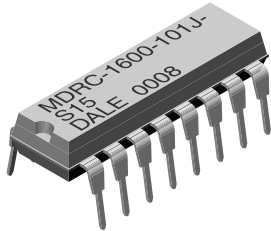


Resistor/Capacitor Networks, Dual-In-Line, Molded DIP, 16 Pin



FEATURES

- 0.190" [4.83mm] maximum seated height
- Rugged molded case construction
- Highly stable thick film
- Reduces total assembly cost
- Low temperature coefficient (- 30°C to + 85°C) ± 100ppm/°C
- Compatible with automatic insertion equipment
- Reduces PC board space

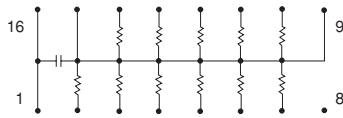
STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SCHEMATIC	POWER RATING $P_{25^{\circ}\text{C}}$ W	RESISTOR CHARACTERISTICS				CAPACITOR CHARACTERISTICS	
			PACKAGE POWER RATING W @ + 70°C	RESISTANCE TOLERANCE ± %	TEMPERATURE COEFFICIENT (- 20°C to + 85°C) Typical	T.C.R. TRACKING ± ppm/°C	CAPACITANCE TOLERANCE	CAPACITANCE VOLTAGE RATING V Max.
MDRC	1641	0.15 max.	2.0 max.	± 2, or 2Ω*	± 100ppm/°C	50	0.1μF + 40%, - 20%	25
MDRC	1642	0.15 max.	2.0 max.	± 2, or 2Ω*	± 100ppm/°C	50	0.1μF + 40%, - 20%	25
MDRC	1643	0.20 max.	2.0 max.	± 2, or 2Ω*	± 100ppm/°C	50	0.1μF + 40%, - 20%	25

* Whichever is greater

CIRCUIT APPLICATIONS

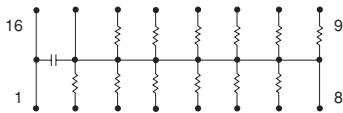
MDRC-1641 Schematic



- 2.0 and - 5.2 Volt ECL Terminator

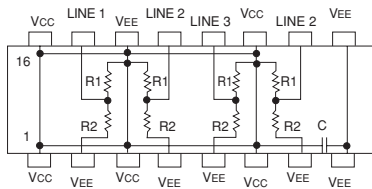
The MDRC-1641 circuit contains 11 resistors of nominally equal value and a .01 microfarad decoupling capacitor. The MDRC-1641 is designed for ECL Line Termination to a - 2.0 volt buss. The .01 microfarad decoupling capacitor is for bypassing transients between supply voltages.

MDRC-1642 Schematic



The MDRC-1642 circuit contains 12 resistors of 510 ohm each and a .01 microfarad decoupling capacitor. The MDRC-1642 is designed for ECL Pull-down to a - 5.2 volt buss. The .01 microfarad decoupling capacitor is for bypassing voltage transients on the voltage buss.

MDRC-1643 Schematic



Thevenin Equivalent Terminator

The MDRC-1643 contains four pair of series resistors. The circuit is compatible with ECL pin configurations. Each terminator section (series pair) contains a voltage divider between VCC (0 volt) and VEE (- 5.2 volt) providing a Thevenin equivalent voltage of - 2.0 volts. A .01 microfarad decoupling capacitor bypasses the VEE buss.

ORDERING INFORMATION

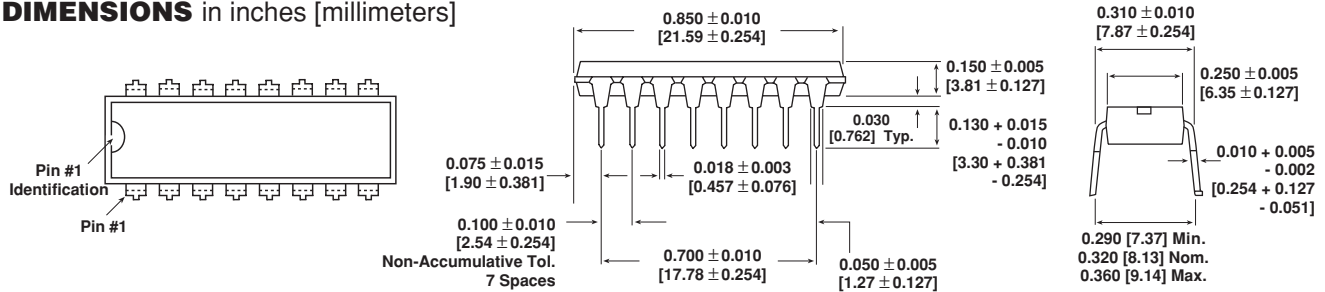
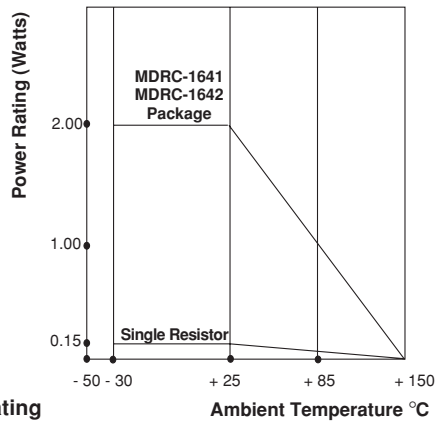
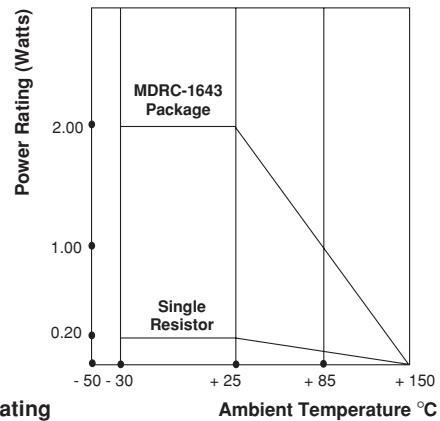
MDRC-1641 and MDRC-1642

<p>MDRC MODEL</p>	<p>16 NUMBER OF PINS</p>	<p>41 SCHEMATIC</p>	<p>500 RESISTANCE VALUE</p> <p>First 2 digits are significant figures. Last digit specifies number of zeros to follow.</p>	<p>G TOLERANCE</p> <p>G = ± 2%</p>
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MDRC-1643

<p>MDRC MODEL</p>	<p>16 NUMBER OF PINS</p>	<p>43 SCHEMATIC</p>	<p>750 IMPEDANCE VALUE IN OHMS (Zo)</p> <p>First 2 digits are significant figures. Last digit specifies number of zeros to follow.</p>	<p>G TOLERANCE</p> <p>G = ± 2% J = ± 5%</p>
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EXAMPLE: MDRC-1641-500G = A 16 pin dual-in-line resistor network with eleven 50 ohm resistors and a .01 microfarad decoupling capacitor.

DIMENSIONS in inches [millimeters]

MDRC-1641 and MDRC-1642

MDRC-1643

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CS206
Operating Voltage (at + 25°C)	VAC	50 maximum
Capacitor Dissipation Factor	%	< 3
Voltage Coefficient of Resistance (typical)	ppm/V	< 50
Operating Temperature Range	°C	- 30 to + 85°C
Storage Temperature Range	°C	- 30 to + 85°C

RESISTANCE VALUE IN OHMS (G Tolerance)

MDRC-1641 50, 68, 75, 100	MDRC-1643		
	R ¹	R ²	Z ₀
	81	130	50
MDRC-1642 510	121	195	75
	162	260	100

MECHANICAL SPECIFICATIONS

Marking Resistance to Solvents:	Permanency testing per MIL-STD-202, Method 215.
Solderability:	Per MIL-STD-202, Method 208E.
Terminals:	Copper alloy, tin-lead plated.
Body:	Molded epoxy.
Weight:	1.5 grams.

PERFORMANCE

TEST	CONDITIONS	MAX. ΔR (Typical Test Lots)
Thermal Shock	MDRC-1641 and MDRC-1642, 5 cycles between - 30°C and + 85°C MDRC-1643, 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	MDRC-1641 and MDRC-1642, 45 minutes at full rated working voltage at - 30°C MDRC-1643, 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	± 0.50% ΔR
Resistance to Soldering Heat	Leads immersed in + 350°C solder to within 1/16" of device 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	1000 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.	± 0.50% ΔR
Terminal Strength	4.5 pound pull for 30 seconds	± 0.25% ΔR
Insulation Resistance	10,000 Megohm (minimum)	—
Dielectric Withstanding Voltage	(200 V RMS for 1 minute)	—