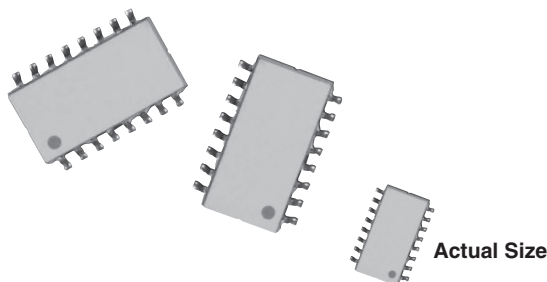


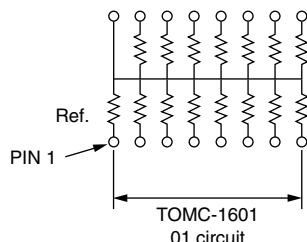
# Molded, 50 mil Pitch Thin Film Resistor, Surface Mount Network



Actual Size

Vishay Dale Thin Film offers standard circuits in 16 pins in a medium body molded surface mount package. The networks are available over a resistance range of 100  $\Omega$  to 100 k $\Omega$ . The network features tight ratio tolerances and close TCR tracking. In addition to the standards shown, custom circuits are available upon request.

## SCHEMATIC



The 01 circuit provides 15 nominally equal resistors, each connected between a common lead (16) and a discrete PC board pin.

## FEATURES

- 0.090" (2.29 mm) maximum seated height
- Rugged, molded case construction (0.22" wide)
- Highly stable thin film ratio stability ( $\Delta R \pm 0.015\%$  at 70 °C for 2000 h)
- Low temperature coefficient,  $\pm 25$  ppm/°C (-55 °C to +125 °C)
- Wide resistance range 100  $\Omega$  to 100 k $\Omega$
- Isolated/bussed circuits
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



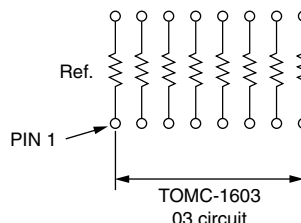
**RoHS\***  
COMPLIANT  
HALOGEN  
**FREE**

## Note

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

## TYPICAL PERFORMANCE

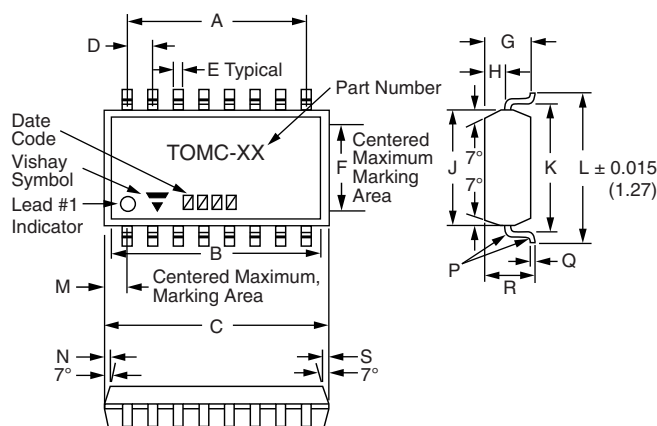
	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.025



The 03 circuit provides a choice of 8 nominally equal resistors with each resistor isolated from all others and wired directly across.

## STANDARD ELECTRICAL SPECIFICATIONS

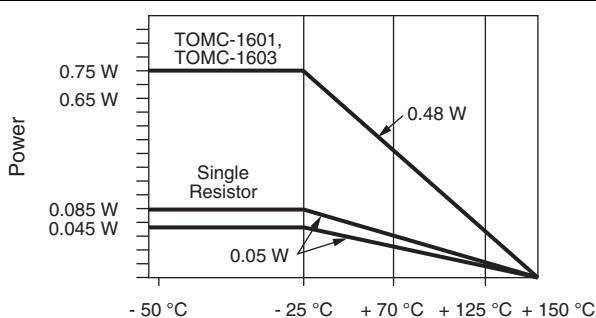
TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	16	-
Resistance Range	100 $\Omega$ to 100 k $\Omega$ per resistor	-
TCR: Absolute	$\pm 25$ ppm/°C	-55 °C to +125 °C
TCR: Tracking	$\pm 5$ ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	$\pm 0.1\%$ to 1%	+25 °C
Tolerance: Ratio	$\pm 0.025\%$ to 0.5%	+25 °C
Power Rating: Resistor	50 mW = PIN 16 common 100 mW = isolated	Maximum at +70 °C
Power Rating: Package	750 mW	Maximum at +70 °C
Stability: Absolute	$\Delta R \pm 0.05\%$	2000 h at +70 °C
Stability: Ratio	$\Delta R \pm 0.015\%$	2000 h at +70 °C
Voltage Coefficient	0.1 ppm/V	-
Working Voltage	100 V max. not to exceed $\sqrt{P \times R}$	-
Operating Temperature Range	-55 °C to +125 °C	-
Storage Temperature Range	-55 °C to +150 °C	-
Noise	< -30 dB	-
Thermal EMF	0.08 $\mu$ V/°C	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01\%$	1 year at +25 °C
Shelf Life Stability: Ratio	$\Delta R \pm 0.002\%$	1 year at +25 °C

**DIMENSIONS AND IMPRINTING** in inches and millimeters


DIMENSION	INCHES	MILLIMETERS
A	0.350	8.89
B	0.400	10.16
C	0.440	11.176
D	0.050	1.27
E	0.018	0.457
F	0.160	4.06
G	0.08	2.03
H	0.036	0.914
J	0.22	5.59
K	0.244	6.20
L	0.30	7.52
M	0.045	1.14
N	0.003	0.076
P	0.005	1.27
Q	0.008	0.203
R	0.085	2.16
S	0.003	0.076

**MECHANICAL SPECIFICATIONS**

Resistive Element	Passivated nichrome
Substrate Material	Silicon
Body	Molded epoxy
Terminals	Copper alloy
Lead (Pb)-free Option	100 % matte tin
Tin Lead Option	Sn85
Tin Lead and Lead (Pb)-free Finish	Plated

**DERATING CURVE**

**GLOBAL PART NUMBER INFORMATION**

New Global Part Numbering: TOMC16031002BUF

	T	O	M	C	1	6	0	3	1	0	0	2	B	U	F
T	O	M	C	T	1	6	0	1	1	0	0	3	Z	T	1

GLOBAL MODEL (4 or 5 digits)	PINS	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	PACKAGING
<b>TOMC</b> (Tin lead)	<b>16</b>	<b>01</b> = 15 bussed equal resistors	First 3 digits are significant figures and the last digit specifies the number of zeros to follow.  Example: 1002 = 10K 1003 = 100K	Abs. Tol.      Ratio <b>A</b> = 0.1 % <sup>(1)</sup> 0.05 % <b>B</b> = 0.1 %      0.1 % <b>C</b> = 0.25 %    0.1 % <b>D</b> = 0.5 %      0.1 % <b>F</b> = 1 %          0.5 % <b>Z</b> = 0.1 % <sup>(2)</sup> 0.025 %	<b>TAPE AND REEL</b> <b>T0</b> = 100 min., 100 mult <b>T1</b> = 1000 min., 1000 mult <sup>(3)</sup> <b>T3</b> = 300 min., 300 mult <b>T5</b> = 500 min., 500 mult <b>TF</b> = Full reel 2000 <b>TS</b> = 100 min., 1 mult  <b>UF</b> = TUBED

Historical Part Number example: TOMC16011002Z (for reference purposes only)

<b>TOMC</b>	<b>16</b>	<b>01</b>	<b>1002</b>	<b>Z</b>
SERIES	NUMBER OF LEADS	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE

**Notes**

- (1) Tolerance available 250 and up
- (2) Tolerance available 1K and up
- (3) Preferred packaging code



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