

CTCSS Series

CHARACTERISTICS

Description: Metal Alloy Current Sensors

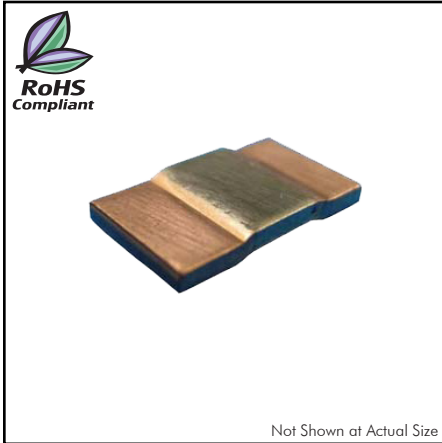
Features:

- LOW T.C.R.
- Wide Resistance range
- Short time over load for 5 seconds
- High Surge Power
- RoHS, PFOS, PFOA, Halogen Free and REACH Compliant
- Anti-sulfurated

Operating Temperature: -55°C to +170°C

Applications: Power Converter, Overload Protection, Linear Motor Control, Switching Converter, Power Amplifier, RF Total Power

Samples available. See website for ordering information.

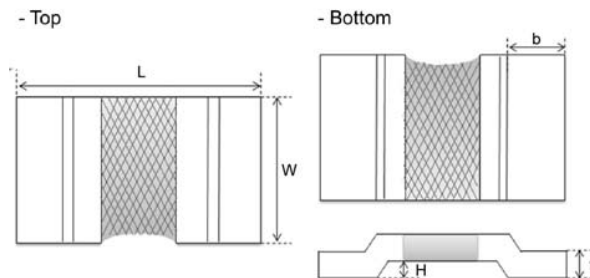


PRODUCT IDENTIFICATION

CTCSS	3921	4	R001XX	F
Product Series	Dimensions Code (Inch)	Rated Power	Resistance (6 Digits)	Tolerance
Metal Alloy	3921	2=2.0W	R001XX=1mΩ	F=±1%
Low Resistance	5931	3=3.0W	R002XX=2mΩ	G=±2%
Shunt Resistor		4=4.0W	R003XX=3mΩ	J=±5%
		5=5.0W	R005XX=5mΩ	
		6=6.0W	R00002=0.2mΩ	
		7=7.0W	R00005=0.5mΩ	
		9=9.0W		
		10=10W		

CONFIGURATION AND DIMENSIONS

CTCSS3921/5931

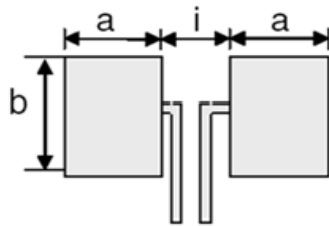


Type	Maximum Power Rating (Watts)	Resistance Range (mΩ)	Dimensions - in Inches (millimeters)				
			L	W	H	b	t
CTCSS3921	9	0.2	0.394±0.01 (10±0.254)	0.205±0.01 (5.2±0.254)	0.0197±0.004 (0.5±0.1)	0.0787±0.024 (2±0.6)	0.051±0.006(1.3±0.15)
	9	0.3					0.051±0.006(1.3±0.15)
	5	0					0.039±0.006(1.0±0.15)
	5	0.2					0.051±0.006(1.3±0.15)
	5	0.3					0.051±0.006(1.3±0.15)
	5	0.5					0.033±0.006(0.88±0.15)
	4	1					0.017±0.006(0.43±0.15)
	4	2					0.027±0.006(0.69±0.15)
	3	3					0.017±0.006(0.43±0.15)
	3	4					0.014±0.006(0.35±0.15)
	2	5					0.014±0.006(0.35±0.15)

CONFIGURATION AND DIMENSIONS

Type	Maximum Power Rating (Watts)	Resistance Range (mΩ)	Dimensions - in Inches (millimeters)				
			L	W	H	b	t
CTCSS5931	10	0.2	0.591±0.01 (15±0.254)	0.305±0.01 (7.75±0.254)	0.0158±0.004 (0.4±0.1)	0.1575±0.024 (4±0.6)	0.056±0.006(1.42±0.15)
	7	0.2					0.055±0.006(1.4±0.15)
	7	0.3					0.037±0.006(0.94±0.15)
	6	0.5					0.022±0.006(0.56±0.15)
	5	1					0.033±0.006(0.85±0.15)
	5	2					0.017±0.006(0.43±0.15)
	4	3					0.011±0.006(0.28±0.15)

RECOMMEND LAND PATTERN



Type	Maximum Power Rating (Watts)	Resistance Range (mΩ)	Dimensions in Inches (Millimeters)		
			a	b	i
CTCSS3921	9	0.2; 0.3	2.7	6.2	5.6
	5	0; 0.2; 0.3; 0.5			
	4	1; 2			
	3	3; 4			
	2	5			
CTCSS5931	10	0.2	5.2	8.75	56
	7	0.2; 0.3			
	6	0.5			
	5	1; 2			
	4	3			

MATERIAL OF ALLOY

Type	Watts	Material	Resistance (mΩ)
CTCSS3921	9	Copper-Manganese Alloy	0.2; 0.3
	5	Copper	0
	5	Copper-Manganese Alloy	0.2; 0.3; 0.5
	4		1
	4	Iron-Chromium Aluminium Alloy	2
	3		3; 4
	2		5
CTCSS5931	10	Copper-Manganese Alloy	0.2
	7		0.2
	7		0.3
	6		0.5
	5	Iron-Chromium Aluminium Alloy	1
	5		2
	4		3

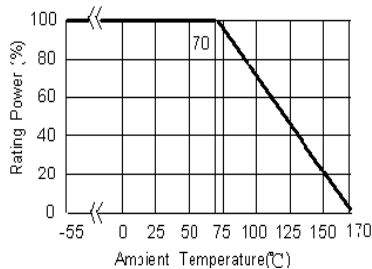
ELECTRICAL CHARACTERISTICS

Type	Rating Power (W) Max.	Rating Current (A) Max.	Overload Current (A) Max.	T.C.R (ppm/°C)	Resistance Range (mΩ)	Operating Temperature Range
					Tolerance ±1%, ±2%, ±5%	
CTCSS3921	9	212.13	474.34	0.2mΩ:≤±200 0.3mΩ:≤±150	0.2; 0.3	-55~170°C
	5	158.11	353.55	0mΩ:≤3800	0; 0.2; 0.3; 0.5	
				0.2mΩ:≤±200		
				0.3mΩ:≤±150		
				0.5mΩ:≤±100		
	4	63.25	141.42	1.0mΩ; 2.0mΩ:≤±75	1; 2	
3	31.62	70.71	3.0mΩ; 4.0mΩ:≤±75	3; 4		
CTCSS5931	10	223.61	447.21	0.2mΩ:≤±100	0.2	
	7	187.08	374.17	0.2mΩ; 0.3mΩ:≤±100	0.2; 0.3	
	6	109.54	244.95	0.5mΩ:≤±100	0.5	
	5	70.71	158.11	1.0mΩ; 2.0mΩ:≤±75	1; 2	
	4	36.51	81.65	3.0mΩ:≤±75	3	

Note: When ordering, please specify tolerance code. Tolerance: F= ±1%, G= ±2%, J= ±5%

- Power Derating Curve: Operating Temperature Range: -55~170°C

For resistors operated in ambient temperatures 70°C, power rating shall be derated in accordance with the curve below:

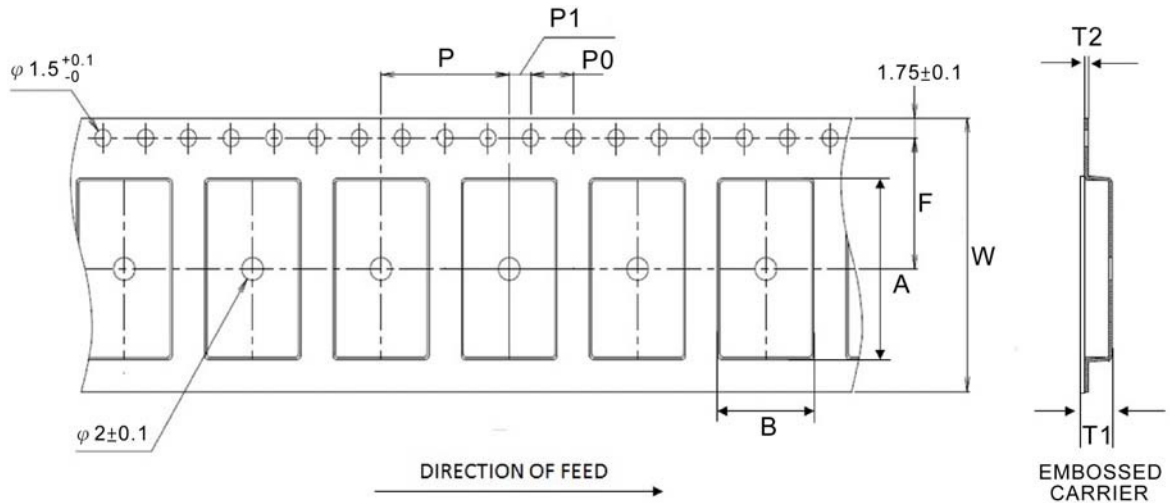


- Rating Current: The resistor shall have a DC continuous working current or a RMS (Root Mean Square) AC continuous working current at commercial-line frequency and wave form corresponding to the power rating, as determined from the following:
Remark: I: Rating Current(A), P: Rating Power(W), R: Resistance (Ω)

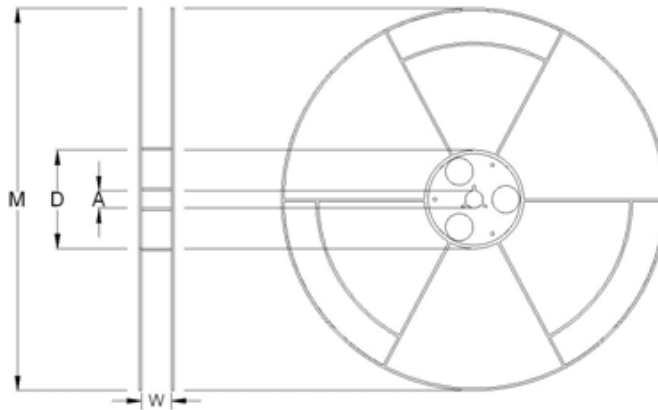
$$I = \sqrt{P/R}$$

PACKAGING SPECIFICATIONS

Tape Dimensions



Reel Dimensions



Dimensions in mm

Type	Tape Dimensions									Reel Dimensions				Quantity
	A	B	W	F	T1	T2	P	P0	P1	M	W	A	D	PCS / REEL
CTCSS3921	10.5	5.7	16	7.5	2.3	0.28	8	4	2	178	17.4	13	60	1000
										178	25.4	13	100	3000
CTCSS5931	15.6	8.3	24	11.5	2.3	0.28	12	4	2	330	17.4	13	100	500
										330	25.4	13	100	2000