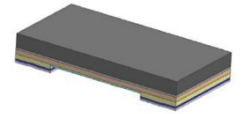


### Features:

- High temperature performance up to 225°C (for operation up to 275°C, contact Stackpole)
- Low thermal EMF (< 1μ V/C) typically
- RoHS compliant, REACH compliant, lead free, and halogen free
- AEC-Q200 compliant

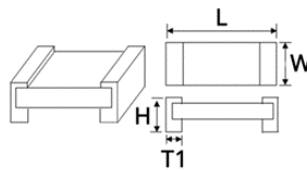


Electrical Specifications					
Type/Code	Maximum Power Rating (W)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance		
			0.5%	1%	5%
CSS0201	0.2	± 200	-	0.01, 0.02	-
CSS0402	0.33	± 150	-	0.0025	-
		± 100	-	0.005, 0.006, 0.008, 0.01, 0.015, 0.02	-
CSS0603	0.33	± 150	-	0.002	-
		± 100	-	0.0025, 0.003, 0.004, 0.005	-
		± 75	-	0.01, 0.015, 0.02	-
CSS0508	1	± 150	-	0.001, 0.0015	-
		± 100	-	0.002, 0.003, 0.004, 0.005	-
CSS0805	0.5	± 100	-	0.0015	-
		± 75	-	0.002, 0.003, 0.004, 0.005	-
		± 50	-	0.006, 0.007, 0.01, 0.015, 0.02	-
CSSH0805	1	± 100	-	0.0005	-
		± 75	-	0.001 - 0.002	-
		± 50	0.007 - 0.013	0.0025 - 0.013	-
CSS1206	1	± 175	-	0.0005 - 0.0006	-
		± 75	0.005 - 0.006	-	-
		± 50	-	0.001 - 0.004	-
		± 25	0.007 - 0.015	0.005 - 0.015	-
		± 15	0.016 - 0.05	0.016 - 0.05	-
CSSH1206	2	± 75	0.005	0.001 - 0.005	-
CSS2010	1	± 100	-	0.0005 - 0.0009	-
		± 50	-	0.001 - 0.003	-
		± 25	0.007 - 0.015	0.004 - 0.006	-
		± 15	0.016 - 0.049	0.007 - 0.1	-
CSSH2010	2	± 100	-	0.0005 - 0.0009	-
		± 75	-	0.001 - 0.0019	-
		± 50	-	0.002 - 0.0069	-
		± 25	0.007 - 0.012	0.007 - 0.012	-

Electrical Specifications (cont.)					
Type/Code	Maximum Power Rating (W)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance		
			0.5%	1%	5%
CSS2512	2	± 150	-	0.0003	
		± 75	0.001	-	
		± 50	0.0011 - 0.003	0.0005 - 0.003	
		± 25	0.0031 - 0.0069	0.004 - 0.006	
		± 15	0.007 - 0.05	0.08 - 0.5	
CSSH2512	3	± 150	-	0.0003	
		± 75	0.001	-	
		± 50	0.0011 - 0.0025	0.0005 - 0.0025	
			0.011 - 0.05	0.011 - 0.1	
		± 25	0.003 - 0.01	0.003 - 0.01	
CSS2725	4	± 100	-	0.0002	
		± 50	-	0.00025 - 0.003	
CSS2728	3	± 25	0.004 - 0.007	0.004 - 0.007	
			0.101 - 0.2	0.101 - 0.2	
		± 15	0.008 - 0.019	0.008 - 0.1	
CSSH2728	4	± 25	0.004 - 0.007	0.004 - 0.007	
		± 15	0.008 - 0.019	0.008 - 0.05	
CSSH3637	7	± 50	0.0005, 0.00075	0.0003, 0.0005, 0.00075	
	6	± 50	0.001		
CSS4527	5	± 50	0.007 - 0.12	0.0005 - 0.2	

$V = \sqrt{(P \cdot R)}$

**Mechanical Specifications**



Type/Code	Maximum Power Rating (W)	Resistance Range (Ω)	L	W	H	T1	Unit
CSS0201	0.2	0.01, 0.02	0.024 ± 0.006	0.012 ± 0.006	0.010 ± 0.004	0.006 ± 0.004	inches
			0.60 ± 0.15	0.30 ± 0.15	0.25 ± 0.10	0.15 ± 0.10	mm
CSS0402	0.33	0.0025	0.039 ± 0.006	0.022 ± 0.006	0.012 ± 0.004	0.012 ± 0.004	inches
			1.00 ± 0.15	0.55 ± 0.15	0.30 ± 0.10	0.30 ± 0.10	mm
		0.005 - 0.02	0.039 ± 0.006	0.022 ± 0.006	0.012 ± 0.004	0.009 ± 0.004	inches
			1.00 ± 0.15	0.55 ± 0.15	0.30 ± 0.10	0.23 ± 0.10	mm

Mechanical Specifications (cont.)							
Type/Code	Maximum Power Rating (W)	Resistance Range (Ω)	L	W	H	T1	Unit
CSS0603	0.33	0.002	0.063 ± 0.010 1.60 ± 0.25	0.031 ± 0.010 0.80 ± 0.25	0.016 ± 0.010 0.40 ± 0.25	0.018 ± 0.008 0.45 ± 0.20	inches mm
		0.0025, 0.003	0.063 ± 0.010 1.60 ± 0.25	0.031 ± 0.010 0.80 ± 0.25	0.016 ± 0.010 0.40 ± 0.25	0.014 ± 0.008 0.35 ± 0.20	inches mm
		0.004 - 0.02	0.063 ± 0.010 1.60 ± 0.25	0.031 ± 0.010 0.80 ± 0.25	0.016 ± 0.010 0.40 ± 0.25	0.012 ± 0.008 0.30 ± 0.20	inches mm
CSS0508	1	0.001	0.049 ± 0.010 1.25 ± 0.25	0.079 ± 0.010 2.00 ± 0.25	0.017 ± 0.006 0.42 ± 0.15	0.015 ± 0.010 0.38 ± 0.25	inches mm
		0.0015	0.049 ± 0.010 1.25 ± 0.25	0.079 ± 0.010 2.00 ± 0.25	0.017 ± 0.006 0.42 ± 0.15	0.015 ± 0.010 0.37 ± 0.25	inches mm
		0.002	0.049 ± 0.010 1.25 ± 0.25	0.079 ± 0.010 2.00 ± 0.25	0.017 ± 0.006 0.42 ± 0.15	0.014 ± 0.010 0.36 ± 0.25	inches mm
		0.003 - 0.005	0.049 ± 0.010 1.25 ± 0.25	0.079 ± 0.010 2.00 ± 0.25	0.017 ± 0.006 0.42 ± 0.15	0.013 ± 0.010 0.32 ± 0.25	inches mm
CSS0805	0.5	0.0015	0.079 ± 0.010 2.00 ± 0.25	0.049 ± 0.010 1.25 ± 0.25	0.016 ± 0.010 0.40 ± 0.25	0.028 ± 0.008 0.70 ± 0.20	inches mm
		0.002	0.079 ± 0.010 2.00 ± 0.25	0.049 ± 0.010 1.25 ± 0.25	0.016 ± 0.010 0.40 ± 0.25	0.024 ± 0.008 0.60 ± 0.20	inches mm
		0.003 - 0.02	0.079 ± 0.010 2.00 ± 0.25	0.049 ± 0.010 1.25 ± 0.25	0.016 ± 0.010 0.40 ± 0.25	0.016 ± 0.008 0.40 ± 0.20	inches mm
CSSH0805	1	0.0005	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.024 ± 0.008 0.60 ± 0.20	0.030 ± 0.008 0.75 ± 0.20	inches mm
		0.001	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.022 ± 0.008 0.55 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
		0.0015	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.018 ± 0.008 0.45 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
		0.002	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.014 ± 0.008 0.35 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
		0.0025	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.018 ± 0.008 0.45 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
		0.003 - 0.008	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.014 ± 0.008 0.35 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
		0.009 - 0.013	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.015 ± 0.008 0.37 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
CSS1206	1	0.0005 - 0.0006	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.045 ± 0.010 1.15 ± 0.25	0.029 ± 0.010 0.73 ± 0.25	inches mm
		0.001 - 0.0015	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.025 ± 0.010 0.65 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	inches mm
		0.002 - 0.004	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.022 ± 0.010 0.55 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	inches mm
		0.005	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.022 ± 0.010 0.55 ± 0.25	0.024 ± 0.010 0.60 ± 0.25	inches mm
		0.006 - 0.05	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.022 ± 0.010 0.55 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	inches mm

### Mechanical Specifications (cont.)

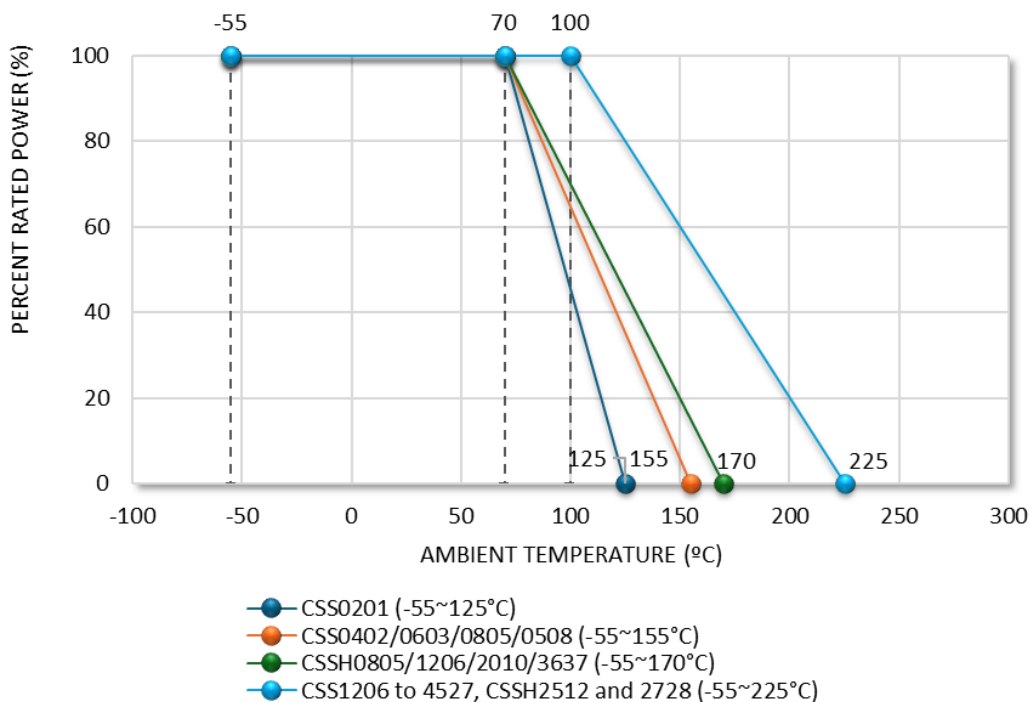
Type/Code	Maximum Power Rating (W)	Resistance Range (Ω)	L	W	H	T1	Unit
CSSH1206	2	0.001	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.025 ± 0.010 0.65 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	inches mm
		0.002 - 0.004	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.021 ± 0.010 0.55 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	inches mm
		0.005	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.021 ± 0.010 0.55 ± 0.25	0.024 ± 0.010 0.60 ± 0.25	inches mm
CSS2010	1	0.0005 - 0.0009	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.057 ± 0.010 1.44 ± 0.25	inches mm
		0.001 - 0.003	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.051 ± 0.010 1.30 ± 0.25	inches mm
		0.0031 - 0.1	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.025 ± 0.010 0.65 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	inches mm
CSSH2010	2	0.0005 - 0.0009	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.057 ± 0.010 1.44 ± 0.25	inches mm
		0.001 - 0.003	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.051 ± 0.010 1.30 ± 0.25	inches mm
		0.0031 - 0.004	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.025 ± 0.010 0.65 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	inches mm
		0.0041 - 0.012	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.025 ± 0.010 0.65 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	inches mm
CSS2512	2	0.0003	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.045 ± 0.010 1.15 ± 0.25	0.080 ± 0.010 2.02 ± 0.25	inches mm
		0.0005 - 0.0007	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.080 ± 0.010 2.02 ± 0.25	inches mm
		0.00075	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.054 ± 0.010 1.37 ± 0.25	inches mm
		0.0008 - 0.004	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.074 ± 0.010 1.88 ± 0.25	inches mm
		0.0041 - 0.075	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.026 ± 0.010 0.65 ± 0.25	0.044 ± 0.010 1.12 ± 0.25	inches mm
		0.08 - 0.1	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.026 ± 0.010 0.65 ± 0.25	0.025 ± 0.010 0.62 ± 0.25	inches mm
		0.3 - 0.5	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.028 ± 0.010 0.72 ± 0.25	0.034 ± 0.010 0.87 ± 0.25	inches mm

Mechanical Specifications (cont.)							
Type/Code	Maximum Power Rating (W)	Resistance Range (Ω)	L	W	H	T1	Unit
CSSH2512	3	0.0003	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.045 ± 0.010 1.15 ± 0.25	0.080 ± 0.010 2.02 ± 0.25	inches mm
		0.0005	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.080 ± 0.010 2.02 ± 0.25	inches mm
		0.0006 - 0.0007	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.074 ± 0.010 1.88 ± 0.25	inches mm
		0.00075	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.054 ± 0.010 1.37 ± 0.25	inches mm
		0.0008 - 0.0029	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.044 ± 0.010 1.12 ± 0.25	inches mm
		0.003 - 0.0035	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.074 ± 0.010 1.88 ± 0.25	inches mm
		0.0036 - 0.004	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.066 ± 0.010 1.68 ± 0.25	inches mm
		0.0041 - 0.01	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.026 ± 0.010 0.65 ± 0.25	0.044 ± 0.010 1.12 ± 0.25	inches mm
		0.0101 - 0.079 <sup>(*)</sup>	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.039 ± 0.010 1.00 ± 0.25	0.044 ± 0.010 1.12 ± 0.25	inches mm
		0.08 - 0.1 <sup>(*)</sup>	0.246 ± 0.010 6.25 ± 0.25	0.126 ± 0.010 3.20 ± 0.25	0.039 ± 0.010 1.00 ± 0.25	0.034 ± 0.010 0.87 ± 0.25	inches mm
CSS2725	4	0.0002 - 0.0003	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.085 ± 0.010 2.16 ± 0.25	inches mm
		0.00035	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.075 ± 0.010 1.90 ± 0.25	inches mm
		0.0004 - 0.00045	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.051 ± 0.010 1.30 ± 0.25	inches mm
		0.0005	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.085 ± 0.010 2.16 ± 0.25	inches mm
		0.0006	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.071 ± 0.010 1.80 ± 0.25	inches mm
		0.00075	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.059 ± 0.010 1.50 ± 0.25	inches mm
		0.001	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.043 ± 0.010 1.09 ± 0.25	0.085 ± 0.010 2.16 ± 0.25	inches mm
		0.0015	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.085 ± 0.010 2.16 ± 0.25	inches mm
		0.002	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.035 ± 0.010 0.89 ± 0.25	0.071 ± 0.010 1.80 ± 0.25	inches mm
		0.0025	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.035 ± 0.010 0.89 ± 0.25	0.065 ± 0.010 1.65 ± 0.25	inches mm
		0.003	0.268 ± 0.010 6.81 ± 0.25	0.254 ± 0.010 6.45 ± 0.25	0.035 ± 0.010 0.89 ± 0.25	0.051 ± 0.010 1.30 ± 0.25	inches mm

Mechanical Specifications (cont.)							
Type/Code	Maximum Power Rating (W)	Resistance Range (Ω)	L	W	H	T1	Unit
CSS2728	3	0.004 - 0.2	0.264 ± 0.010 6.71 ± 0.25	0.283 ± 0.010 7.19 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.045 ± 0.010 1.14 ± 0.25	inches mm
CSSH2728	4	0.004 - 0.05	0.264 ± 0.010 6.71 ± 0.25	0.283 ± 0.010 7.19 ± 0.25	0.039 ± 0.010 0.99 ± 0.25	0.045 ± 0.010 1.14 ± 0.25	inches mm
CSSH3637	7	0.0003	0.362 ± 0.010 9.20 ± 0.25	0.378 ± 0.010 9.60 ± 0.25	0.029 ± 0.010 0.73 ± 0.25	0.111 ± 0.010 2.83 ± 0.25	inches mm
		0.0005	0.362 ± 0.010 9.20 ± 0.25	0.378 ± 0.010 9.60 ± 0.25	0.029 ± 0.010 0.73 ± 0.25	0.098 ± 0.010 2.49 ± 0.25	inches mm
		0.00075	0.362 ± 0.010 9.20 ± 0.25	0.378 ± 0.010 9.60 ± 0.25	0.029 ± 0.010 0.73 ± 0.25	0.090 ± 0.010 2.28 ± 0.25	inches mm
	6	0.001	0.362 ± 0.010 9.20 ± 0.25	0.378 ± 0.010 9.60 ± 0.25	0.029 ± 0.010 0.73 ± 0.25	0.090 ± 0.010 2.28 ± 0.25	inches mm
CSS4527	5	0.0005	0.450 ± 0.010 11.43 ± 0.25	0.270 ± 0.010 6.85 ± 0.25	0.059 ± 0.010 1.50 ± 0.25	0.137 ± 0.010 3.47 ± 0.25	inches mm
		0.0006 - 0.003	0.450 ± 0.010 11.43 ± 0.25	0.270 ± 0.010 6.85 ± 0.25	0.059 ± 0.010 1.50 ± 0.25	0.127 ± 0.010 3.22 ± 0.25	inches mm
		0.004 - 0.005	0.450 ± 0.010 11.43 ± 0.25	0.270 ± 0.010 6.85 ± 0.25	0.059 ± 0.010 1.50 ± 0.25	0.127 ± 0.010 3.22 ± 0.25	inches mm
		0.0051 - 0.2	0.450 ± 0.010 11.43 ± 0.25	0.270 ± 0.010 6.85 ± 0.25	0.059 ± 0.010 1.50 ± 0.25	0.072 ± 0.010 1.82 ± 0.25	inches mm

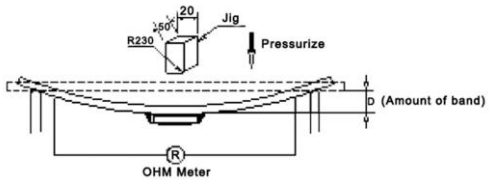
(\*) with heat sink

**Power Derating Curve:**



Performance Characteristics																																																																																																															
Test	Test Method	Test Specification	Test Condition																																																																																																												
Temperature Coefficient of Resistance (TCR)	JIS-C-5201-1 4.8	Per specification (refer to Electrical Specification table)	$TCR (ppm/^{\circ}C) = \frac{R2 - R1}{R1 (T2 - T1)} \times 10^6$ R1: resistance of room temperature (T1) R2: resistance of 125°C (T2)																																																																																																												
Short Time Overload	JIS C 5201-1 4.13	<table border="1"> <thead> <tr> <th>Size</th> <th>Power (W)</th> <th>Max. R Change</th> </tr> </thead> <tbody> <tr><td>CSS0201</td><td>0.2</td><td>≤ ± 0.5%</td></tr> <tr><td>CSS0402</td><td>0.33</td><td>± 1% + 0.5mΩ</td></tr> <tr><td>CSS0603</td><td>0.33</td><td>± 1% + 0.5mΩ</td></tr> <tr><td>CSS0508</td><td>1</td><td>± 1% + 0.5mΩ</td></tr> <tr><td>CSS0805</td><td>0.5</td><td>± 1% + 0.5mΩ</td></tr> <tr><td>CSSH0805</td><td>1</td><td>≤ ± 1%</td></tr> <tr><td>CSS1206</td><td>1</td><td>≤ ± 0.5%</td></tr> <tr><td>CSSH1206</td><td>2</td><td>≤ ± 0.5%</td></tr> <tr><td>CSS2010</td><td>1</td><td>≤ ± 0.5%</td></tr> <tr><td>CSSH2010</td><td>2</td><td>≤ ± 0.5%</td></tr> <tr><td>CSS2512</td><td>2</td><td>≤ ± 0.5%</td></tr> <tr><td>CSSH2512</td><td>3</td><td>≤ ± 0.5%</td></tr> <tr><td>CSS2725</td><td>4</td><td>≤ ± 0.5%</td></tr> <tr><td>CSS2728</td><td>3</td><td>≤ ± 0.5%</td></tr> <tr><td>CSSH2728</td><td>4</td><td>≤ ± 0.5%</td></tr> <tr><td>CSSH3637</td><td>6 and 7</td><td>≤ 0.5% + 0.5mΩ</td></tr> <tr><td>CSS4527</td><td>5</td><td>≤ ± 2%</td></tr> </tbody> </table>	Size	Power (W)	Max. R Change	CSS0201	0.2	≤ ± 0.5%	CSS0402	0.33	± 1% + 0.5mΩ	CSS0603	0.33	± 1% + 0.5mΩ	CSS0508	1	± 1% + 0.5mΩ	CSS0805	0.5	± 1% + 0.5mΩ	CSSH0805	1	≤ ± 1%	CSS1206	1	≤ ± 0.5%	CSSH1206	2	≤ ± 0.5%	CSS2010	1	≤ ± 0.5%	CSSH2010	2	≤ ± 0.5%	CSS2512	2	≤ ± 0.5%	CSSH2512	3	≤ ± 0.5%	CSS2725	4	≤ ± 0.5%	CSS2728	3	≤ ± 0.5%	CSSH2728	4	≤ ± 0.5%	CSSH3637	6 and 7	≤ 0.5% + 0.5mΩ	CSS4527	5	≤ ± 2%	The number of rated power are as follows: <table border="1"> <thead> <tr> <th>Size</th> <th>Power (W)</th> <th>Rated Power</th> </tr> </thead> <tbody> <tr><td>CSS0201</td><td>0.2</td><td>2.5 times</td></tr> <tr><td>CSS0402</td><td>0.33</td><td>2.5 times</td></tr> <tr><td>CSS0603</td><td>0.33</td><td>2.5 times</td></tr> <tr><td>CSS0508</td><td>1</td><td>2.5 times</td></tr> <tr><td>CSS0805</td><td>0.5</td><td>2.5 times</td></tr> <tr><td>CSSH0805</td><td>1</td><td>4 times</td></tr> <tr><td>CSS1206</td><td>1</td><td>5 times</td></tr> <tr><td>CSSH1206</td><td>2</td><td>5 times</td></tr> <tr><td>CSS2010</td><td>1</td><td>5 times</td></tr> <tr><td>CSSH2010</td><td>2</td><td>5 times</td></tr> <tr><td>CSS2512</td><td>2</td><td>5 times</td></tr> <tr><td>CSSH2512</td><td>3</td><td>5 times</td></tr> <tr><td>CSS2725</td><td>4</td><td>5 times</td></tr> <tr><td>CSS2728</td><td>3</td><td>5 times</td></tr> <tr><td>CSSH2728</td><td>4</td><td>5 times</td></tr> <tr><td>CSSH3637</td><td>6 and 7</td><td>5 times</td></tr> <tr><td>CSS4527</td><td>5</td><td>5 times</td></tr> </tbody> </table>	Size	Power (W)	Rated Power	CSS0201	0.2	2.5 times	CSS0402	0.33	2.5 times	CSS0603	0.33	2.5 times	CSS0508	1	2.5 times	CSS0805	0.5	2.5 times	CSSH0805	1	4 times	CSS1206	1	5 times	CSSH1206	2	5 times	CSS2010	1	5 times	CSSH2010	2	5 times	CSS2512	2	5 times	CSSH2512	3	5 times	CSS2725	4	5 times	CSS2728	3	5 times	CSSH2728	4	5 times	CSSH3637	6 and 7	5 times	CSS4527	5	5 times
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Insulation Resistance	JIS-C-5201-1 4.6	≥ 10 <sup>9</sup> Ω	Put the resistor in the fixture, add 100 VDC in terminal for 60 seconds, then measure the insulation resistance between electrodes and insulating enclosure or between electrodes and base material																																																																																																												
Dielectric Withstanding Voltage	JIS-C-5201-1 4.7	No short or burned in the appearance.	Applied 500 VAC for 1 minute and limit surge current 50 mA (max)																																																																																																												

Operating Temperature Range for size CSS0201 is -55 to +125°C.  
 Operating Temperature Range for sizes CSS0402, CSS0603, CSS0805, and CSS0508 is -55 to +155°C.  
 Operating Temperature Range for size CSSH0805, CSSH1206, CSSH2010, and CSSH3637 is -55 to +170°C.  
 Operating Temperature Range for sizes CSS1206 - CSS4527, CSSH 2512 and CSSH 2728 is -55 to +225°C.

Mechanical Performance			
Test Item	Test Method	Test Specifications	Test Condition
Resistance to Solder Heat	JIS C 5201-1 4.18	0201 - 0805: ≤ ± 1% + 0.5mΩ CSSH0805 and above 1206: ≤ ± 0.5% + 0.5mΩ CSSH3637: ≤ ± 0.5% + 0.5mΩ Jumper < Rmax	260 ± 5°C for 10 ± 1 seconds
Solderability	JIS C 5201-1 4.17	> 95 % coverage	245 ± 5°C for 3 ± 0.5 seconds
Substrate Bending	JIS C 5201-1 4.33	± 1% + 0.5mΩ CSSH3637: ≤ ± 0.5% + 0.5mΩ	Span between fulcrums: 90 mm Bend width: 2 mm 

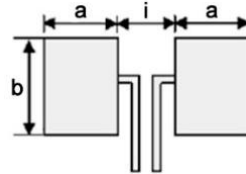
Mechanical Performance (cont.)			
Test Item	Test Method	Test Specifications	Test Condition
Resistance to Solvent	JIS C 5201-1 4.29	$\leq \pm 0.5\%$	The tested resistor is immersed into isopropyl alcohol of 20 ~ 25°C for 60 seconds, then the resistor is left in the room for 48 hours.
		No evidence of mechanical damage	
Vibration	JIS C 5201-1 4.22	$\leq \pm 0.5\%$	The resistor shall be mounted by its terminal leads to the supporting terminals on the solid table. The entire frequency range from 10 Hz to 55 Hz and return to 10 Hz, shall be transferred in 1 minute. Amplitude: 1.5 mm. This motion shall be applied for a period of 4 hours in each 3 mutually perpendicular directions (a total of 12 hours)
		No evidence of mechanical damage	
Mechanical Shock	JIS C 5202 6.7	$\pm 1\% + 0.5m\Omega$	a = 50 G, t = 11 ms, 5 times shock

Environmental Performance													
Test Item	Test Method	Test Specifications	Test Condition										
Low Temperature Exposure (Storage)	JIS C 5201-1 4.23.4	0201 - 0805: $\leq \pm 1\% + 0.5m\Omega$ $\geq 1206: \pm 0.5\%$	1000 hours at $-55 \pm 2^\circ\text{C}$										
High Temperature Exposure (Storage)	JIS C 5201-1 4.23.2	0201 - 0805: $\leq \pm 1\% + 0.5m\Omega$	1000 hours at $+155 \pm 2^\circ\text{C}$										
		CSSH0805: $\pm 1\%$ CSSH3637: $\leq \pm 1\% + 0.5m\Omega$ $\geq 1206: \pm 1\%$	1000 hours at $+170 \pm 5^\circ\text{C}$										
		0201 Jumper < Rmax	1000 hours at $+125 \pm 2^\circ\text{C}$										
Temperature Cycling	JESD22 Method JA-104	0201 - 0805: $\leq \pm 1\% + 0.5m\Omega$ CSSH0805: $\leq \pm 0.5\% + 0.5m\Omega$ $\geq 1206: \leq \pm 0.5\% + 0.5m\Omega$	$-55$ to $+150^\circ\text{C}$ 30 minutes each, except for 0201 which is $-55$ to $+125^\circ\text{C}$ 30 minutes each.										
Biased Humidity	JIS C 5201-1 4.24	0201 - 0805: $\leq \pm 2\% + 0.5m\Omega$ 0201 Jumper < R max	T = $40 \pm 2^\circ\text{C}$ , RH = 90~95%, Load with Rated Current 1.5 hours "ON", 0.5 hours "OFF", 1000 hours										
		CSSH0805: $\pm 0.5\%$ CSSH3637: $\leq \pm 0.5\% + 0.5m\Omega$ $\geq 1206: \pm 0.5\%$	1000 hours at $+85^\circ\text{C}$ / 85% R.H., 10% of operating power 1.5 hours "ON" and 0.5 hours "OFF"										
Load Life	JIS C 5201-1 4.25	0201 - 0805: $\leq \pm 2\% + 0.5m\Omega$ 0201 Jumper = R max CSSH0805: $\pm 1\%$ CSSH3637: $\leq \pm 1\% + 0.5m\Omega$ 1206 - 2728: $\pm 1\%$ 4527: $\pm 2\%$	T = $70 \pm 2^\circ\text{C}$ , load with Rated Current 1.5 hours "ON", 0.5 hours "OFF", 1000 hours										
Whisker Test	JESD Standard No.22A121 class 2	Max 50 $\mu\text{m}$	Test item (Thermal Shock Test): <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2">Testing Condition</th> </tr> </thead> <tbody> <tr> <td>Minimum Storage Temperature</td> <td><math>-55 +0 / -10^\circ\text{C}</math></td> </tr> <tr> <td>Maximum Storage Temperature</td> <td><math>85 + 10 / -0^\circ\text{C}</math></td> </tr> <tr> <td>Temperature-Retaining Time</td> <td>10 minutes</td> </tr> <tr> <td>Number of Temperature Cycles</td> <td>1500</td> </tr> </tbody> </table> Inspection: Inspect for whisker formation on specimens that underwent the acceleration test, with a magnifier (stereo microscope) of about 40 or higher magnification. If judgement is difficult with this method, use a scanning electron microscope (SEM) of about 1000 or higher magnification.	Testing Condition		Minimum Storage Temperature	$-55 +0 / -10^\circ\text{C}$	Maximum Storage Temperature	$85 + 10 / -0^\circ\text{C}$	Temperature-Retaining Time	10 minutes	Number of Temperature Cycles	1500
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Recommended storage temperature:  $25 \pm 5^\circ\text{C}$ . Humidity:  $60 \pm 20\%$ .



**Recommended Pad Layout**



Type/Code	Maximum Power Rating (W)	Resistance Range ( $\Omega$ )	a	b	i	Unit
CSS0201	0.2	0.01, 0.02	0.008 0.20	0.013 0.33	0.010 0.25	inches mm
CSS0402	0.33	0.0025	0.024 0.60	0.024 0.60	0.014 0.35	inches mm
		0.005 - 0.02	0.024 0.60	0.024 0.60	0.016 0.40	inches mm
CSS0603	0.33	0.002	0.056 1.41	0.036 0.92	0.015 0.38	inches mm
		0.0025, 0.003	0.053 1.35	0.036 0.92	0.020 0.50	inches mm
		0.004 - 0.02	0.051 1.30	0.036 0.92	0.024 0.60	inches mm
CSS0508	1	0.001, 0.0015, 0.002	0.035 0.90	0.091 2.30	0.016 0.40	inches mm
		0.003 - 0.005	0.033 0.85	0.091 2.30	0.020 0.50	inches mm
CSS0805	0.5	0.0015, 0.002	0.061 1.55	0.057 1.44	0.020 0.50	inches mm
		0.003 - 0.02	0.055 1.40	0.057 1.44	0.031 0.80	inches mm
CSSH0805	1	0.0005	0.053 1.35	0.071 1.80	0.012 0.30	inches mm
		0.001 - 0.013	0.039 1.00	0.071 1.80	0.039 1.00	inches mm
CSS1206	1	0.0005 - 0.0006	0.065 1.65	0.086 2.18	0.035 0.90	inches mm
		0.001 - 0.05	0.063 1.60	0.086 2.18	0.039 1.00	inches mm
CSSH1206	2	0.001 - 0.005	0.063 1.60	0.086 2.18	0.039 1.00	inches mm
CSS2010	1	0.0005 - 0.003	0.114 2.89	0.115 2.92	0.048 1.22	inches mm
		0.0031 - 0.1	0.090 2.29	0.115 2.92	0.095 2.41	inches mm
CSSH2010	2	0.0005 - 0.003	0.114 2.89	0.115 2.92	0.048 1.22	inches mm
		0.0031 - 0.012	0.090 2.29	0.115 2.92	0.095 2.41	inches mm

Recommended Pad Layout (cont.)						
Type/Code	Maximum Power Rating (W)	Resistance Range ( $\Omega$ )	a	b	i	Unit
CSS2512	2	0.0003 - 0.0007	0.120 3.05	0.145 3.68	0.050 1.27	inches mm
		0.00075	0.086 2.19	0.145 3.68	0.118 3.00	inches mm
		0.0008 - 0.004	0.120 3.05	0.145 3.68	0.050 1.27	inches mm
		0.00041 - 0.075	0.083 2.11	0.145 3.68	0.125 3.18	inches mm
		0.08 - 0.1	0.083 2.11	0.145 3.68	0.125 3.18	inches mm
		0.3 - 0.5	0.083 2.11	0.145 3.68	0.125 3.18	inches mm
CSSH2512	3	0.0003 - 0.0005	0.120 3.05	0.145 3.68	0.050 1.27	inches mm
		0.0006 - 0.0029	0.086 2.19	0.145 3.68	0.118 3.00	inches mm
		0.003 - 0.004	0.110 2.79	0.145 3.68	0.071 1.80	inches mm
		0.0101 - 0.1	0.086 2.19	0.145 3.68	0.118 3.00	inches mm
CSS2725	4	0.0002 - 0.003	0.125 3.18	0.270 6.86	0.052 1.32	inches mm
CSS2728	3	0.004 - 0.2	0.108 2.75	0.308 7.82	0.138 3.51	inches mm
CSSH2728	4	0.004 - 0.1	0.108 2.75	0.308 7.82	0.138 3.51	inches mm
CSSH3637	7	0.0003 - 0.00075	0.152 3.85	0.413 10.50	0.114 2.90	inches mm
	6	0.001				
CSS4527	5	0.0005 - 0.005	0.228 5.80	0.344 8.74	0.138 3.51	inches mm
		0.0051 - 0.2	0.163 4.15	0.344 8.74	0.268 6.81	inches mm

**Recommended Solder Profiles**

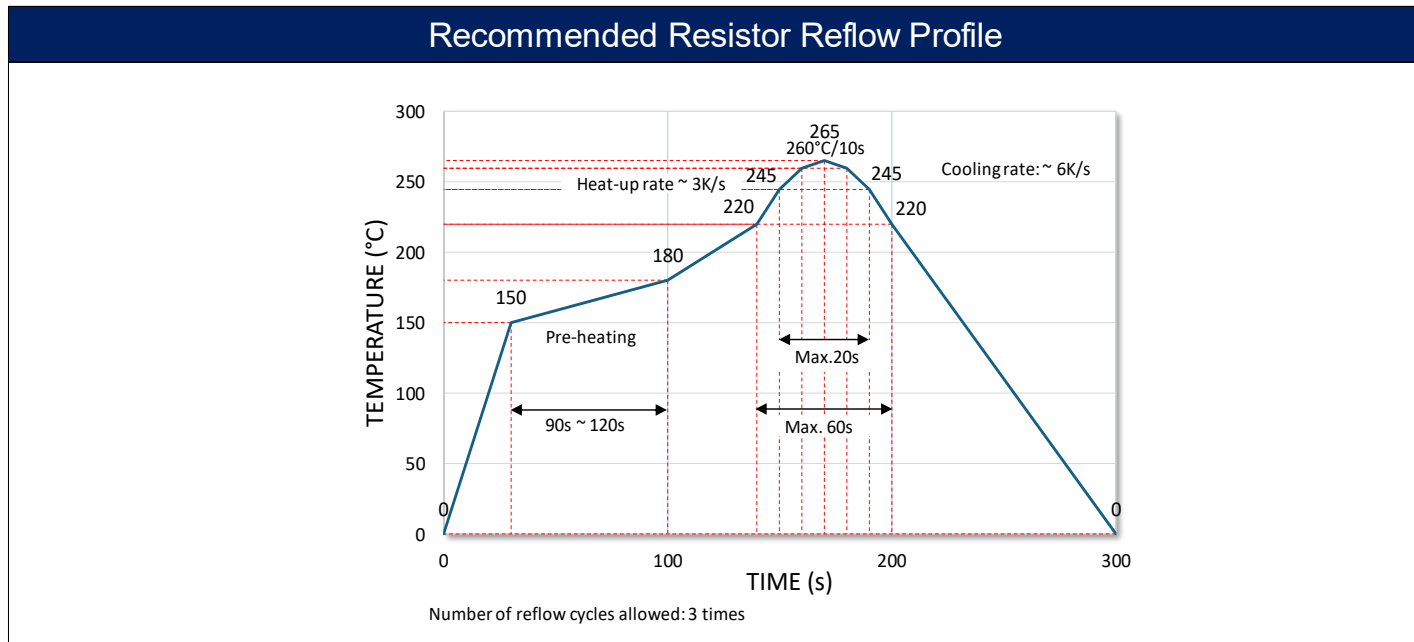
This information is intended as a reference for solder profiles for Stackpole resistive components. These profiles should be compatible with most soldering processes. These are only recommendations. Actual numbers will depend on board density, geometry, packages used, etc., especially those cells labeled with “\*”.

Soldering iron recommended temperatures: 330 to 350°C with minimum duration.  
Maximum number of reflow cycles: 3.

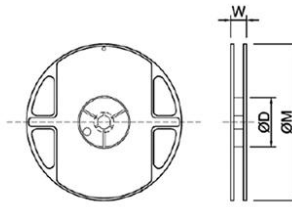
Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 seconds	70 seconds	60 seconds
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	250°C	240°C
Dwell Time at Max.	10 seconds	5 seconds	*
Ramp DN (°C/sec)	N/A	N/A	N/A

Temperature Diff. = Difference between final preheat stage and soldering stage.

Convection IR Reflow			
Description	Maximum	Recommended	Minimum
Ramp Up (°C/sec)	3°C/sec	2°C/sec	*
Dwell Time > 217°C	150 seconds	90 seconds	60 seconds
Solder Temp.	260°C	245°C	*
Dwell Time at Max.	30 seconds	15 seconds	10 seconds
Ramp DN (°C/sec)	6°C/sec	3°C/sec	*

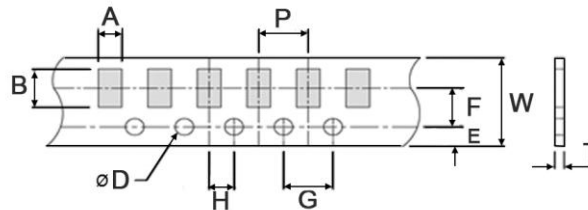


**Reel Specifications**



Type/Code	Tape Width	W	ØD	ØM	Unit
0201, 0402, 0603 0508, 0805, 1206	8 mm	0.354 ± 0.020 9.00 ± 0.50	2.362 ± 0.079 60.00 ± 2.00	7.008 ± 0.197 178.00 ± 5.00	inches mm
CSSH0805	8 mm	0.472 ± 0.020 12.00 ± 0.50	2.362 ± 0.079 60.00 ± 2.00	7.008 ± 0.197 178.00 ± 5.00	inches mm
CSSH3637	16 mm	0.685 ± 0.039 17.40 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	7.008 ± 0.079 178.00 ± 2.00	inches mm
2010, 2512, 2725, 2728	12 mm	0.543 ± 0.020 13.80 ± 0.50	3.150 ± 0.039 80.00 ± 1.00	7.008 ± 0.197 178.00 ± 5.00	inches mm
4527	24 mm	0.984 ± 0.039 25.00 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	7.008 ± 0.197 178.00 ± 5.00	inches mm

**Packaging Specifications - Paper Tape**

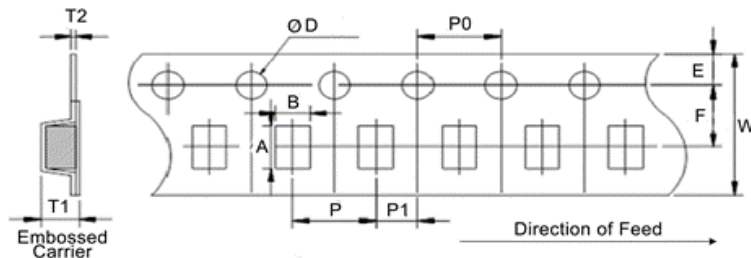


Type/Code	W	P	E	F	ØD	Unit
CSS0201	0.315 ± 0.012 8.00 ± 0.30	0.079 ± 0.004 2.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.059 +0.004 / -0 1.50 +0.1 / -0	inches mm
CSS0402	0.315 ± 0.012 8.00 ± 0.30	0.079 ± 0.004 2.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.059 +0.004 / -0 1.50 +0.1 / -0	inches mm
CSS0603	0.315 ± 0.012 8.00 ± 0.30	0.157 ± 0.004 4.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.059 +0.004 / -0 1.50 +0.1 / -0	inches mm
CSS0508	0.315 ± 0.012 8.00 ± 0.30	0.157 ± 0.004 4.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.059 +0.004 / -0 1.50 +0.1 / -0	inches mm
CSS0805	0.315 ± 0.012 8.00 ± 0.30	0.157 ± 0.004 4.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.059 +0.004 / -0 1.50 +0.1 / -0	inches mm

**Packaging Specifications - Paper Tape (cont.)**

Type/Code	G	H	A	B	T	Unit
CSS0201	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.016 ± 0.008 0.40 ± 0.20	0.028 ± 0.008 0.70 ± 0.20	0.018 ± 0.002 0.45 ± 0.05	inches mm
CSS0402	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.026 ± 0.008 0.65 ± 0.20	0.043 ± 0.008 1.10 ± 0.20	0.017 ± 0.002 0.42 ± 0.05	inches mm
CSS0603	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.039 ± 0.008 0.98 ± 0.20	0.073 ± 0.008 1.85 ± 0.20	0.024 ± 0.004 0.60 ± 0.10	inches mm
CSS0508	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.061 ± 0.008 1.55 ± 0.20	0.091 ± 0.008 2.30 ± 0.20	0.028 ± 0.008 0.70 ± 0.20	inches mm
CSS0805	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.061 ± 0.008 1.55 ± 0.20	0.091 ± 0.008 2.30 ± 0.20	0.030 ± 0.008 0.75 ± 0.20	inches mm

**Packaging Specifications - Plastic Tape**



Type/Code	A	B	W	E	F	T1	Unit
CSS1206/CSSH1206 (0.0005Ω - 0.0006Ω)	0.138 ± 0.004 3.50 ± 0.10	0.075 ± 0.004 1.90 ± 0.10	0.315 ± 0.006 8.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.050 ± 0.004 1.27 ± 0.10	inches mm
CSS1206/CSSH1206 (≥ 0.001Ω)	0.137 ± 0.004 3.48 ± 0.10	0.072 ± 0.004 1.83 ± 0.10	0.315 ± 0.006 8.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.043 ± 0.004 1.10 ± 0.10	inches mm
CSS2010/CSSH2010	0.215 ± 0.004 5.45 ± 0.10	0.114 ± 0.004 2.90 ± 0.10	0.472 ± 0.006 12.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.052 ± 0.004 1.33 ± 0.10	inches mm
CSS2512/CSSH2512 (0.0003Ω)	0.265 ± 0.004 6.74 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.472 ± 0.006 12.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.063 ± 0.004 1.60 ± 0.10	inches mm
CSS2512/CSSH2512	0.266 ± 0.004 6.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.472 ± 0.006 12.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.051 ± 0.004 1.30 ± 0.10	inches mm
CSS2725	0.281 ± 0.004 7.15 ± 0.10	0.266 ± 0.004 6.75 ± 0.10	0.472 ± 0.006 12.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.077 ± 0.004 1.95 ± 0.10	inches mm
CSS2728	0.281 ± 0.004 7.15 ± 0.10	0.303 ± 0.004 7.70 ± 0.10	0.472 ± 0.006 12.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.057 ± 0.004 1.45 ± 0.10	inches mm
CSSH0805 0.0005Ω - 0.001Ω	0.096 ± 0.004 2.45 ± 0.10	0.067 ± 0.004 1.70 ± 0.10	0.315 ± 0.012 8.00 ± 0.30	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.035 ± 0.010 0.90 ± 0.25	inches mm
CSSH0805 0.0015Ω - 0.013Ω	0.096 ± 0.004 2.45 ± 0.10	0.067 ± 0.004 1.70 ± 0.10	0.315 ± 0.012 8.00 ± 0.30	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.022 ± 0.010 0.55 ± 0.25	inches mm
CSSH3637	0.394 ± 0.004 10.00 ± 0.10	0.378 ± 0.004 9.60 ± 0.10	0.630 ± 0.008 16.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.295 ± 0.004 7.50 ± 0.10	0.051 ± 0.004 1.30 ± 0.10	inches mm
CSS4527	0.465 ± 0.004 11.80 ± 0.10	0.283 ± 0.004 7.20 ± 0.10	0.945 ± 0.006 24.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.453 ± 0.004 11.50 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	inches mm

**Packaging Specifications - Plastic Tape (cont.)**

Type/Code	T2	P	P0	P1	ΦD	Unit
CSS1206/CSSH1206 (0.0005Ω - 0.0006Ω)	0.009 ± 0.004 0.23 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSS1206/CSSH1206 (≥ 0.001Ω)	0.008 ± 0.002 0.20 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSS2010/CSSH2010	0.009 ± 0.002 0.23 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSS2512/CSSH2512 (0.0003Ω)	0.009 ± 0.002 0.24 ± 0.05	0.315 ± 0.004 8.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSS2512/CSSH2512	0.008 ± 0.002 0.20 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSS2725	0.010 ± 0.002 0.25 ± 0.05	0.315 ± 0.004 8.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSS2728	0.010 ± 0.002 0.25 ± 0.05	0.472 ± 0.004 12.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSSH0805 0.0005Ω - 0.001Ω	0.008 ± 0.002 0.20 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSSH0805 0.0015Ω - 0.013Ω	0.008 ± 0.002 0.20 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSSH3637	0.010 ± 0.002 0.25 ± 0.05	0.472 ± 0.004 12.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm
CSS4527	0.012 ± 0.004 0.30 ± 0.10	0.472 ± 0.004 12.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	inches mm

**RoHS Compliance**

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union’s directive regarding “Restrictions on Hazardous Substances” (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

**RoHS Compliance Status**

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)
CSS	Ultra-Precision Current Sensing Chip Resistor	SMD	YES	100% Matte Sn over Ni	Always	Always
CSSH	Ultra-Precision Current Sensing Chip Resistor (High Power)	SMD	YES	100% Matte Sn over Ni	Always	Always

**“Conflict Metals” Commitment**

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the “conflict region” of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

**Compliance to “REACH”**

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, “The Registration, Evaluation, Authorization and Restriction of Chemicals”, otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

**Environmental Policy**

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

**How to Order**



Product Series		Size	Tolerance		Packaging				Resistance Value
Code	Description	Size	Code	Tol	Code	Description	Size	Quantity	Four characters with the multiplier used as the decimal holder. "L" used as multiplier of 10 <sup>-3</sup> for any value under 0.1 ohm. 0.00025 ohm = L250 0.004 ohm = 4L00 0.05 ohm = 50L0 0.12 ohm = R120
CSS	Metal Alloy	0201	D	0.5%	T	7" Reel Paper Tape	0201, 0402	10000	
CSSH	High Power	0402	F	1%			0603, 0508	5000	
		0603	G	2%	0805		4000		
		0805	J	5%		7" Reel Plastic Tape	1206 (≥0.001Ω)	2000	
		0508			1206 (0.0003 - 0.0006Ω)		2010, 2512 (>0.0003Ω)	1000	
		1206			2512 (0.0003Ω)		2725, 2728, 3637	500	
		2010			4527				
		2512							
		2728							
		2725							
		3637							
		4527							