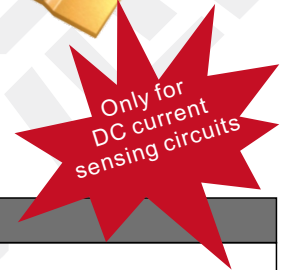
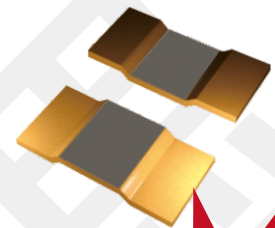


**TCR  $\leq \pm 25 \text{ppm}/^\circ\text{C}$  (-55~+170°C, +20°C Ref), tightest tolerance  $\pm 0.5\%$   
**No trimming & Non-hot-spot design, Low EMF**  
**AEC-Q200 qualified****

### Introduction

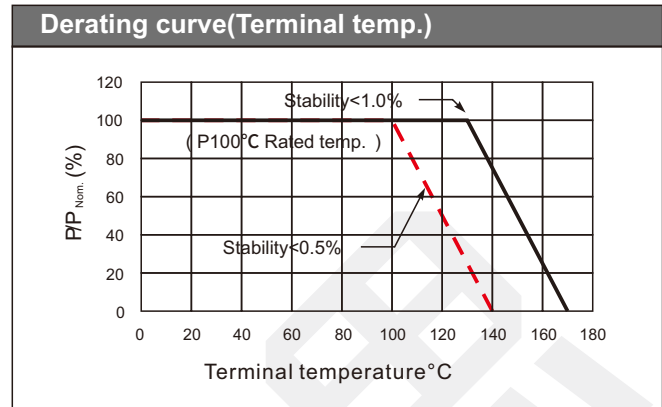
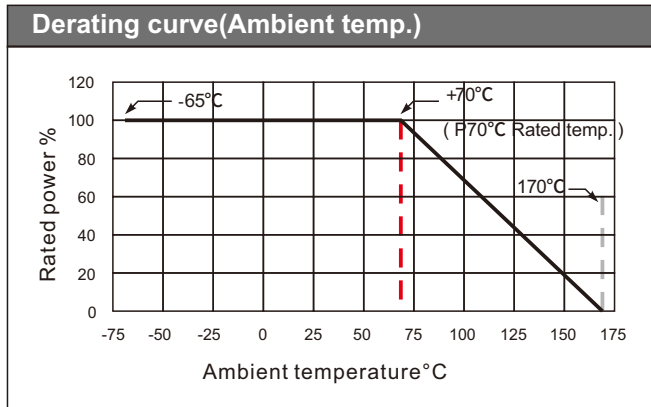
This series is made from a precision metal alloy and which is then precisely machined and welded using exclusive EB-Welding equipment designed and manufactured independently by C&B Group. The combination of excellent consistency of metal alloy, the precision machining capability and the efficient welding process allow the product to achieve a tight tolerance up to  $\pm 0.5\%$  without trimming. The "Trimming Free" technology avoids the loss of rated current and the hot-spot due to notches in the trimming process, which greatly increases the reliability of the product. At the same time, the improved welding quality ensures very low EMF and high stability of the product. From the raw material to equipment and core process, whole process is strictly controlled inside of the house to make sure stable quality and timely delivery.

This series is ideal for high current sensing circuits which ask for high precision at the same time. Visit [www.resistor.today](http://www.resistor.today) to learn more.



Specifications (mm)										
			Recommend solder pad							
Series	Size	Rated Power	Resistance range	Tolerance	TCR	Operating temp.	Packaging			
SEWF3920	3920	8W	1mΩ	±5% ±1% ±0.5%	≤±25ppm/°C (-55~+170°C, +20°C Ref)	-65~+170°C	tape&reel 2000pcs/reel			
		6W	2mΩ							
		5W	3mΩ							
Dimensions										
Size	Resistance	L	W	A	D	T	H	a	b	c
3920	1mΩ	10.0±0.2	5.2±0.2	2.0±0.2	0.5±0.2	1.3±0.1	1.8±0.2	5.6±0.1	6.2±0.2	2.7±0.2
	2mΩ	10.0±0.2	5.2±0.2	2.0±0.2	0.5±0.2	0.65±0.1	1.15±0.2	5.6±0.1	6.2±0.2	2.7±0.2
	3mΩ	10.0±0.2	5.2±0.2	2.0±0.2	0.5±0.2	0.45±0.1	0.95±0.2	5.6±0.1	6.2±0.2	2.7±0.2

Part Number Information														
Example, SEWF3920F1L00P9 (SEWF 3920 ±1% 1mΩ ±25ppm/°C Standard)														
S	E	W	F	3	9	2	0	F	1	L	0	0	P	9
Series SEWF			Size 3920		Tolerance D=±0.5% F=±1% J=±5%			Resistance 1L00=1mΩ 2L00=2mΩ 3L00=3mΩ			TCR P=±25ppm/°C		Code 9=Standard	



Performance				
Test Item	Test Method	Standard	Typical	Maximum
Short-time overload	5x rated power for 5s,measured 24±2h after test	MIL-STD-202 Method 201	±0.1%	±0.5%
Thermal shock	-55°C→+125°C,1000 cycles,measured 24±2h after test	JESD22 Method JA-104	±0.1%	±0.5%
Moisture resistance	T=24h/cycle,no load,7a and 7b not required,measured 24±2h after test	MIL-STD-202 Method 106	±0.2%	±0.5%
Load life	+70°C,2000h,rated power,measured 24±2h after test	MIL-STD-202 Method 108	±0.5%	±1.0%
Resistance to soldering heat	+260,±5°C,10s±1s,measured 24±2h after test	MIL-STD-202 Method 210	±0.2%	±0.5%
High temp. & high humidity	+85°C,85%RH,10% of rated power,1000h,measured 24±2h after test	MIL-STD-202 Method 103	±0.2%	±0.5%
Low temp. storage	-65°C for 96h,measured 24±2h after test	IEC 60068-2-1	±0.1%	±0.5%
Vibration	Frequency varied 10Hz to 2000Hz in 20 minutes,acceleration 5g X-Y-Z direction°C12 cycles	MIL-STD-202 Method 204	±0.05%	±0.2%
Mechanical shock	100g,6ms,half-sine shock wave,3 times/direction,18 times measured 24±2h after test	MIL-STD-202 Method 107	±0.05%	±0.2%
Resistance to solvent	Immerse in solvent for 3 min and then wipe 10 times 3 cycles of 3 solvents,clean and dry at ambient temperature	MIL-STD-202 Method 215	Clear marking No visible damage	
Solderability	+235°C±5°C,2s±0.5s	J-STD-202	95% covered	
TCR	-55°C and +170°C,+20°C ref.	IEC 60115-1 4.8	Within the nominal value range	
Substrate bending	2mm,for 60s	AEC-Q200-005	±0.01%	±0.1%
Terminal strength	Force 17.7N,hold for 60s	AEC-Q200-006	±0.01%	±0.1%
Low temp. operation	-55°C,no load for 1h,rated voltage load for 45 min,no load for 15 min	IEC 60115-1 4.36	±0.2%	±0.5%

Popular Part Number				
Part Number	Size	Tolerance	Resistance	TCR
SEWF3920J1L00P9	3920	±5%	1mΩ	±25ppm/°C
SEWF3920F1L00P9	3920	±1%	1mΩ	±25ppm/°C
SEWF3920D1L00P9	3920	±0.5%	1mΩ	±25ppm/°C
SEWF3920J2L00P9	3920	±5%	2mΩ	±25ppm/°C
SEWF3920F2L00P9	3920	±1%	2mΩ	±25ppm/°C
SEWF3920D2L00P9	3920	±0.5%	2mΩ	±25ppm/°C
SEWF3920J3L00P9	3920	±5%	3mΩ	±25ppm/°C
SEWF3920F3L00P9	3920	±1%	3mΩ	±25ppm/°C
SEWF3920D3L00P9	3920	±0.5%	3mΩ	±25ppm/°C

