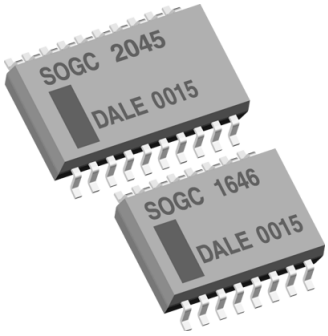
# Thick Film Resistor Networks, Dual-In-Line Small Outline Molded Dip 45 & 46 Schematics




## FEATURES

- 0.110" [2.79] maximum seated height
- Rugged, molded case construction
- 0.050" [1.27] lead spacing
- Reduces total assembly costs
- Compatible with automatic surface mounting equipment
- Uniform performance characteristics
- Meets EIA PDP 100, SOGN-0003 outline dimensions
- Available in tube pack or tape and reel pack
- Lead (Pb)-free version is RoHS compliant

Pb Available

e1 RoHS* COMPLIANT

## STANDARD ELECTRICAL SPECIFICATIONS

| GLOBAL MODEL | CIRCUIT SCHEMATIC | RESISTOR CIRCUIT W at 70 °C | PACKAGE POWER W at 70 °C | TOLERANCE ± % | RESISTANCE VALUES Ω | OPERATING VOLTAGE VDC | TEMPERATURE COEFFICIENT ± ppm/°C |
|---|---|---|---|---|---|---|---|
| SOGC16 | 45 | 0.1 | 1.6 | 2 | 180, 270, 820 | 50 max | 100 |
| | 46 | 0.1 | 1.6 | 2 | 330, 150, 330 | 50 max | 100 |
| SOGC20 | 45 | 0.1 | 2.0 | 2 | 180, 270, 820 | 50 max | 100 |
| | 46 | 0.1 | 2.0 | 2 | 330, 150, 330 | 50 max | 100 |

## TECHNICAL SPECIFICATIONS

| PARAMETER | UNIT | S0GC16 | SOGC20 |
|---|---|---|---|
| Package Power Rating (Maximum at + 70 °C) | W | 1.6 | 2.0 |
| TCR Tracking (- 55 °C to + 125 °C) | ppm/°C | ± 50 | |
| Voltage Coefficient of Resistance | ppm/V | < 50 typical | |
| Maximum Operating Voltage | VDC | 50 | |
| Operating Temperature Range | °C | - 55 to + 125 | |
| Storage Temperature Range | °C | - 55 to + 150 | |

## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Marking | Model number, schematic number, value, tolerance, pin 1 indicator, date code |
| Marking Resistance to Solvents | Permanency testing per MIL-STD-202, Method 215 |
| Maximum Solder Reflow Temperature | + 255 °C |
| Solderability | Per MIL-STD-202, Method 208E |
| Terminals | Copper alloy. Solder dipped terminal |
| Body | Molded epoxy |

## GLOBAL PART NUMBER INFORMATION

**New Global Part Numbering: SOGC1646DC (preferred part numbering format)**

| S | O | G | C | 1 | 6 | 4 | 6 | D | C | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

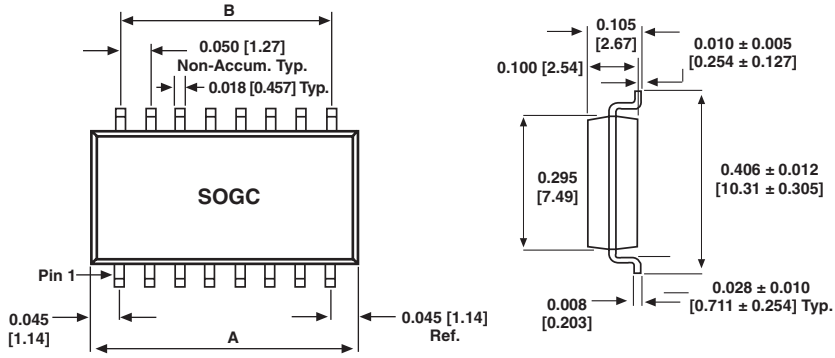
| GLOBAL MODEL | PIN COUNT | SCHEMATIC | PACKAGING | SPECIAL |
|---|---|---|---|---|
| **SOGC** | **16**<br>**20** | **45** = TTL/ECL Translator<br>**46** = Signal Terminator | **EJ** = Lead (Pb)-free, Tube<br>**EA** = Lead (Pb)-free, Tape & Reel<br>**DC** = Tin/Lead, Tube<br>**RZ** = Tin/Lead, Tape & Reel | Blank = Standard (Dash Number) (up to 3 digits) From **1-999** as applicable |

**Historical Part Number example: SOGC1646 (will continue to be accepted)**

| SOGC | 16 | 46 | D02 |
|---|---|---|---|
| HISTORICAL MODEL | PIN COUNT | SCHEMATIC | PACKAGING |

* Pb containing terminations are not RoHS compliant, exemptions may apply

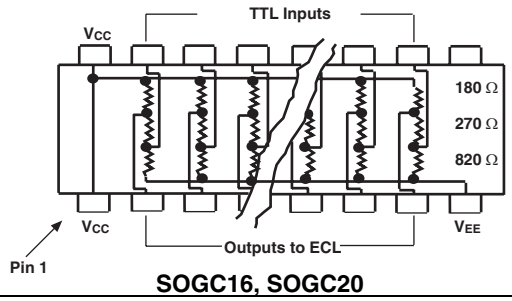
**DIMENSIONS** in inches [millimeters]




| GLOBAL MODEL | A | B |
|---|---|---|
| SOGC16 | 0.440 [11.18] | 0.350 [8.89] |
| SOGC20 | 0.540 [13.72] | 0.450 [11.43] |

## CIRCUIT APPLICATIONS

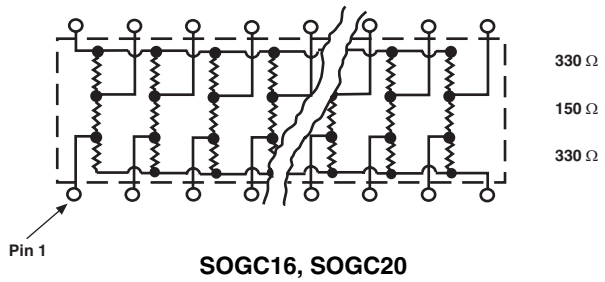
**45 Schematic**




**SOGC16, SOGC20**

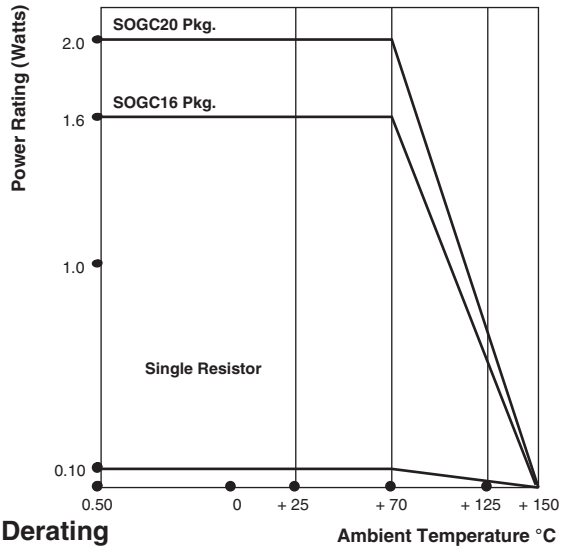
TTL to ECL translator
The SOGCxx45 network consists of resistors of 3 different values, internally divided into 6 or 8 identical three (3) resistor sections for TTL to ECL translation.

**46 Schematic**




**SOGC16, SOGC20**

SCSI-BUS signal terminator
The SOGCxx46 network consists of resistors of 2 different values, internally divided into 7 or 9 identical three (3) resistor sections for SCSI-BUS terminator applications.




## PERFORMANCE

| TEST | MAX. $\Delta R$ (TYPICAL TEST LOTS) |
|---|---|
| Power Conditioning | ± 0.50 % $\Delta R$ |
| Thermal Shock | ± 0.50 % $\Delta R$ |
| Short Time Overload | ± 0.25 % $\Delta R$ |
| Low Temperature Operation | ± 0.25 % $\Delta R$ |
| Moisture Resistance | ± 0.50 % $\Delta R$ |
| Resistance to Soldering Heat | ± 0.25 % $\Delta R$ |
| Shock | ± 0.25 % $\Delta R$ |
| Vibration | ± 0.25 % $\Delta R$ |
| Load Life | ± 0.50 % $\Delta R$ |
| Terminal Strength | ± 0.25 % $\Delta R$ |
| Insulation Resistance | 10 000 MΩ (minimum) |
| Dielectric Withstanding Voltage | No evidence of arcing or damage (200 V RMS for 1 minute) |

- Test methods per MIL-STD-202

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