89typ	89typ	
	START-UP VOLTAGE[V]	DC32 - 36									
	HYSTERESIS VOLTAGE[V]	DC2 min									
OUTPUT	VOLTAGE[V]	1.2	1.5	1.8	2	2.5	3.3	5	12	15	
	CURRENT[A]	5.2	5.2	4.5	4.5	4.5	4.5	3	1.25	1	
	VOLTAGE ACCURACY[%]	+5, -3									
	RIPPLE[mVp-p]	25max							120max		
	RIPPLE NOISE[mVp-p]	50max							150max		
	START-UP TIME[ms]	20 - 200max (DCIN 48V, Io=100%)									
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING *1	±1% of rated output voltage									
	OVERCURRENT PROTECTION	Works over 103% of rating									
	OVERVOLTAGE PROTECTION	Works at 120 - 140% of rating									
	LOWVOLTAGE PROTECTION	Works at 90% max of rating									
	REMOTE ON/OFF	Provided(RC open : ON, short between RC and +Vin : OFF)									

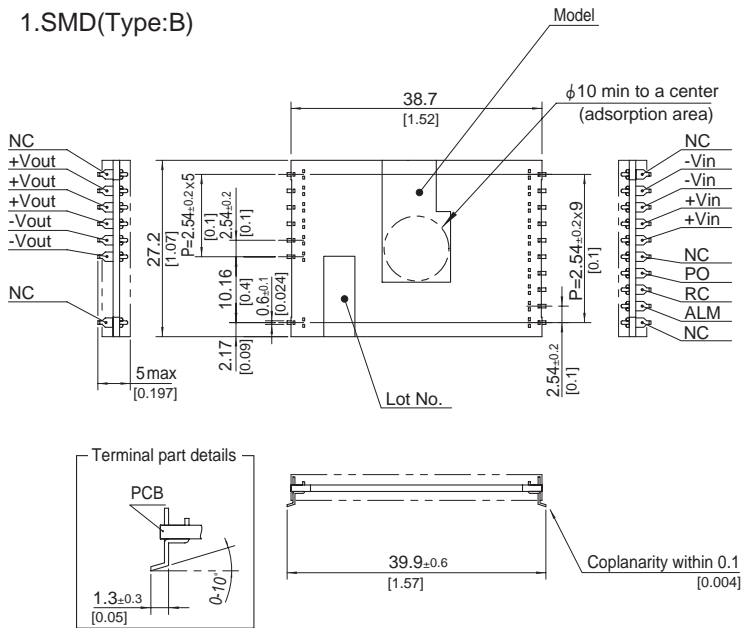
### GENERAL SPECIFICATIONS

<b>ISOLATION</b>	<b>INPUT-OUTPUT</b>	DC1.500V 1minute, DC500V 50MΩ min (20±15°C)
<b>ENVIRONMENT</b>	<b>OPERATING TEMP.,HUMID.AND ALTITUDE</b>	-40 to +85°C, 20 - 95%RH (Non condensing), 3,000m (10,000feet) max
	<b>STORAGE TEMP.,HUMID.AND ALTITUDE</b>	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max (SMD:Refer to the Instruction Manual)
	<b>VIBRATION</b>	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis
	<b>IMPACT</b>	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis
<b>SAFETY</b>	<b>AGENCY APPROVALS</b>	UL60950-1, C-UL (CSA60950-1), EN60950-1
<b>OTHERS</b>	<b>CASE SIZE/WEIGHT</b>	38.7×5.0×27.2mm [1.52×0.197×1.07 inches] (W×H×D) /12g max
	<b>COOLING METHOD</b>	Convection

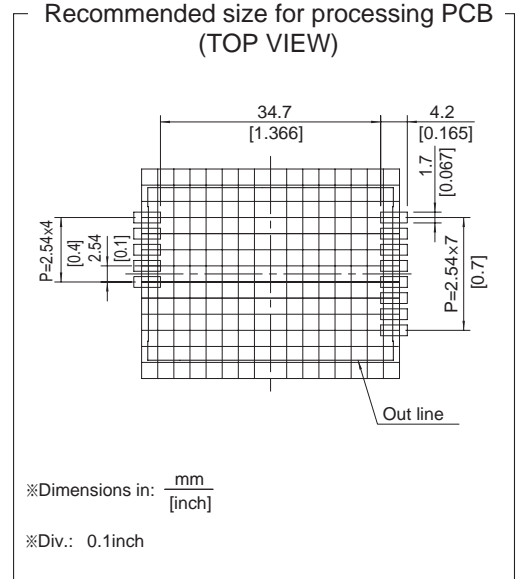
\*1 At rated input(DC24V, DC48V), rated load and 25°C

### External view

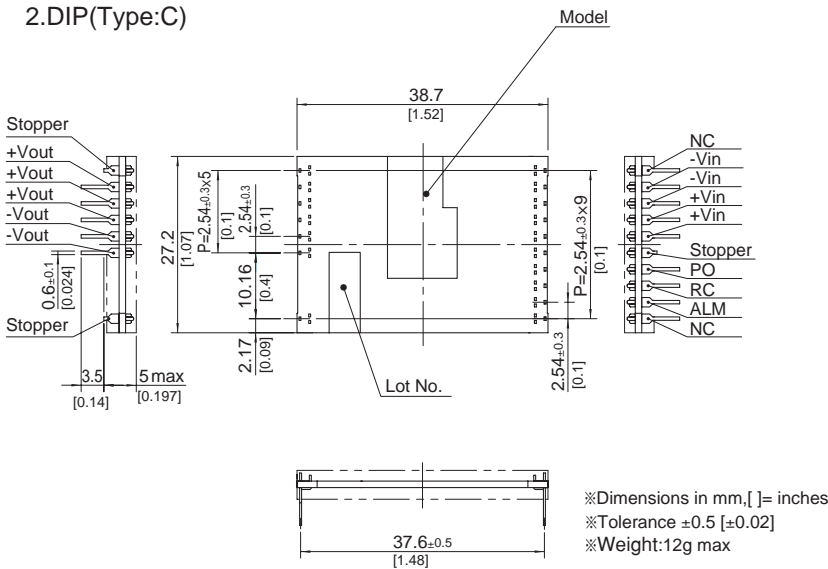
#### 1.SMD(Type:B)



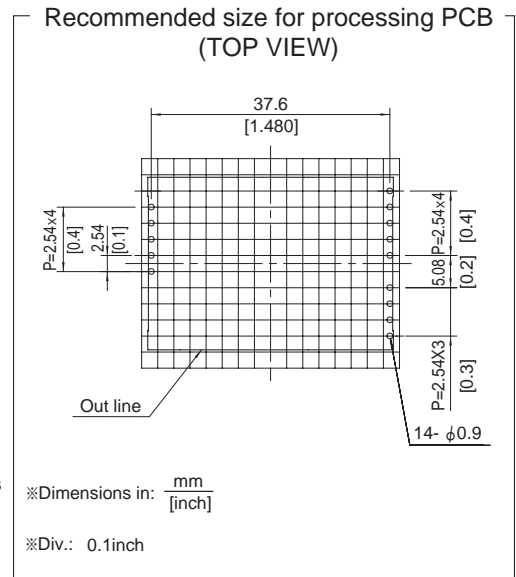
#### Recommended size for processing PCB (TOP VIEW)



#### 2.DIP(Type:C)



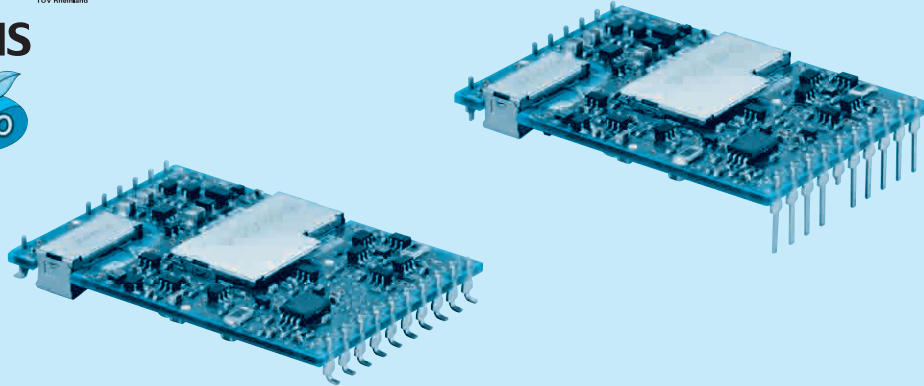
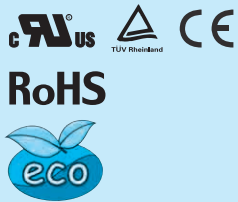
#### Recommended size for processing PCB (TOP VIEW)



# SFS20

SF S 20 48 3R3 B

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage  
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Mounting type  
(Soldering process)  
B : SMD(Pb-free solder)  
C : DIP(Pb-free solder)

MODEL	SFS20481R5	SFS20481R8	SFS20482R5	SFS20483R3	SFS204805
MAX OUTPUT WATTAGE[W]	13.5	14.4	17.5	19.8	20.0
DC OUTPUT	1.5V 9A	1.8V 8A	2.5V 7A	3.3V 6A	5V 4A

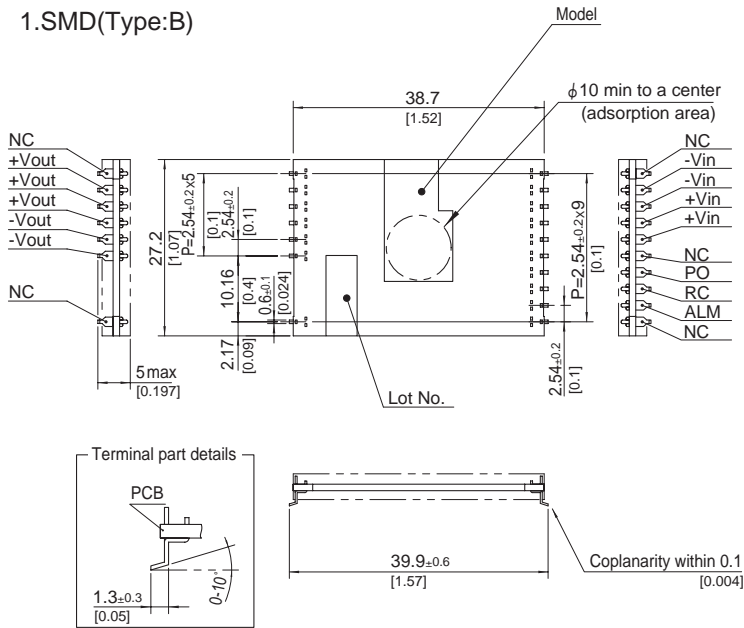
## SPECIFICATIONS

	MODEL	SFS20481R5	SFS20481R8	SFS20482R5	SFS20483R3	SFS204805
INPUT	VOLTAGE[V]	DC36 - 76				
	CURRENT[A]	*1 0.33typ	0.35typ	0.41typ	0.46typ	0.46typ
	EFFICIENCY[%]	*1 86typ	85typ	88typ	90typ	90typ
	START-UP VOLTAGE[V]	DC32 - 36				
	HYSTERESIS VOLTAGE[V]	DC2 min				
OUTPUT	VOLTAGE[V]	1.5	1.8	2.5	3.3	5
	CURRENT[A]	9	8	7	6	4
	VOLTAGE ACCURACY[%]	+5, -3				
	RIPPLE[mVp-p]	50max				
	RIPPLE NOISE[mVp-p]	50max				
	START-UP TIME[ms]	20 - 200max (DCIN 48V, Io=100%)				
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING *1	+2, -1% of rated output voltage				
	OVERCURRENT PROTECTION	Works over 103% of rating				
	OVERVOLTAGE PROTECTION	Works at 115 - 145% of rating				
	LOWVOLTAGE PROTECTION	Works at 95% max of rating				
ISOLATION	REMOTE ON/OFF	Provided(RC open : ON, short between RC and +Vin : OFF)				
ENVIRONMENT	INPUT-OUTPUT	DC1,500V 1minute, DC500V 50MΩ min (20±15℃)				
	OPERATING TEMP.,HUMID.AND ALTITUDE	-40 to +85℃, 20 - 95%RH (Non condensing), 3,000m (10,000feet) max				
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max (SMD:Refer to the Instruction Manual)				
	VIBRATION	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis				
SAFETY	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis				
	AGENCY APPROVALS	UL60950-1, C-UL(CSA60950-1), EN60950-1				
OTHERS	CASE SIZE/WEIGHT	38.7 × 5.0 × 27.2mm [1.52 × 0.197 × 1.07 inches] (W × H × D) /12g max				
	COOLING METHOD	Convection/Forced air				

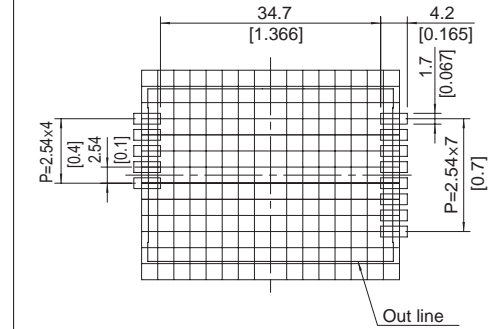
\*1 At rated input(DC48V), rated load and 25℃

External view

1.SMD(Type:B)



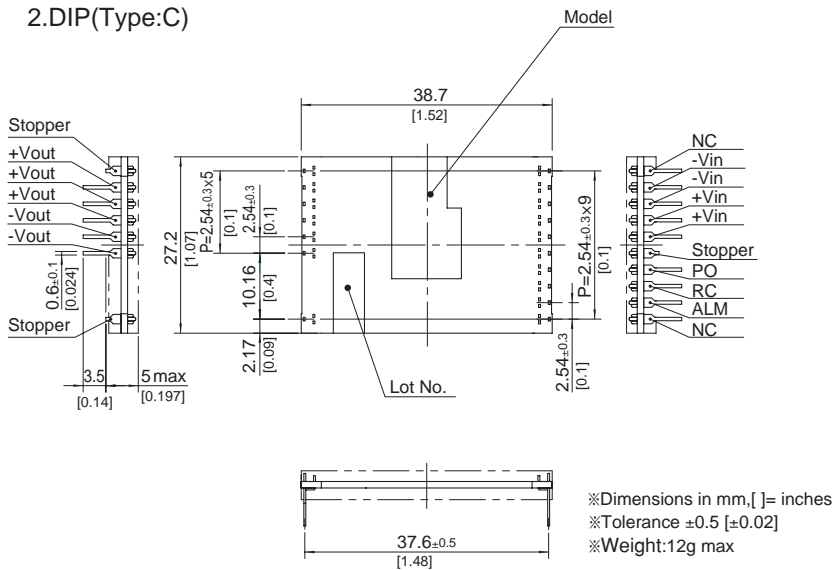
Recommended size for processing PCB (TOP VIEW)



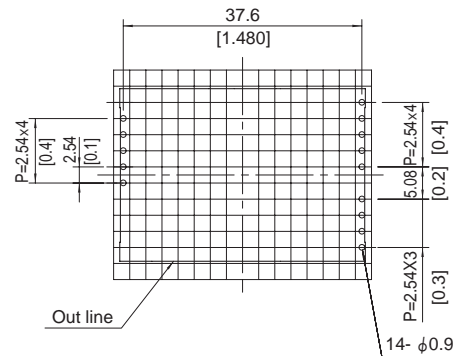
※Dimensions in:  $\frac{\text{mm}}{[\text{inch}]}$

※Div.: 0.1inch

2.DIP(Type:C)



Recommended size for processing PCB (TOP VIEW)



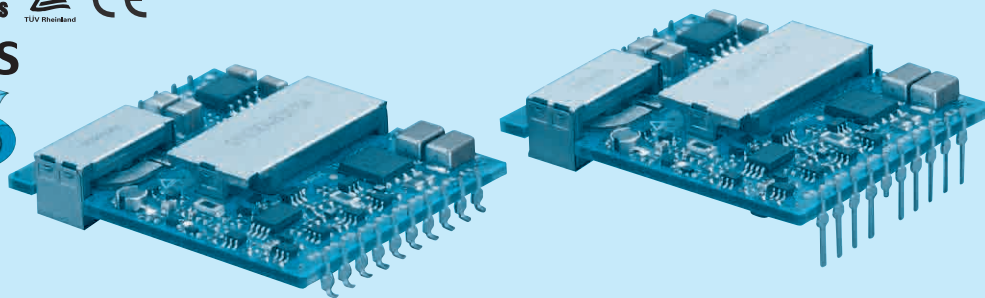
※Dimensions in:  $\frac{\text{mm}}{[\text{inch}]}$

※Div.: 0.1inch

# SFS30

SF S 30 48 3R3 B

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage  
24:DC18 - 36V  
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Mounting type  
(Soldering process)  
B : SMD(Pb-free solder)  
C : DIP(Pb-free solder)

MODEL	SFS30241R2	SFS30241R5	SFS30241R8	SFS30242R5	SFS30243R3	SFS302405	SFS302412	SFS302415
MAX OUTPUT WATTAGE[W]	12.48	15.6	16.2	22.5	29.7	30.0	30.0	30.0
DC OUTPUT	1.2V 10.4A	1.5V 10.4A	1.8V 9A	2.5V 9A	3.3V 9A	5V 6A	12V 2.5A	15V 2A

## SPECIFICATIONS

	MODEL	SFS30241R2	SFS30241R5	SFS30241R8	SFS30242R5	SFS30243R3	SFS302405	SFS302412	SFS302415	
INPUT	VOLTAGE[V]	DC18 - 36								
	CURRENT[A]	*1 0.60typ	0.74typ	0.76typ	1.04typ	1.36typ	1.36typ	1.36typ	1.39typ	
	EFFICIENCY[%]	*1 86.5typ	87.5typ	89typ	90typ	91typ	92typ	92typ	90typ	
	START-UP VOLTAGE[V]	DC16 - 18								
	HYSTERESIS VOLTAGE[V]	DC1 min								
OUTPUT	VOLTAGE[V]	1.2	1.5	1.8	2.5	3.3	5	12	15	
	CURRENT[A]	10.4	10.4	9	9	9	6	2.5	2	
	VOLTAGE ACCURACY[%]	+5, -3								
	RIPPLE[mVp-p]	25max						120max		
	RIPPLE NOISE[mVp-p]	50max						150max		
	START-UP TIME[ms]	20 - 200max (DCIN 24V, Io=100%)								
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING *1	±1% of rated output voltage								
	OVERCURRENT PROTECTION	Works over 103% of rating								
	OVERVOLTAGE PROTECTION	Works at 120 - 140% of rating								
	LOWVOLTAGE PROTECTION	Works at 90% max of rating								
	REMOTE ON/OFF	Provided(RC open : ON, short between RC and +Vin : OFF)								

MODEL	SFS30481R2	SFS30481R5	SFS30481R8	SFS304802	SFS30482R5	SFS30483R3	SFS304805	SFS304810	SFS304812	SFS304815
MAX OUTPUT WATTAGE[W]	12.48	15.6	16.2	18.0	22.5	29.7	30.0	30.0	30.0	30.0
DC OUTPUT	1.2V 10.4A	1.5V 10.4A	1.8V 9A	2V 9A	2.5V 9A	3.3V 9A	5V 6A	10V 3A	12V 2.5A	15V 2A

## SPECIFICATIONS

	MODEL	SFS30481R2	SFS30481R5	SFS30481R8	SFS304802	SFS30482R5	SFS30483R3	SFS304805	SFS304810	SFS304812	SFS304815	
INPUT	VOLTAGE[V]	DC36 - 76										
	CURRENT[A]	*1 0.30typ	0.37typ	0.38typ	0.42typ	0.52typ	0.67typ	0.68typ	0.69typ	0.68typ	0.68typ	
	EFFICIENCY[%]	*1 86typ	87.5typ	89typ	89typ	91typ	92typ	92.5typ	91typ	92typ	92typ	
	START-UP VOLTAGE[V]	DC32 - 36										
	HYSTERESIS VOLTAGE[V]	DC2 min										
OUTPUT	VOLTAGE[V]	1.2	1.5	1.8	2	2.5	3.3	5	10	12	15	
	CURRENT[A]	10.4	10.4	9	9	9	9	6	3	2.5	2	
	VOLTAGE ACCURACY[%]	+5, -3										
	RIPPLE[mVp-p]	25max							120max			
	RIPPLE NOISE[mVp-p]	50max							150max			
	START-UP TIME[ms]	20 - 200max (DCIN 48V, Io=100%)										
PROTECTION CIRCUIT AND OTHERS	OUTPUT VOLTAGE SETTING *1	±1% of rated output voltage										
	OVERCURRENT PROTECTION	Works over 103% of rating										
	OVERVOLTAGE PROTECTION	Works at 120 - 140% of rating										
	LOWVOLTAGE PROTECTION	Works at 90% max of rating										
	REMOTE ON/OFF	Provided(RC open : ON, short between RC and +Vin : OFF)										

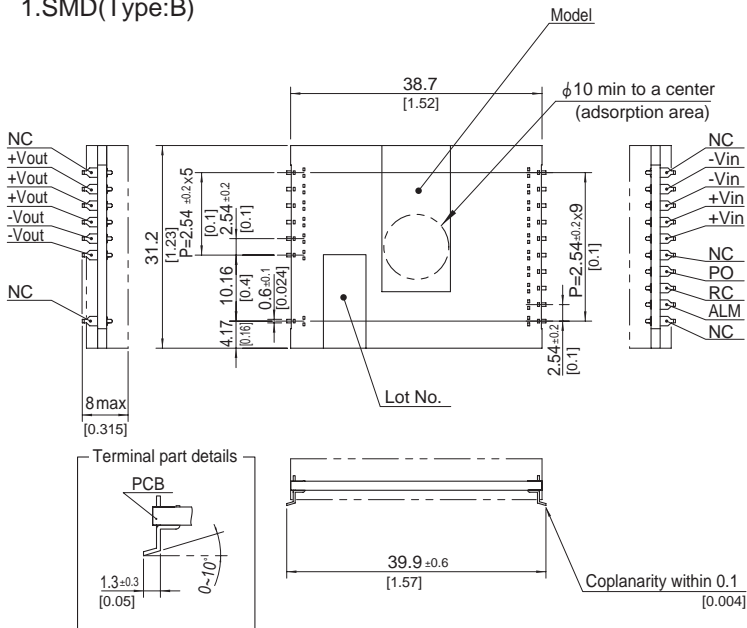
**GENERAL SPECIFICATIONS**

<b>ISOLATION</b>	<b>INPUT-OUTPUT</b>	DC1.500V 1minute, DC500V 50MΩ min (20±15°C)
<b>ENVIRONMENT</b>	<b>OPERATING TEMP.,HUMID.AND ALTITUDE</b>	-40 to +85°C, 20 - 95%RH (Non condensing), 3,000m (10,000feet) max
	<b>STORAGE TEMP.,HUMID.AND ALTITUDE</b>	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max (SMD:Refer to the Instruction Manual)
	<b>VIBRATION</b>	10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis
	<b>IMPACT</b>	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis
<b>SAFETY</b>	<b>AGENCY APPROVALS</b>	UL60950-1, C-UL (CSA60950-1), EN60950-1
<b>OTHERS</b>	<b>CASE SIZE/WEIGHT</b>	38.7 × 8.0 × 31.2mm [1.52 × 0.315 × 1.23 inches] (W × H × D) /20g max
	<b>COOLING METHOD</b>	Convection/Forced air

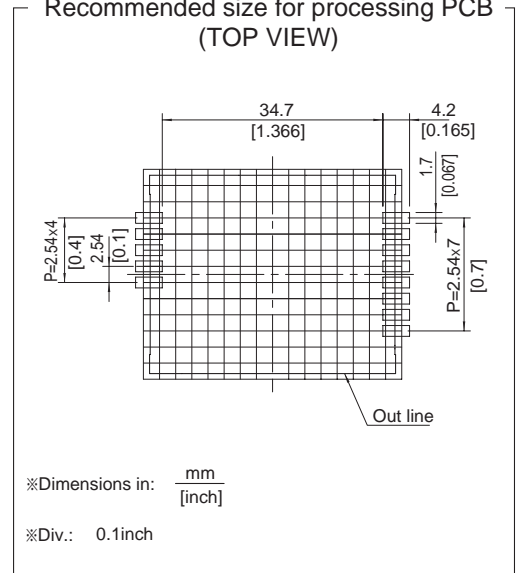
\*1 At rated input(DC24V, DC48V), rated load and 25°C

**External view**

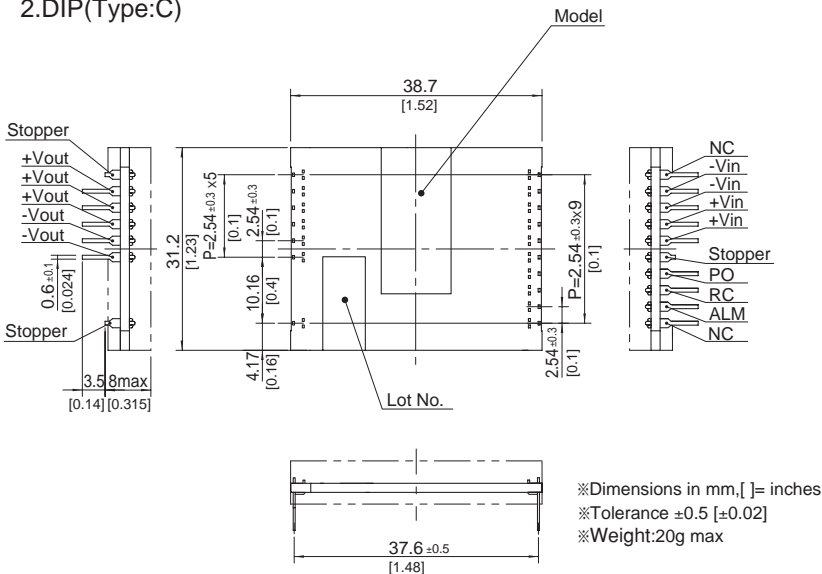
**1.SMD(Type:B)**



**Recommended size for processing PCB (TOP VIEW)**



**2.DIP(Type:C)**



**Recommended size for processing PCB (TOP VIEW)**

