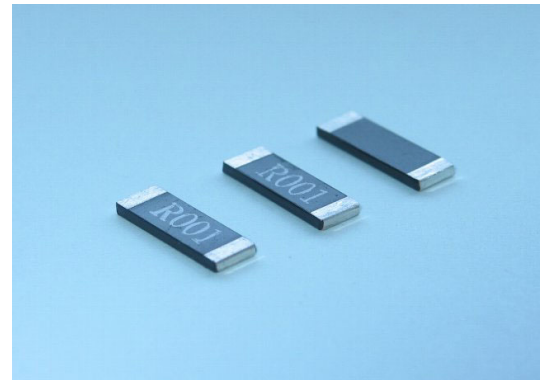


CURRENT DETECT CHIP RESISTORS,
WSL1, WSL2, WSL8 (CS20)



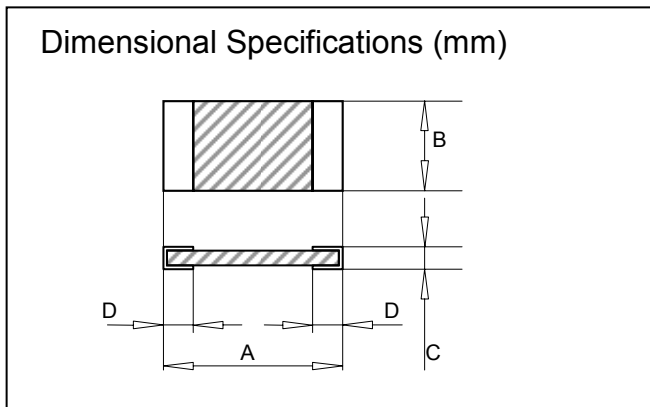
Features and Applications

Presenting surface mounted, low resistance value, low profile, low inductance and large impulse durable metal plate current detectors.

Rating 1/2W, 1W and 8W selectable for your applications.

Tolerance +/-1% and TC 0ppm/C to +50ppm/C standard.

Current detection circuit for high speed CPU peripherals, battery charging current protections, DC-DC conversion modules, DC-AC conversion, servo-motor control electronics, intelligent power modules, etc.



Type	WSL1	WSL2	WSL8
A	5.08+/-0.25	6.4+/-0.3	12.8+/-0.5
B	2.54+/-0.25	3.2+/-0.3	6.4max
C	2.0max	2.0max	2.5max
D	1.0	1.0	1.3

Marking
Marking is done by 3 digits resistance value notation and tolerance code F(1%).

Specification and Performances

	WSL1	WSL2	WSL8(CS20)	Remarks
Resistance	0.5m, 1m, 2m, 3m, 4m, 5mohms			
TCR	+/-50ppm/C(C)			Actually+/-30ppm/C
Tolerance	+/-1.0% (F), +/-5.0% (J)			
Rating Power	1W	2W	8W	Attached on pcb (70micron)
Rating Current	30A	45A	90A	At 1mohm
Maximum Current	45A	65A	126A	2.5seconds one time
Series Inductance	1nH	2nH	5nH	
Operating Temp.	-55 C to 175 C	-55 to +175 C	-55 C to 175 C	
Storage Temp.	-55 C to 175 C	-55 C to 175 C	-55 C to 175 C	

CURRENT DETECT CHIP RESISTORS,

WSL1, WSL2, WSL8 (CS20)

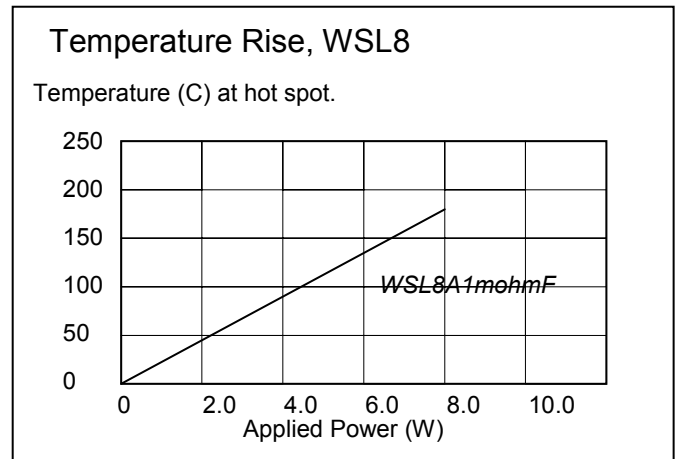
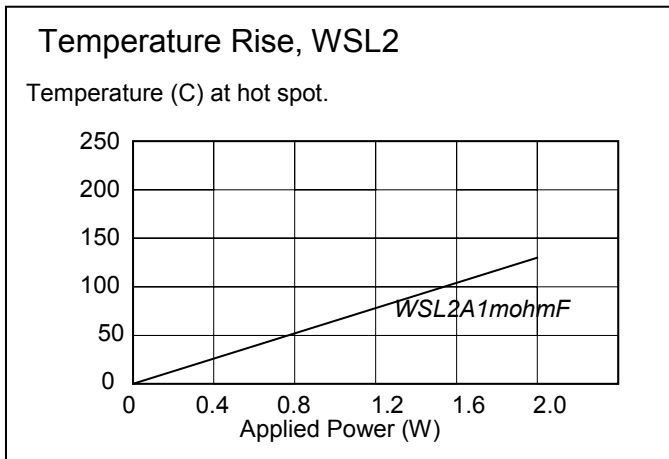
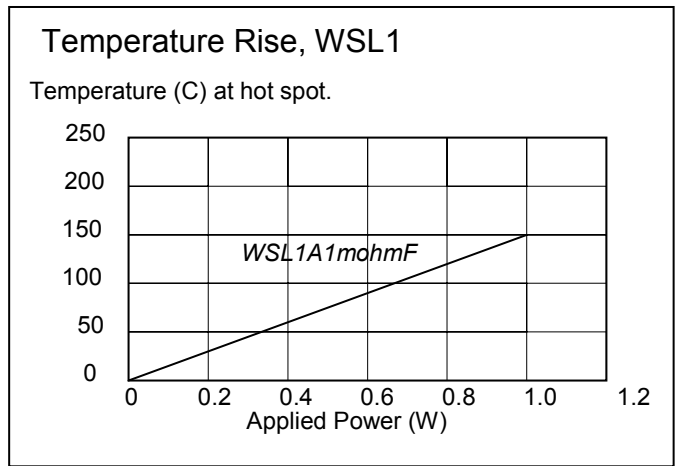
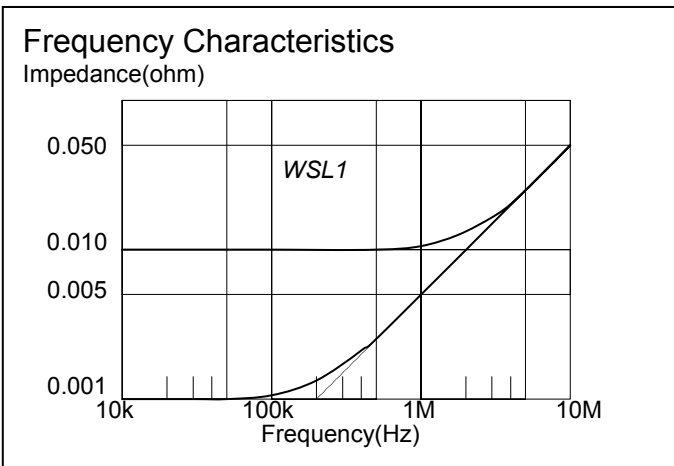
Ordering Information

Ordering P/N	Type	TC	Resistance	Tolerance	Additional Code
WSL1C1mohmF001	WSL1	C (50ppm)	1 mOhm	F (1%)	Z00 bulk, Z01 tape
WSL2C1mohmF001	WSL2	C (50ppm)	3 mOhm	J (5%)	Z00 bulk, Z01 tape
WSL8C2mohmF001	WSL8	C (50ppm)	2 mOhm	F (1%)	Z00 bulk, Z01 tape

Note: 178mm dia. reel contains 4000pcs/WSL1 and 2000pcs/WSL2. More detail about taping, please call factory.

Specifications

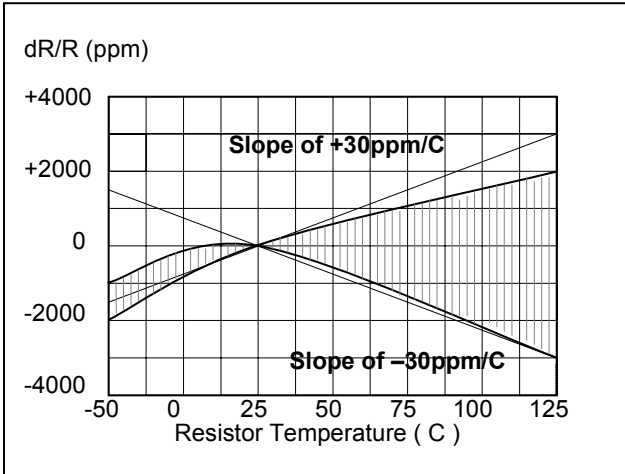
	Specifications	Conditions
Short Time Overload	+/-0.5%+0.5mohm)	maximum current, 2.5seconds.
Low Temperature Storage	+/- (0.5%+0.5mohm)	-55C, 24hours
High Temperature Storage	+/- (1.0%+0.5mohm)	+175C, 1000hours
Heat Shock	+/- (0.5%+0.5mohm)	-55C to +125C, 20min. interval, 5min. 5cycles
Vibration	+/- (0.5%+0.5mohm)	10-2000Hz, 1.5mm/20gr, 2hours
Soldering Heat	+/- (0.25%+0.5mohm)	260C+/-5C, 10+/-1seconds.
Solder ability	90%/terminal surface	
Humidity	+/- (0.5%+0.1mohm)	85C, 85%RH, dc0.1W, 1000 hours
Load Life	+/- (0.5%+0.1mohm)	25C, dc rated power, 90min ON, 30min OFF, 1000hours



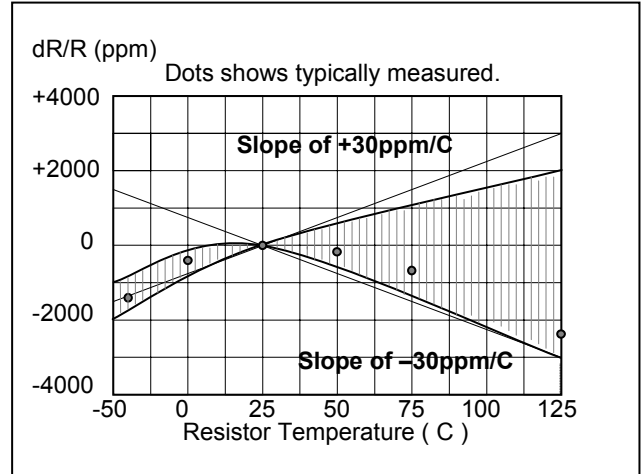
CURRENT DETECT CHIP RESISTORS,

WSL1, WSL2, WSL8 (CS20)

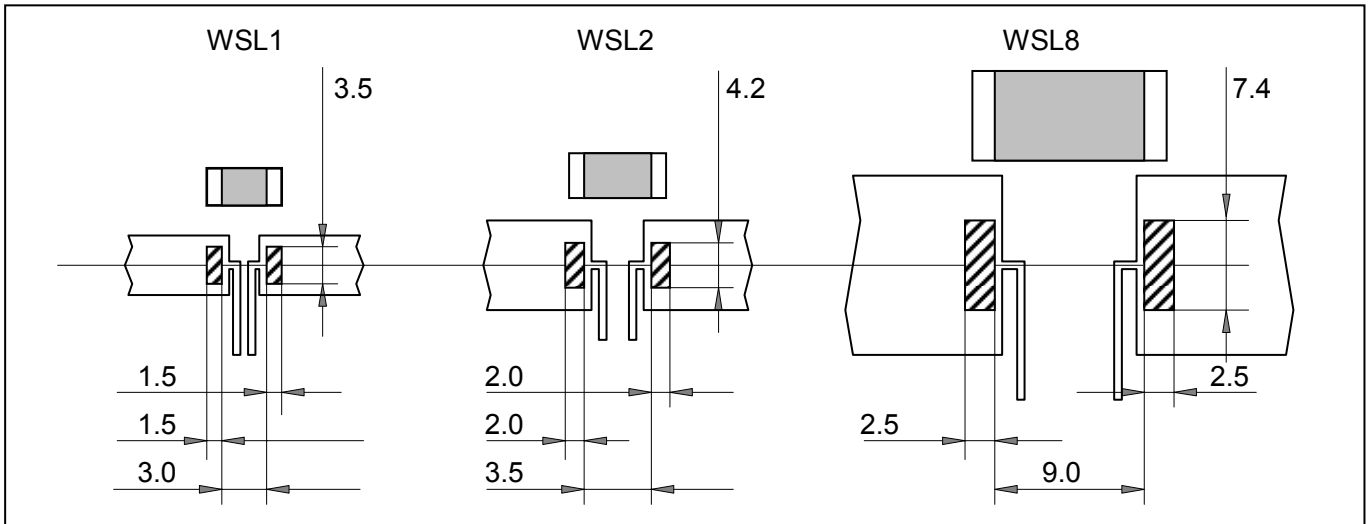
Temperature Characteristics, WSL2



Temperature Characteristics, WSL8



Recommended Foot Print (mm)



Soldering Recommendation

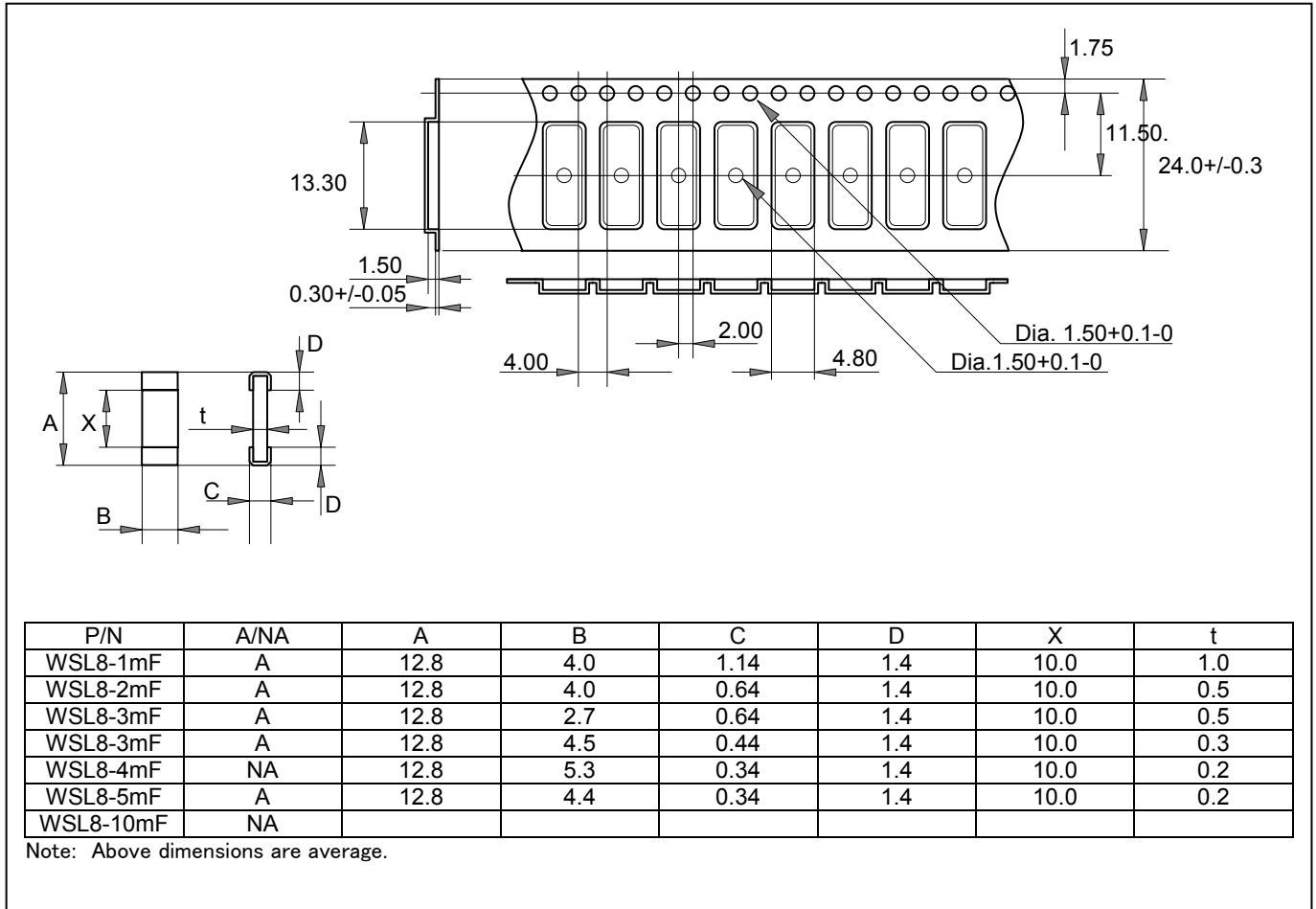
Because heat capacity of WSL8 is larger than another small chip components, when re-flow soldering process is taken in installing WSL8, temperature shall be increase by 10C or 20C.

Custom design: Making customer required length / width current shunt resistor is available, please mail to below. info@willow.co.uk

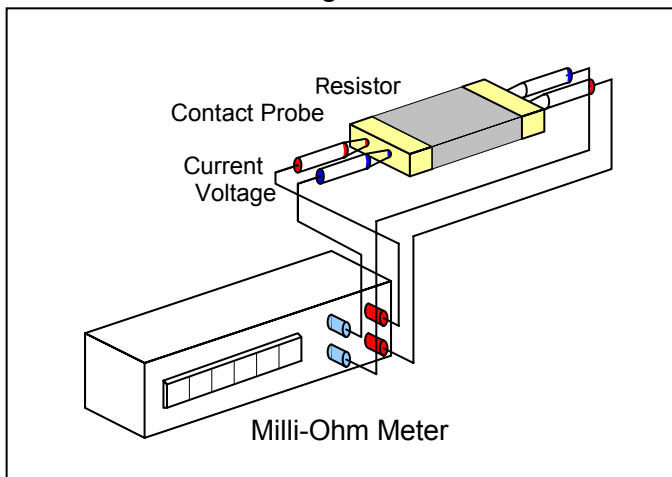
CURRENT DETECT CHIP RESISTORS,

WSL1, WSL2, WSL8 (CS20)

Taping Specifications (WSL8)



Resistance Measuring Position



Resistance checking of the WSL resistors is done at side positions of resistor terminals as shown in left figure with 4-ports measuring system. Resistance tolerance of +/-1.0% shall be within +0.8% and -0.8% in factory inspection. When surface mount resistor is attached on circuit board, small resistance change will be occur, If small resistance change cannot be ignored, please call factory.