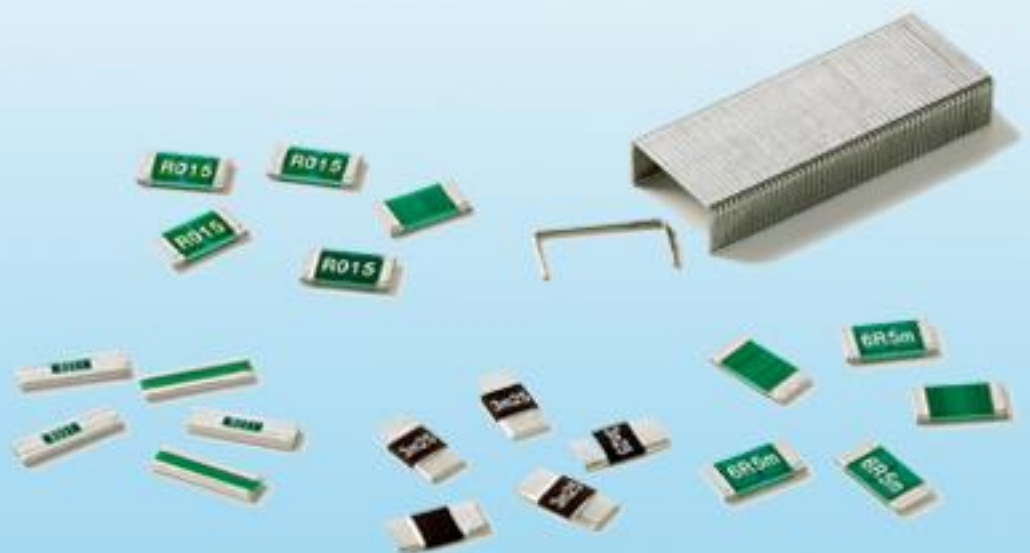


Passive Components

Resistor / Resistor Network
Current Sensing Resistor /
Shunt Sensor / PT Sensor /
Fuse-Resistance Protector



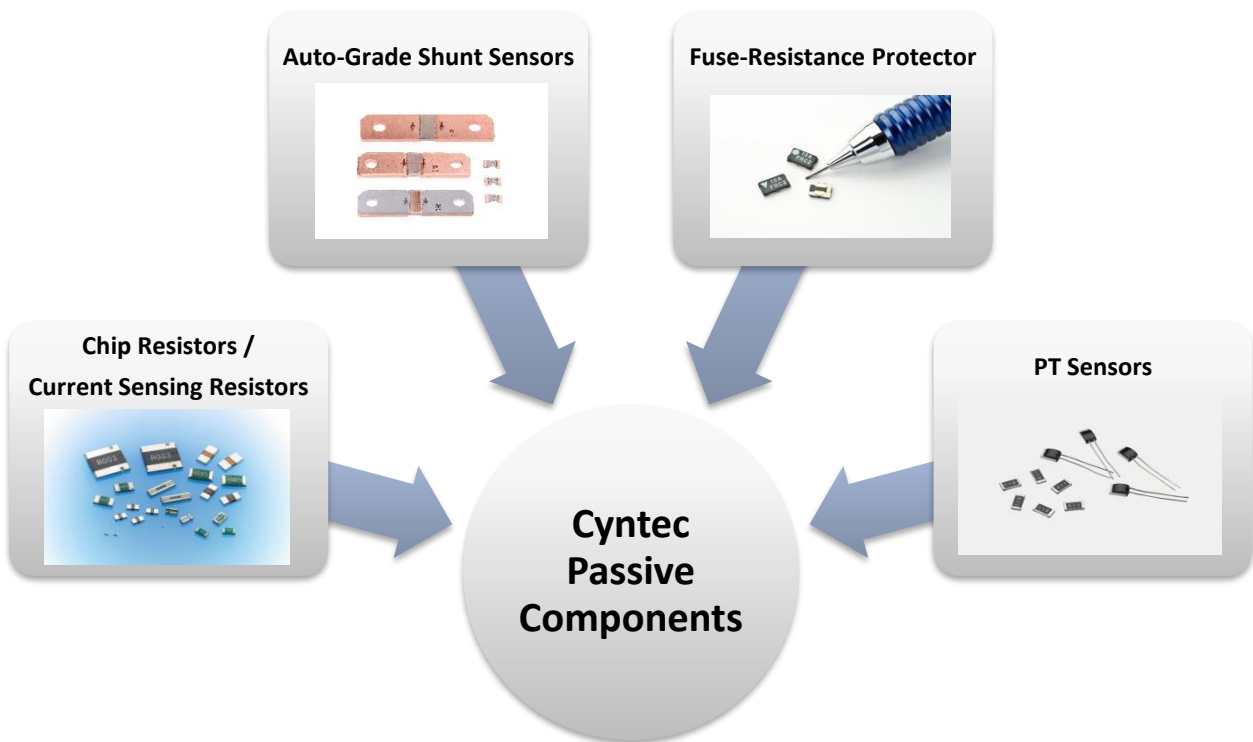
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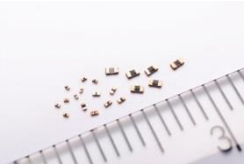

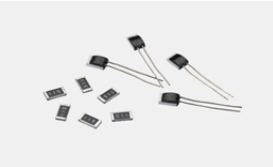
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INTRODUCTION

At Cyntec we do widely use combinations of substrate materials (ceramic, glass, silicon material, etc...) and processing technologies (photolithography, thick film technologies) to produce passive components such as chip resistors, resistor network, current sensors, and fuse-resistance protector which provide the best design and performance solutions for the smartphone, wearable, IOT and other communication products.



<p>Current Sensing Resistor</p> 	<p>Cyntec has developed a series of current sensing resistor which characterized with miniaturization down to 01005 size, high power up to 3W, high precision, and low TCR. Besides the thin film and thick film, we develop the new processing technology to bond metal foil and ceramic substrate together. Base on the new technical perform, we can keep the competitive strength of low TCR.</p>
<p>Shunt Sensor</p> 	<p>Cyntec has Unique size of 6918, 8420 and 8436 shunt sensor. It used new processing technology E-Beam welding. Own mechanical process technology can meet customized requirement. Patented pin structure can sense ultra-low and high accuracy voltage.</p>

<p>Chip Resistor</p> 	<p>Cyntec offers various series of chip resistors based on thin film and thick film types to apply to all electronic equipment. The feature of chip resistor is high precision and miniaturization size that down to 01005size.</p>
<p>Fuse-resistance Protector</p> 	<p>Cyntec has developed and produced a complete series of low profile and high stability FR-Protector (Fuse-Resistance Protector) with two protection functions for main application in lithium-ion battery pack including OCP (Over Current Protection) and OVP (Over Voltage Protection) to ensure the safety of battery module.</p>
<p>PT Sensor</p> 	<p>The Platinum Resistance Temperature Detector (Pt-RTD) chip consists of a thin film Platinum film deposited on a high purity aluminum oxide substrate. In a chip form, the Pt-RTD provides a significant cost advantage compared to the conventional wire wound Pt-RTD. Due to the stability of the TCR of the platinum element, OTP Protection function, the highly advanced packaging materials, and processing technologies, the Pt-RTD in a chip form is able to withstand temperatures ranging from -260°C to 1000°C.</p>

PRODUCT SPECIFICATION

CURRENT SENSING RESISTOR (Consumer-Grade)

0201

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
RLM-0603-K	0603	0201	1/5W	5 10 20	±1%(F)	±150
RLM-0603-C	0603	0201	1/10W	5 10 20	±1%(F)	±150
RL-0603-C	0603	0201	1/10W	50 100 150	±1%(F)	±200
RLT0306-C	0603	0201	1/10W	500 ~ 2000	±1%(F)	±200

0402

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
RLM-0510-FL	1005	0402	1/3W	2.5 5 10 20	±1%(F)	±100
RLM-0510-7F	1005	0402	1/6W	10 20	±1%(F)	±200
RL-1005-7	1005	0402	1/6W	40 50 60	±1%(F)	0~500
RLT0510-3	1005	0402	1/4W	65~1000	±1%(F)	±200

0603

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
RLM0816T4F-4	1608	0603	1/2W	1 2 3 5	±1%(F)	±150
RLM-0816-4F	1608	0603	1/2W	2.5 5 10 20 25	±1%(F)	±75
RLT0816-3	1608	0603	1/4W	50~<10000	±1%(F)	±200

0805

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
RLM-1220-4F	2012	0805	1/2W	1.5 2 3 5 10 15	±1%(F)	±100
SCRR0805SD	2012	0805	1/2W	20~500	1%(F)	±100
RLM-2012W-6F	1220	0508	1W	1 2 5 10	±1%(F)	±150
SCRR0508WD	1220	0508	1/2W	20~510	±0.5%(D) ±1%(F)	±200
RLM-1220-6F	2012	0805	1W	1.5 2 3 4 5 6 7 8 9 10	±1%(F)	±100

1206

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
VSML1206S1	3216	1206	1W	1~10	±1%(F)	±75
VSML1206SA	3216	1206	1.5W	1~5	±1(F)	±75
SCRR1206S1	3216	1206	1W	10~1000	±1%(F)	±100
RL1632T4F-B	1632	1206	1.5W	1 1.5 2 3 4 5	±1%(F)	±100
RLM-1632-6F	1632	1206	1W	3 5 10	±1%(F)	±100
RLM-1632W-6F	1632	0612	1W	1 2 3 5 10	±1%(F)	±100
SCRR0612W1	1632	0612	1W	8~1000	±1%(F)	±100
SCRR0612W2	1632	0612	2W	10~150	±1%(F)	±200
RL1632T4F	1632	1206	1W	0.5 0.75 1 2 3 4 5 7 9	±1%(F)	±100
RL1632T4F	1632	1206	1W	10 20 25 100 200	±1%(F)	±150

2512

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
VSML2512S2	6432	2512	2W	15	±1%(F)	±50
VSML2512S3	6432	2512	3W	0.3~10	±1%(F)	±50~±125
VSML2512S4	6432	2512	4W	3	±1%(F)	±50
VSML2512S5	6432	2512	5W	2	±1%(F)	±50
VSML2512S6	6432	2512	6W	0.3~1	±1%(F)	±50~±125
SCRR2512S2	6432	2512	2W	10~1000	±1%(F)	±100

3922

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
VSML3922S5	10055	3922	5W	3, 4	±1%(F)	±50~±100
VSML3922S7	10055	3922	7W	2	±1%(F)	±50~±100
VSML3922S9	10055	3922	9W	0.2~1	±1%(F)	±50~±100

CURRENT SENSING RESISTOR (Automotive-Grade)

0805

Part Number	Dimension		Power Rating (W)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
VS RP0805SD	2012	805	1/2W	20~500	±1%(F)	±100
VS RP0508WD	1220	508	1/2W	20~510	±1%(F)	±200

1206

Part Number	Dimension		Power Rating (W)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
VS ML1206SA	3216	1206	1.5W	1~5	±1%(F)	±75
VS RP1206S1	3216	1206	1W	10~1000	±1%(F)	±100
VS RP1206SB	3216	1206	3/4W	1100~10000	±1%(F)	±100
VS RP1206SD	3216	1206	1/2W	10~1000	±1%(F)	±100
VS ML1206S1	3216	1206	1W	1~10	±1%(F)	±75
VS RP0612W1	1632	612	1W	10~1000	±1%(F)	±100
VS RP0612W2	1632	612	2W	10~150	±1%(F)	±100

2512

Part Number	Dimension		Power Rating (W)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
VS ML2512S2	6432	2512	2W	15	±1%(F)	±50
VS ML2512S3	6432	2512	3W	0.3~10	±1%(F)	±50~±125
VS ML2512S4	6432	2512	4W	3	±1%(F)	±75
VS ML2512S5	6432	2512	5W	2	±1%(F)	±75
VS ML2512S6	6432	2512	6W	0.3~1	±1%(F)	±75~±125
VS RP2512S1	6432	2512	1W	10~1000	±1%(F)	±100
VS RP2512S2	6432	2512	2W	10~1000	±1%(F)	±100

3922

Part Number	Dimension		Power Rating (W)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
VS ML3922S5	10550	3922	5W	3, 4	±1%(F)	±50~±100
VS ML3922S7	10550	3922	7W	2	±1%(F)	±50~±100

VSML3922S9	10550	3922	9W	0.2~1	±1%(F)	±50~±100
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SHUNT SENSOR (Automotive-Grade)

6918

Part Number	Dimension (mm)		Power Rating (W)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	L	W				
V SMB6918SZ	69.25	18.0	36W	0.150	± 5%(J)	0.150mΩ: ±100
V SMB6918SY	69.25	18.0	36W	0.100	± 5%(J)	0.100mΩ: ±100
V SPA6918SY	69.25	18.0	36W	0.100	± 5%(J)	0.100mΩ: ±100

8420

Part Number	Dimension (mm)		Power Rating (W)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	L	W				
V SMA8420AY	84.0	20.0	36W	0.050	± 5%(J)	0.050mΩ: ±100

8436

Part Number	Dimension (mm)		Power Rating (W)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	L	W				
V SMB8436SY	84.0	36.0	36W	0.025	± 5%(J)	0.025mΩ: ±100

6918 (Connector Type)

Part Number	Dimension (mm)		Max Current (A)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	L	W				
V GE00-400VN-000	69.25	18.0	400A	0.150	± 5%(J)	0.150mΩ: ±100
V GE00-500VN-010	69.25	18.0	500A	0.100	± 5%(J)	0.100mΩ: ±150

8420 (Connector Type)

Part Number	Dimension (mm)		Max Current (A)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	L	W				
V GA00-500VN-010	84.00	20	500	0.05	±5%(J)	0.050mΩ: ±100

8436 (Connector Type)

Part Number	Dimension (mm)		Max Current (A)	Resistance Value (mΩ)	Resistance Tolerance	TCR (ppm/°C)
	L	W				
V GB00-1K0VN-070	84.00	36	1000	0.025	±5%(J)	0.025mΩ: ±200
V GB00-800VN-050	84.00	36	800	0.025	±5%(J)	0.025mΩ: ±100

SHUNT SENSOR MODULE (Automotive-Grade)

8420 (Connector Type)

Part Number	Dimension (mm)		Nominal Current Range	Accuracy	Operating temperature	Operating Voltage
	L	W				
VGAS2-500CB-000	84.00	57.0	±500A	±0.2%	-40~105°C	12V
VGAS2-500TB-000	84.00	57.0	±500A	±0.2%	-40~105°C	12V

8436 (Connector Type)

Part Number	Dimension (mm)		Nominal Current Range	Accuracy	Operating temperature	Operating Voltage
	L	W				
VGBS3-1K0CB-000	84.00	73	±1000	±0.2%	-40~105°C	12V
VGBS3-1K0TB-000	84.00	73	±1000	±0.2%	-40~105°C	12V

RESISTOR (Consumer-Grade)

008004

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
CRNHYSE	0201	008004	1/70W	10~1M	\pm 5%(J)	\pm 200

09005

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
RR0203S	03015	09005	1/50W	10~1M	\pm 1%(F)	\pm 200

01005

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
PFR02S	0402	01005	1/32W	1~10M	\pm 1%(F)	\pm 200
RR0204S	0402	01005	1/32W	1~10M	\pm 1%(F)	\pm 200
RR0204SE	0402	01005	1/32W	10~1M	\pm 1%(F)	\pm 200
CRTFQSS	0402	01005	1/32W	1~2M	\pm 1%(F)	\pm 200

0201

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
PFR03S	0603	0201	1/20W	1~10M	\pm 0.5%(D) \pm 1%(F)	\pm 200
RR0306S	0603	0201	1/20W	1~10M	\pm 0.5%(D) \pm 1%(F)	\pm 200
RR0306SE	0603	0201	1/20W	10~1M	\pm 1%(F)	\pm 200
CRTFKSR	0603	0201	1/20W	1~2M	\pm 0.5%(D) \pm 1%(F)	\pm 200

0402

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
PFR05	1005	0402	1/16W	1~10M	\pm 0.5%(D) \pm 1%(F)	\pm 25
RR0510	1005	0402	1/16W	1~10M	\pm 0.5%(D) \pm 1%(F)	\pm 25
RR0510SE	1005	0402	1/16W	10~1M	\pm 1%(F)	\pm 200
CRTFHXQ	1005	0402	1/16W	1~2M	\pm 0.5%(D) \pm 1%(F)	\pm 50

HPFR05S	1005	0402	1/5W	1~1K	±1%(F)	±200
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0603

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
HPFR08S	1608	0603	2/5W	1~10K	±1%(F)	±200

0805

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
HPFR12S	2012	0805	1/2W	1~3K	±0.5%(D) ±1%(F)	±200

1206

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/°C)
	Metric (mm)	Inch (mil)				
HPFR16S	3216	1206	1W	1~1K	±0.5%(D) ±1%(F)	±150

RESISTOR (Automotive-Grade)

0201

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
VRNSKR	0603	0201	1/20W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 200

0402

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
VRNSHN	1005	0402	1/10W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 100
VRLSHN	1005	0402	1/10W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 100
VRASHN	1005	0402	1/10W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 100

0603

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
VRNSIN	1608	0603	1/10W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 100
VRNSIL	1608	0603	1/8W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 100
VRASIN	1608	0603	1/10W	1~10M	$\pm 1\%$	± 100

0805

Part Number	Dimension		Power Rating (W)	Resistance Value (Ω)	Resistance Tolerance	TCR (ppm/ $^{\circ}$ C)
	Metric (mm)	Inch (mil)				
VRNSGL	2012	0805	1/8W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 100
VRNSGG	2012	0805	1/4W	1~10M	$\pm 0.5\%$, $\pm 1\%$	± 100

FUSE-RESISTANCE PROTECTOR

4030

Part Number	Dimension			Rated Current	Operating Voltage	Heater Resistance
	L (mm)	W (mm)	T (mm)			
FD-4030-12A-C1-C	4.0	3.0	0.85	12A	3.00~4.50V	0.63~1.35Ω
FD-4030-12A-C2-C	4.0	3.0	0.85	12A	4.00~9.00V	2.00~2.65Ω
FD-4030-12A-C3-C	4.0	3.0	0.85	12A	7.40~14.0V	5.00~9.00Ω
FD-4030-12A-C4-C	4.0	3.0	0.85	12A	10.5~19.6V	9.80~18.0Ω
FD-4030-15A-C1-C	4.0	3.0	0.85	15A	3.00~4.50V	0.63~1.35Ω
FD-4030-15A-C2-C	4.0	3.0	0.85	15A	5.00~9.00V	2.2~3.3Ω
FD-4030-15A-C3-C	4.0	3.0	0.85	15A	7.40~13.80V	5.5~8.4Ω
FD-4030-15A-C4-C	4.0	3.0	0.85	15A	10.50~19.60V	10.4~15.8Ω
FD-4030-15A-C5-C	4.0	3.0	0.85	15A	14.40~23.50V	17.9~29.1Ω

5432

Part Number	Dimension			Rated Current	Operating Voltage	Heater Resistance
	L (mm)	W (mm)	T (mm)			
FC-5432-10A-C2-C	5.4	3.2	1.05	10A	4.0~9.0V	1.7~2.65Ω
FC-5432-12A-C1-C	5.4	3.2	1.05	12A	4.0~7.0V	1.25~2.65Ω
FC-5432-12A-C3-C	5.4	3.2	1.05	12A	7.0~14.0V	5.0~8.0Ω
FC-5432-12A-C4-C	5.4	3.2	1.05	12A	10.5~19.5V	9.8~16.5Ω
FC-5432-15A-C3-C	5.4	3.2	1.05	15A	7.0~14.0V	5.0~9.0Ω
FC-5432-15A-C3-C	5.4	3.2	1.05	15A	10.5~19.5V	10~18Ω
FC-5432-15A-C5-C	5.4	3.2	1.05	15A	14.4~23.5V	15.8~31.8Ω

9550

Part Number	Dimension			Rated Current	Operating Voltage	Heater Resistance
	L (mm)	W (mm)	T (mm)			
FR-9550-30A-C01-B	9.5	5.0	2.0	30A	4.0~6.6V	0.8~1.2Ω
FR-9550-30A-C03-B	9.5	5.0	2.0	30A	8.4~13.2V	3.2~5.2Ω
FR-9550-30A-C04-B	9.5	5.0	2.0	30A	11.1~18.4V	6.3~9.3Ω
FR-9550-30A-C05-B	9.5	5.0	2.0	30A	14.0~23.4V	10.0~15.0Ω
FR-9550-30A-C07-B	9.5	5.0	2.0	30A	20.2~31.5V	18.8~31.2Ω
FR-9550-30A-C10-B	9.5	5.0	2.0	30A	28.0~46.9V	40.0~60.0Ω
FR-9550-30A-C14-B	9.5	5.0	2.0	30A	39.6~62.0V	72.4~120.6Ω

PT SENSORS

Part Number	Dimension		Nominal Resistance at 0°C	TCR (ppm/°C)	Operating Temperature Range
	sensor body	wire length			
SE10255018	3.2*1.6	None	1000Ω±0.48%	3750	-55°C~125°C
SA10100609	1.7*2.8	10.0	100Ω±0.12%	3850	-50°C~500°C
SA50160527	2.0*3.0	10.0	500Ω±0.06%	3850	-50°C~500°C
SA50100585	2.0*3.0	10.0	500Ω±0.12%	3850	-50°C~500°C
SA10260539	2.0*3.0	10.0	1000Ω±0.06%	3850	-50°C~500°C
SA10200542	2.0*3.0	10.0	1000Ω±0.12%	3850	-50°C~500°C
SA10101553	ψ3.0*6.0	8.0	100Ω±0.12%	3850	-50°C~500°C
SA50101528	ψ3.0*6.0	8.0	500Ω±0.12%	3850	-50°C~500°C
SA10201521	ψ3.0*6.0	8.0	1000Ω±0.12%	3850	-50°C~500°C
CYN-8Y-001	ψ6.0*106.0	550.0	500Ω±0.24%	3850	-40°C~538°C
CYN-8Y-002	ψ5.0*78.0	152.0	1000Ω±0.4%	3750	-40°C~538°C

CONTACT US

Beside the standard products, we also make customize products according to your different request and specifications. If you have any question or request, please contact us. We will reply to you as soon as possible.

Contact Window: service@cyntec.com

More detail information in <https://www.cyntec.com>

