

# The 3<sup>th</sup>Gen+ Smart-Core PD3.1 EPR PPS&AVS Solution

Type-C Ver 2.0, Shunt Regulators for CV , PSEL\_R Function, EPR&PPS Compatible

Turnkey Integration & BMS Design Business Center (SHENZHEN)

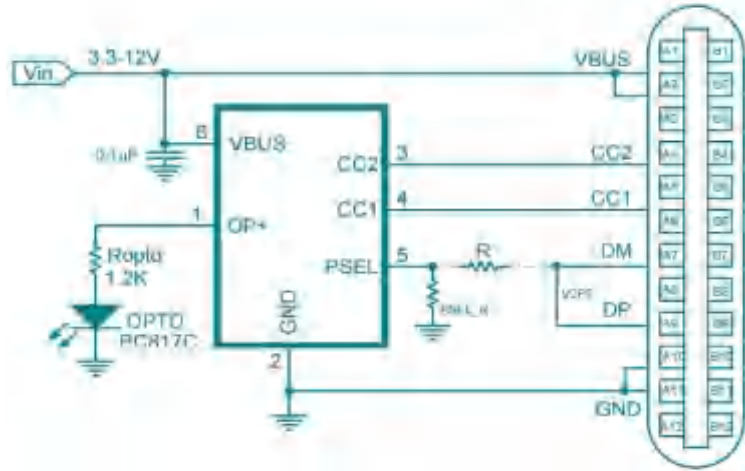
2022-06-28

Ver: VTR1.35SZ/E2H60L

Matthew\_Mao (Shenzhen)



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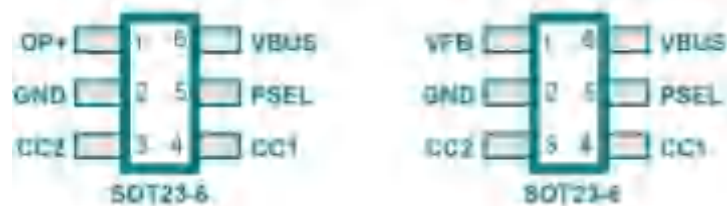
## Fix PDO Output Profile:

- 5V(3.00A)
- 9V(2.00 2.22A 2.77A 3.00A....)
- 12V(1.50A 1.67A 2.10A 2.50A....)
- 15V 20V 28V 48V C+C=35+35W (opt.SDC5435R)

## APDO(PPS) Output Profile:

- 3.3-5.9V3.0A 3.3-11V(1.80A 2.25A 3.00A)

## Package Type



## Protocol Support

- USB PD2.0/PD3.x and PPS Advanced Compatibility
- USB Type-C Rev 2.0 Compatible (Opt.)
- 18-240W Support and PD3.x AVS PPS and EPR

## Highly Integrated

- Suited for 3.3V to 12V VBUS Range
- Built-in Shunt Regulators for Constant Voltage
- Built-in Internal Feedback Compensation
- Cable Drop Compensation: 60-1200mV
- Built-in Output Capacitors Bleeding function for discharging
- CC1 CC2 >6V OVP ; VBUS CC1 CC2>14V AMR and Hardware Reset to vSafe5V, Discharging

- Support Apple2.4A DP=DM=2.7V (20W V2P7 Ver.)

- PSEL\_ R PDO setting function greatly simplifies the optimal BOM cost, also the most advanced intelligent dynamic PDO power setting pin

## Protection

- Output Over/Under-Voltage Protection
- ±2KV ESD HBM ANS/ESDA/JEDEC JS001-2021
- CC1/CC2 OVP for PD3.1 Spec.

## Applications

- Travel Adapters with USB PD Type-C Control
- Travel Adapters with Fast Charge Protocols
- Others Type-C PD Source Application



# SDC5435x SDC5436 FPDO and APDO List

深圳市中电华威电子有限公司 www.zthw.cn (13049495456) 光天芯业 一级代理商

Highly Integrated, Advanced CV Loop Easy to USE , PD3.x and PPS Protocol IC, CDC Prog.

Items	Package	LOOP
SDC5435A	SOT23-6	OPTO+ (PC817C) PPS 20-30W
SDC5435B	SOT23-6	OPTO+ (PC817C) DP_DM=2V7 20W
SDC5435T	SOT23-6	OPTO+ (PC817C) DP_DM=2V7 18W
SDC5436	SOT23-6	VFB (For DC-DC Application): DP_DM=2V7 20W
SDC5435S	SOT23-8	OPTO+ (PC817C) 30-240W CC/CV Loop

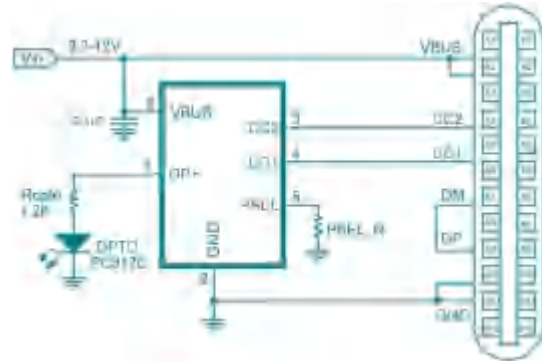
Items	PSEL_R	Pout	USBC PDO List
SDC5435A	GND	25W	5V3.00A 9V2.77A 3.3-5.9V3.00A 3.3-11V2.25A
	Open	20W	5V3.00A 9V2.22A 12V1.67A 3.3-5.9V3.00A 3.3-11V2.00A
	51K	30W	5V3.00A 9V3.00A 12V2.50A 3.3-5.9V3.00A 3.3-11V3.00A
SDC5435B	Open	20W	5V3.00A 9V2.22A 12V1.67A DP_DM=2V7
SDC5435T	Open	18W	5V3.00A 9V2.00A 12V1.50A DP_DM=2V7
SDC5436x	Open	20W	5V3.00A 9V2.22A 12V1.67A 3.3-5.9V3.00A 3.3-11V2.00A DP_DM=2V7
SDC5435S1	R=64K-820K	30-140W	...20V-28V 5A 3.3-5.9V3.00A 3.3-11V2.25A DP_DM=1V2
SDC5435S2	R=64K-820K	30-140W	...20V-28V 5A 3.3-5.9V3.00A 3.3-11V2.25A DP_DM=1V2
SDC5435S3	R=64K-820K	30-140W	...20V-28V 5A 3.3-5.9V3.00A 3.3-11V2.25A DP_DM=1V2
SDC5435S4	R=64K-820K	30-140W	...20V-28V 5A 3.3-5.9V3.00A 3.3-11V2.25A DP_DM=1V2
SDC5435Q	R=64K-820K	30-140W	...20V-28V 5A 3.3-5.9V3.00A 3.3-11V2.25A DP_DM=1V2
SDC5435R	R=64K-820K	30-140W	...20V-28V 5A 3.3-5.9V3.00A 3.3-11V2.25A DP_DM=1V2
SDC5435F	R=64K-820K	30-140W	...20V-28V 5A 3.3-5.9V3.00A 3.3-11V2.25A DP_DM=1V2
SDC5435V	R=64K-820K	140W-240W	...28V-48V 5A EPR PPS AVS Support DP_DM=1V2 QC3.0+ FCP AFC...



Part definition

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## SDC5435A OPTO+ (PSEL&PPS Ver.)



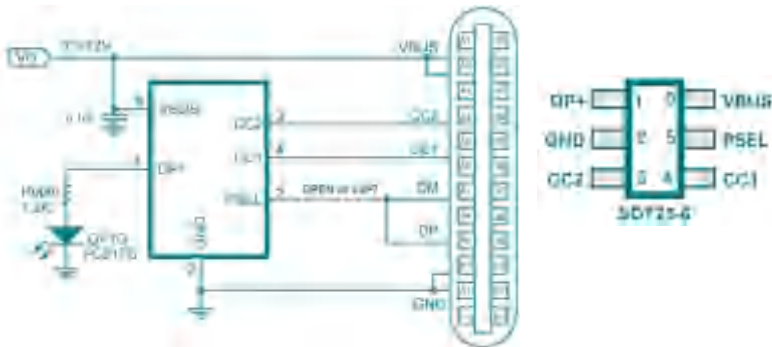
PSEL\_R:  
GND=25W  
Open=20W  
51K=30W



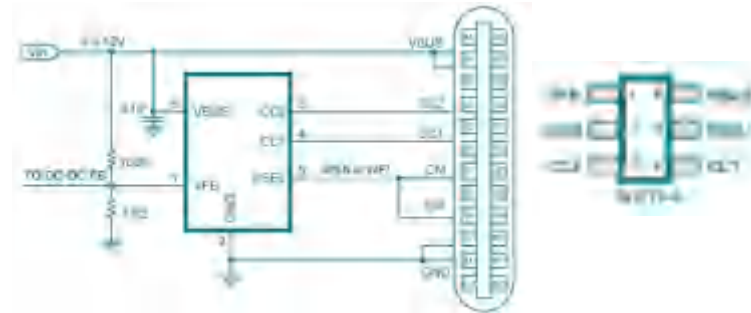
Model	Power	OC1	OC2	OC3	OC4	OC5	OC6	OC7	OC8	OC9	OC10
25W	25W	30V/0.8A	30V/0.7A	30V/0.6A	30V/0.5A	30V/0.4A	30V/0.3A	30V/0.2A	30V/0.1A	30V/0.05A	30V/0.02A
20W	20W	30V/0.8A	30V/0.7A	30V/0.6A	30V/0.5A	30V/0.4A	30V/0.3A	30V/0.2A	30V/0.1A	30V/0.05A	30V/0.02A
18W	18W	30V/0.8A	30V/0.7A	30V/0.6A	30V/0.5A	30V/0.4A	30V/0.3A	30V/0.2A	30V/0.1A	30V/0.05A	30V/0.02A

## SDC5435B/T (OPTO+) and SDC5436 (VFB&PPS) (2V7P 20W Ver.)

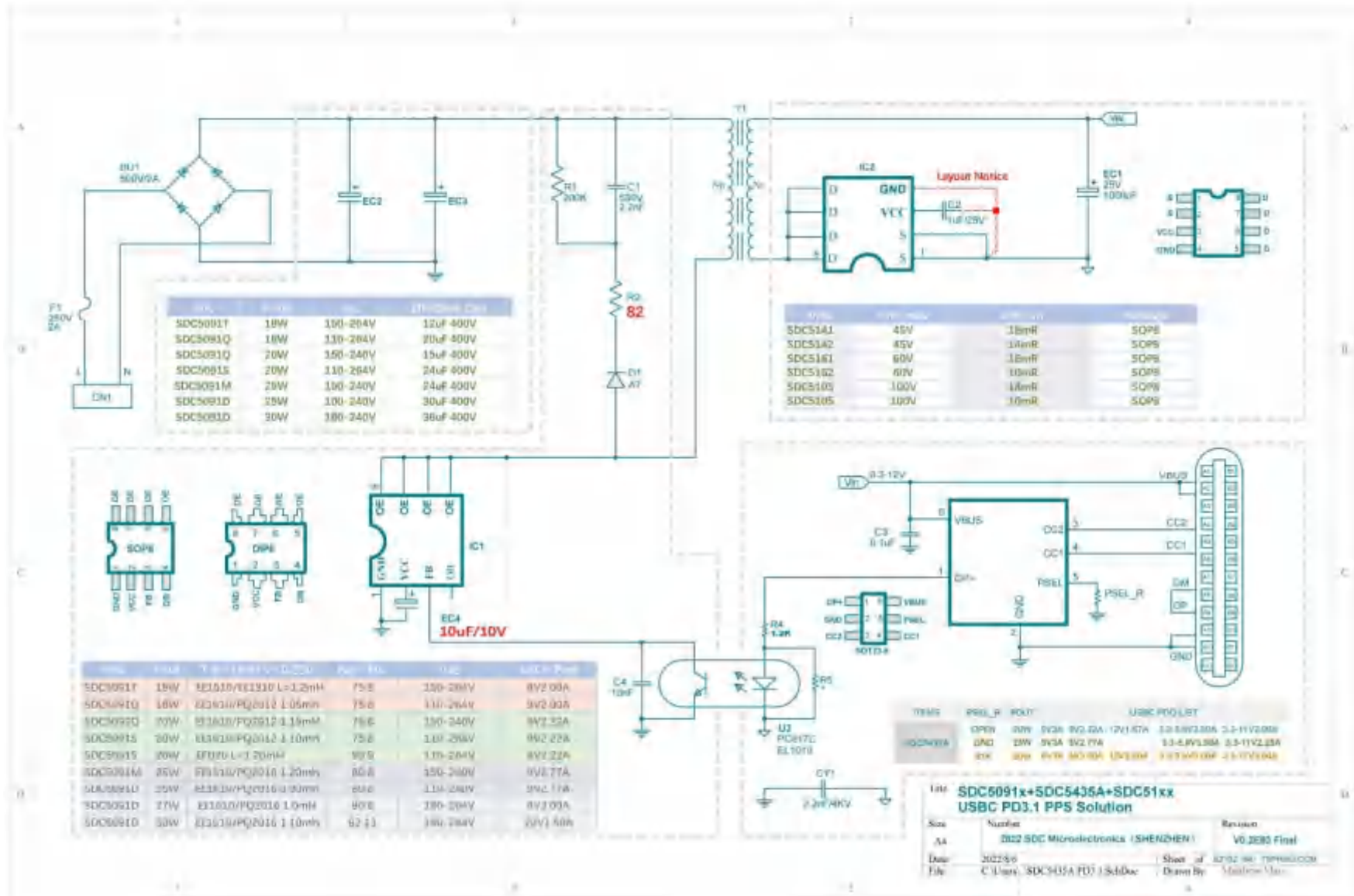
### SDC5435B 20W SDC5435T 18W

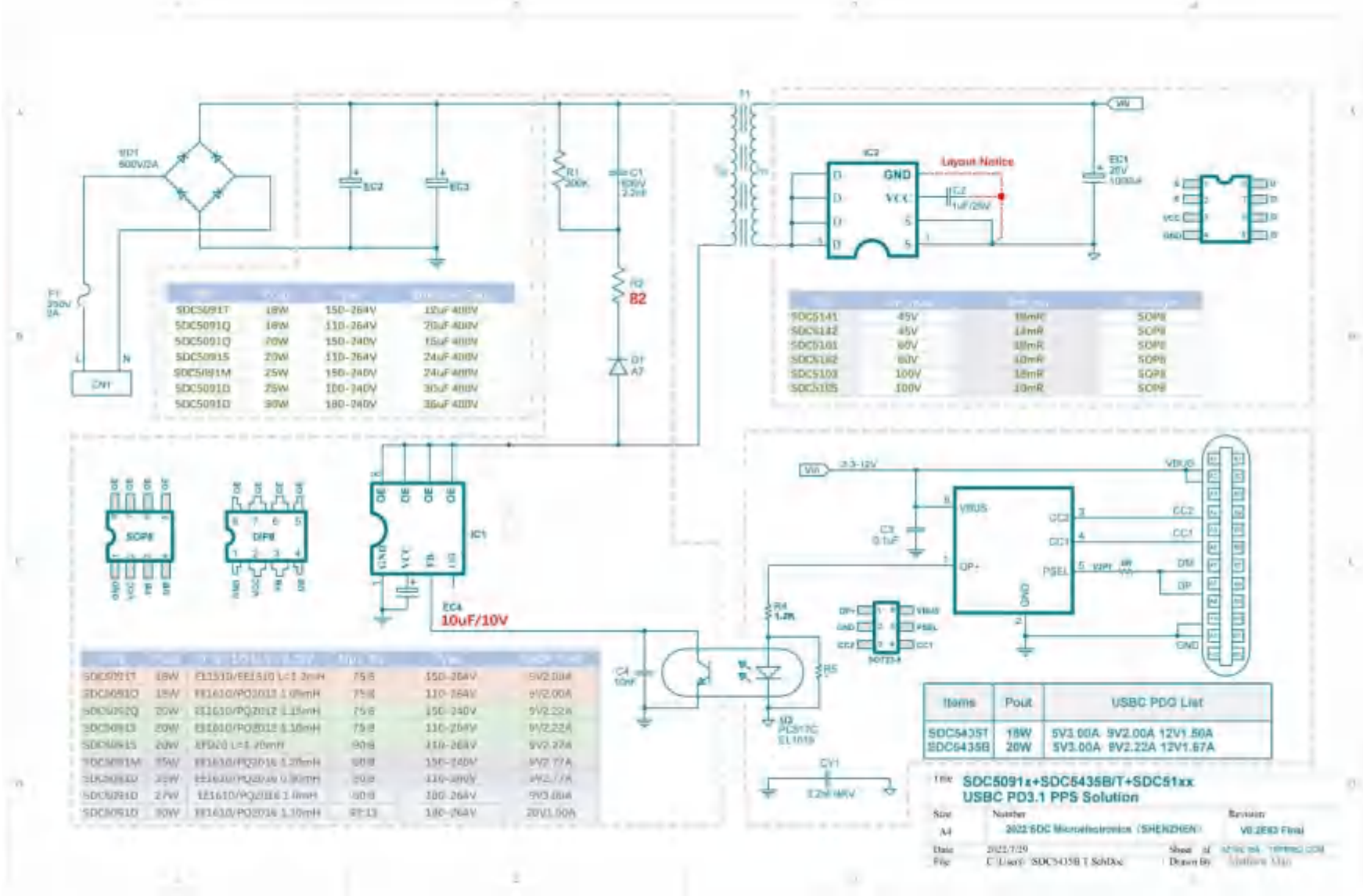


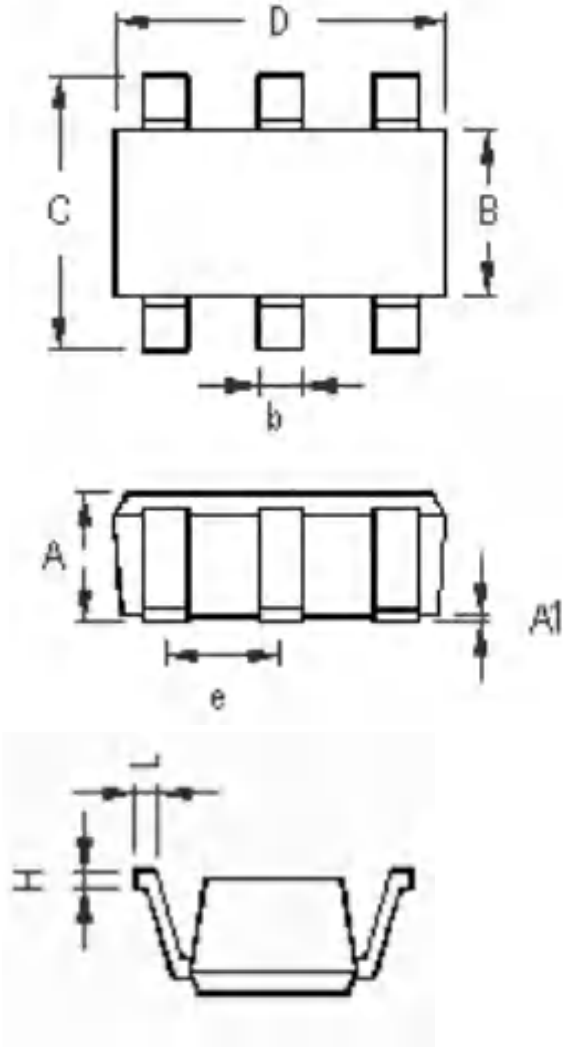
### SDC5436 20W PPS



PDO: 5V3.00A 9V2.22A 12V1.67A 3.3-5.9V3.00A 3.3-11V2.00A







Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.889	1.295	0.031	0.051
A1	0.000	0.152	0.000	0.006
B	1.397	1.803	0.055	0.071
b	0.250	0.560	0.010	0.022
C	2.591	2.997	0.102	0.118
D	2.692	3.099	0.106	0.122
e	0.838	1.041	0.033	0.041
H	0.080	0.254	0.003	0.010
L	0.300	0.610	0.012	0.024