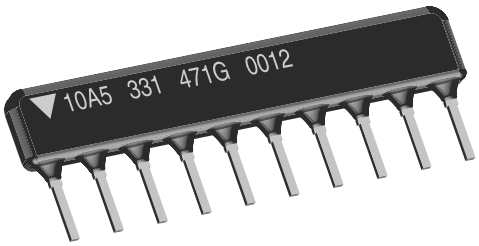
Thick Film Resistor Networks
Single-In-Line, Coated SIP 01, 03, 05 Schematics



FEATURES

- 0.195" [4.95mm] "A", 0.250" [6.35mm] "B", or 0.350" [8.89mm] "C" Profile maximum seated height
- "A" profile standard in 6 thru 10 pins
- Highly stable thick film
- Low temperature coefficient (- 55°C to + 125°C) ± 100ppm/°C
- Reduces total assembly costs
- Resistor elements protected by tough epoxy conformal coating
- Wide resistance range
- Available in bag pack or tube pack

STANDARD ELECTRICAL SPECIFICATIONS

MODEL/ SCHEMATIC	PROFILE	RESISTOR POWER RATING Max. @ 70°C*	RESISTANCE RANGE Ω	STANDARD TOLERANCE %	TEMPERATURE COEFFICIENT (- 55°C to + 125°C)	TCR TRACKING (- 55°C to + 125°C)	OPERATING VOLTAGE VDC Max.
CSC01	A B C	0.20 W 0.22 W 0.28 W	10 - 2.2M	± 2	± 100ppm/°C	± 50ppm/°C	100
CSC03	A B C	0.30 W 0.37 W 0.50 W	10 - 2.2M	± 2	± 100ppm/°C	± 50ppm/°C	100
CSC05	A B C	0.25 W 0.28 W 0.35 W	10 - 2.2M	± 2	± 100ppm/°C	± 150ppm/°C	100

* For resistor power ratings @ + 25°C see derating curves.
• See derating curves for Package Power Rating. Higher power rated “C” Profile available.

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CSC Series
Voltage Coefficient of Resistance	V_{eff}	< 50ppm typical
Dielectric Strength	VAC	200
Isolation Resistance (03 Schematic)	Ω	> 100M
Operating Temperature Range	°C	- 55 to + 125

ORDERING INFORMATION

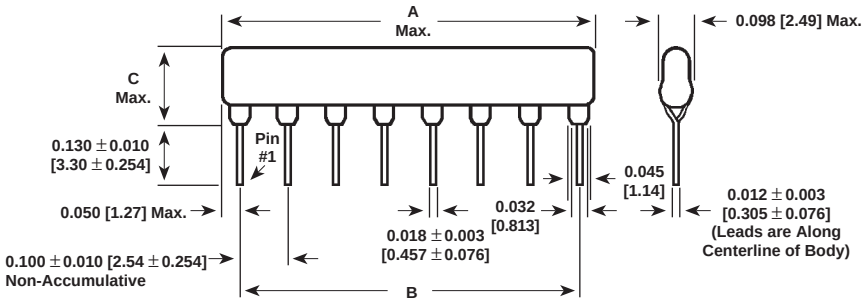
01 and 03 Schematics

CSC MODEL	08 NUMBER OF PINS	A PACKAGE CODE	01 / 03 SCHEMATIC	101 RESISTANCE VALUE	G TOLERANCE
		A = 0.195" [4.95mm] Height 0.100" [2.54mm] Lead Spacing B = 0.250" [6.35mm] Height 0.100" [2.54mm] Lead Spacing C = 0.350" [8.89mm] Height 0.100" [2.54mm] Lead Spacing	01 = Pin #1 common to all resistors 03 = Isolated resistors	First 2 digits are significant figures. Last digit specifies number of zeros to follow.	G = ± 2%

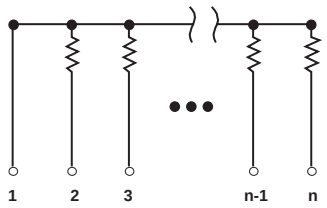
05 Schematic

CSC MODEL	08 NUMBER OF PINS	A PACKAGE CODE	05 SCHEMATIC	221 RESISTANCE VALUE R_1	331 RESISTANCE VALUE R_2	G TOLERANCE
		A = 0.195" [4.95mm] Height 0.100" [2.54mm] Lead Spacing B = 0.250" [6.35mm] Height 0.100" [2.54mm] Lead Spacing C = 0.350" [8.89mm] Height 0.100" [2.54mm] Lead Spacing		First two digits are significant figures. The third digit specifies the number of zeros to follow.		G = ± 2%

DIMENSIONS in inches [millimeters]

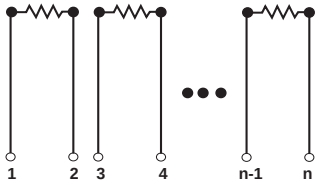


01 Schematic



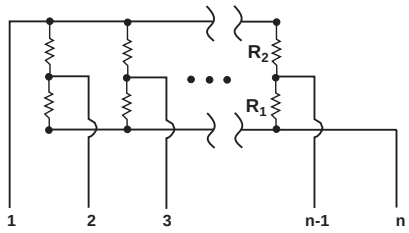
MODEL	NUMBER OF RESISTORS	A (Maximum)	B	C (Maximum)
CSC05	4	0.490 [12.45]	0.400 [10.16]	"A" Profile = 0.195 [4.95] "B" Profile = 0.250 [6.35] "C" Profile = 0.350 [8.89]
CSC06	5	0.590 [14.99]	0.500 [12.70]	
CSC07	6	0.690 [17.53]	0.600 [15.24]	
CSC08	7	0.790 [20.07]	0.700 [17.78]	
CSC09	8	0.890 [22.61]	0.800 [20.32]	
CSC10	9	0.990 [25.15]	0.900 [22.86]	
CSC11*	10	1.09 [27.69]	1.00 [25.40]	

03 Schematic



MODEL	NUMBER OF RESISTORS	A (Maximum)	B	C (Maximum)
CSC06	3	0.590 [14.99]	0.500 [12.70]	"A" Profile = 0.195 [4.95]
CSC08	4	0.790 [20.07]	0.700 [17.78]	"B" Profile = 0.250 [6.35]
CSC10	5	0.990 [25.15]	0.900 [22.86]	"C" Profile = 0.350 [8.89]

05 Schematic



MODEL	NUMBER OF RESISTORS	A (Maximum)	B	C (Maximum)
CSC05	6	0.490 [12.45]	0.400 [10.16]	
CSC06	8	0.590 [14.99]	0.500 [12.70]	
CSC07	10	0.690 [17.53]	0.600 [15.24]	"A" Profile = 0.195 [4.95]
CSC08	12	0.790 [20.07]	0.700 [17.78]	"B" Profile = 0.250 [6.35]
CSC09	14	0.890 [22.61]	0.800 [20.32]	"C" Profile = 0.350 [8.89]
CSC10	16	0.990 [25.15]	0.900 [22.86]	
CSC11*	18	1.09 [27.69]	1.00 [25.40]	

* "B" and "C" Profiles only.

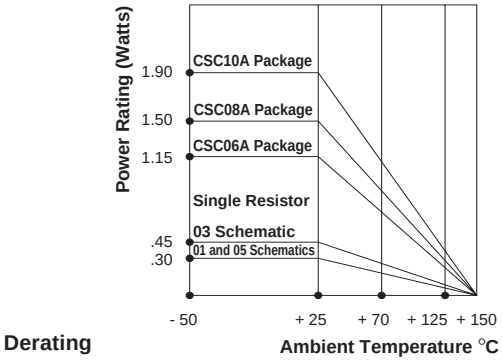
MECHANICAL SPECIFICATIONS	
Marking Resistance to Solvents:	Permanency testing per MIL-STD-202, Method 215.
Solderability:	Per MIL-STD-202, Method 208E, RMA flux.
Body:	High alumina, epoxy coated.
Terminals:	Copper alloy, tin-lead plated.

STOCKED RESISTANCE VALUES IN OHMS ("G" TOLERANCE)

Standard E-24 resistance values stocked. Consult factory.

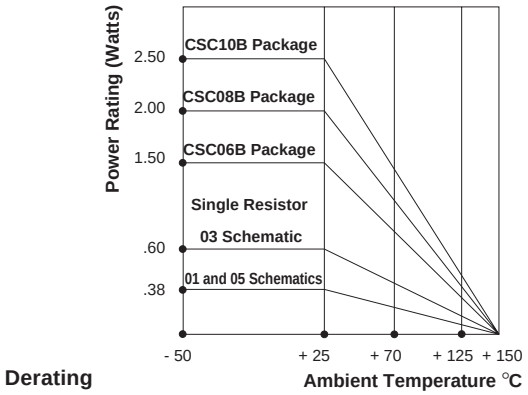
Many dual terminator resistance values stocked. Consult factory

"A" Profile



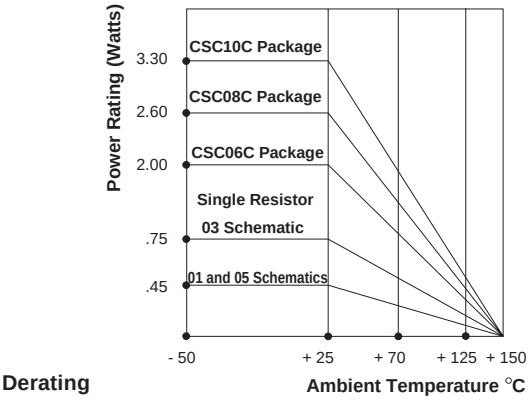
"A" PROFILE + 70°C PACKAGE RATINGS	
CSC10A	1.25 watts
CSC09A	1.12 watts
CSC08A	1.00 watts
CSC07A	0.87 watts
CSC06A	0.75 watts
CSC05A	0.62 watts

"B" Profile



"B" PROFILE + 70°C PACKAGE RATINGS	
CSC11B	1.75 watts
CSC10B	1.60 watts
CSC09B	1.45 watts
CSC08B	1.30 watts
CSC07B	1.15 watts
CSC06B	1.00 watts
CSC05B	0.80 watts
CSC04B	0.60 watts

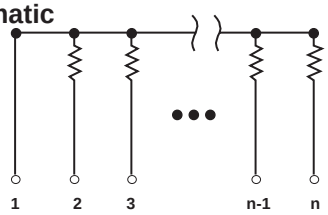
"C" Profile



"C" PROFILE + 70°C PACKAGE RATINGS	
CSC11C	2.30 watts
CSC10C	2.12 watts
CSC09C	1.90 watts
CSC08C	1.70 watts
CSC07C	1.50 watts
CSC06C	1.30 watts
CSC05C	1.00 watts
CSC04C	0.79 watts

CIRCUIT APPLICATIONS

01 Schematic



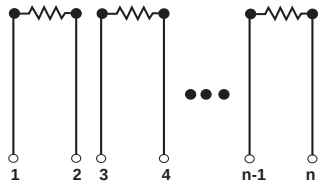
"A" Profile = 5, 7 and 9 resistors with one pin common

The CSCxxx-01 single-in-line resistor networks provide the user with nominally equal resistors, each connected to a common pin (Pin No. 1). Commonly used in the following applications:

- "Wired OR" Pull-up
- Open Collector Pull-up
- Power Gate Pull-up
- TTL Input Pull-down
- MOS/ROM Pull-up/Pull-down
- TTL Unused Gate Pull-up

* "B" and "C" Profiles available. Odd pin available in 5, 7, 9, and 11.

03 Schematic



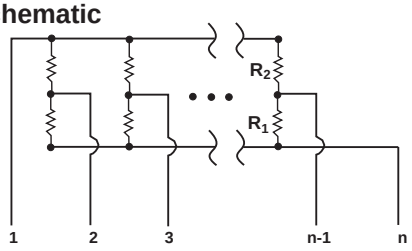
"A" Profile = 2 through 5 isolated resistors

The CSCxxx-03 single-in-line resistor networks provide the user with nominally equal resistors. Each resistor is isolated from all others. Commonly used in the following applications:

- "Wired OR" Pull-up
- Long-Line Impedance Balancing
- Power Driven Pull-up
- LED Current Limiting
- Power Gate Pull-up
- ECL Output Pull-down
- Line Termination
- TTL Input Pull-down

* "B" and "C" Profiles available.

05 Schematic



Pulse squaring and TTL dual-line terminators

The CSCxxx-05 circuits contain series pairs of resistors. Each series pair is connected between two common lines. The junction of these resistor pairs is connected to the input terminals. The 05 circuits are designed for TTL dual-line termination and pulse squaring.

* "B" and "C" Profiles available. Odd pin available in 5, 7, 9 and 11.

PERFORMANCE

TEST	CONDITIONS	MAX. ΔR (Typical Test Lots)
Thermal Shock	5 cycles between - 65°C and + 125°C	± 0.50% ΔR
Short Time Overload	2.5 x rated working voltage, 5 seconds	± 0.25% ΔR
Low Temperature Operation	45 minutes at full rated working voltage at - 65°C	± 0.25% ΔR
Moisture Resistance	240 hours with humidity ranging from 80% RH to 98% RH	± 1.00% ΔR
Resistance to Soldering Heat	Leads immersed in + 350°C solder to within 1/16" of body for 3 seconds	± 0.25% ΔR
Shock	Total of 18 shocks at 100 G's	± 0.25% ΔR
Vibration	12 hours at maximum of 20 G's between 10 and 2,000 Hz	± 0.25% ΔR
Load Life	1,000 hours at + 70°C, rated power applied 1.5 hours “ON”, 0.5 hour “OFF” for full 1000 hour period. Derated according to the curve.	± 1.00% ΔR
Terminal Strength	4.5 pound pull for 30 seconds	± 0.25% ΔR
Insulation Resistance	10,000 Megohm (minimum)	—
Dielectric Withstanding Voltage	No evidence of arcing or damage (200 V RMS for 1 minute)	—