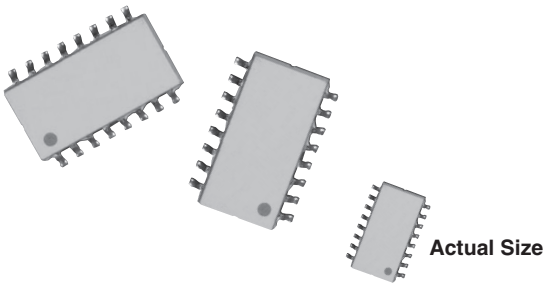
Molded, 50 mil Pitch, Dual-In-Line Thin Film Resistor, Surface Mount Network



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 Ω to 100 kΩ. The network features tight ratio tolerances and close TCR tracking. In addition to the standards shown, custom circuits are available upon request.

FEATURES

- 0.090" (2.29 mm) maximum seated height
- Rugged, molded case construction (0.22" wide)
- Highly stable thin film ratio stability (Δ*R* ± 0.015 % at 70 °C for 2000 h)
- Low temperature coefficient, ± 25 ppm/°C (- 55 °C to + 125 °C)
- Wide resistance range 100 Ω to 100 kΩ
- Isolated/bussed circuits
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

RoHS* COMPLIANT

HALOGEN FREE

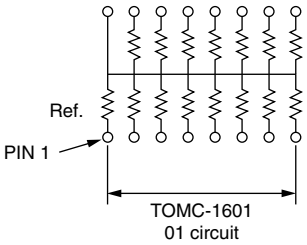
Note

* Lead (Pb)-containing terminations are not RoHS-compliant. Exemptions may apply.

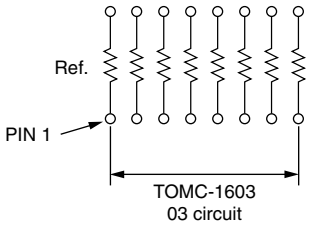
TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.025

SCHEMATIC



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

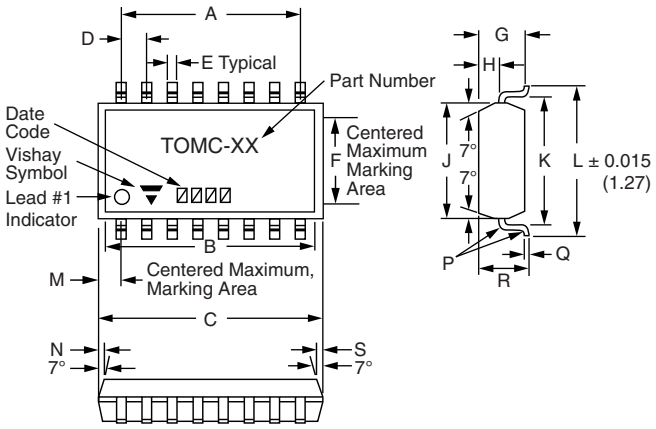


The 03 circuit provides a choice of 8 nominally equal resistors with each resistor isolated from all others and wired directly across.

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	16	-
Resistance Range	100 Ω to 100 kΩ per resistor	-
TCR: Absolute	± 25 ppm/°C	- 55 °C to + 125 °C
TCR: Tracking	± 5 ppm/°C	- 55 °C to + 125 °C
Tolerance: Absolute	± 0.1 % to 1 %	+ 25 °C
Tolerance: Ratio	± 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	Δ*R* ± 0.05 %	2000 h at + 70 °C
Stability: Ratio	Δ*R* ± 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 µV/°C	-
Shelf Life Stability: Absolute	Δ*R* ± 0.01 %	1 year at + 25 °C
Shelf Life Stability: Ratio	Δ*R* ± 0.002 %	1 year at + 25 °C

DIMENSIONS AND IMPRINTING in inches and millimeters

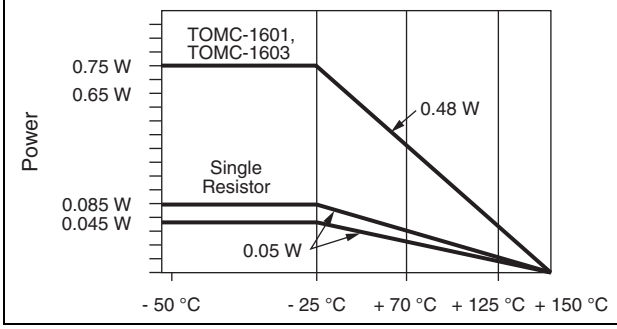


DIMENSION	INCHES	MILLIMETERS
A	0.350	8.89
B	0.400	10.16
C	0.440	11.176
D	0.050	1.27
E	0.018	0.457
F	0.160	4.06
G	0.08	2.03
H	0.036	0.914
J	0.22	5.59
K	0.244	6.20
L	0.30	7.52
M	0.045	1.14
N	0.003	0.076
P	0.005	1.27
Q	0.008	0.203
R	0.085	2.16
S	0.003	0.076

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
TOMC (Tin lead) **TOMCT** (Lead (Pb)-free) (e3)	**16**	**01** = 15 bussed equal resistors **03** = 7 or 8 isolated 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 **A** = 0.1 % (1) / 0.05 % **B** = 0.1 % / 0.1 % **C** = 0.25 % / 0.1 % **D** = 0.5 % / 0.1 % **F** = 1 % / 0.5 % **Z** = 0.1 % (2) / 0.025 %	TAPE AND REEL **T0** = 100 min., 100 mult **T1** = 1000 min., 1000 mult (3) **T3** = 300 min., 300 mult **T5** = 500 min., 500 mult **TF** = Full reel 2000 **TS** = 100 min., 1 mult **UF** = TUBED

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

TOMC	16	01	1002	Z
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

Vishay Dale Thin Film Land Patterns

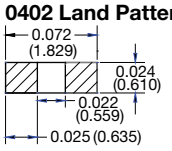
1. Scope

This technical note provides sample land patterns for Vishay Dale Thin Film SMT resistive products. The following drawings are based on IPC-SM-782 Surface Mount Design and Land Pattern Standard. These drawings are for reference only Vishay Thin Film recommends that the user contacts their PC board supplier for actual land patterns required. The pads are intended for lead (Pb)-free and tin / lead solder types.

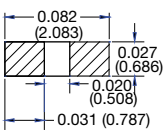
2. Product Series

Thin Film Surface Mount Chip Resistors (FC, L, P, PTN, PLT, PLTT. PLTU, PAT, PATT, PNM, M/D55342 QPL Series)

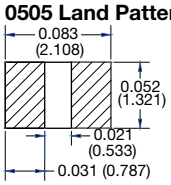
0402 Land Pattern



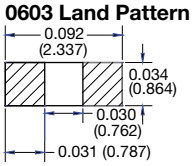
0502 Land Pattern



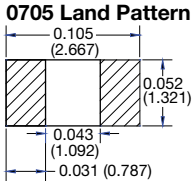
0505 Land Pattern



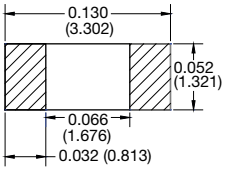
0603 Land Pattern



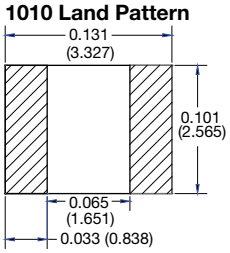
0705 Land Pattern



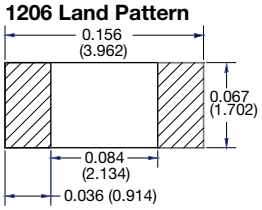
1005 Land Pattern



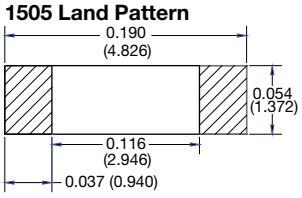
1010 Land Pattern



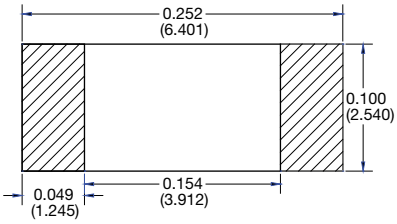
1206 Land Pattern



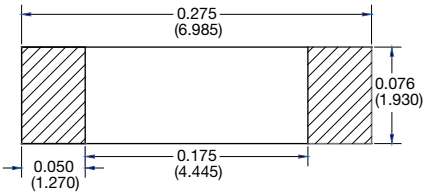
1505 Land Pattern



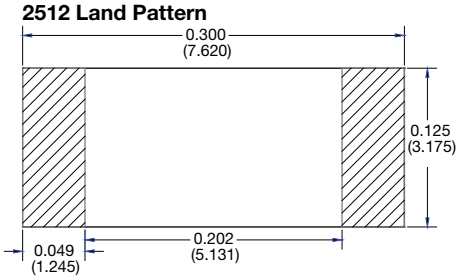
2010 Land Pattern



2208 Land Pattern

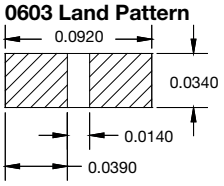


2512 Land Pattern

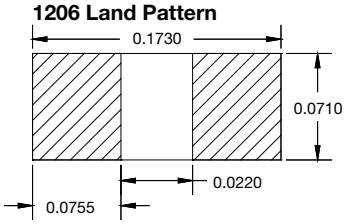


Thin Film Surface Mount Chip Resistors (PHP, PCAN Series)

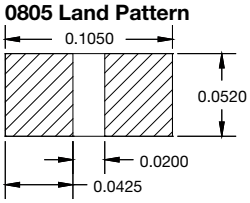
0603 Land Pattern



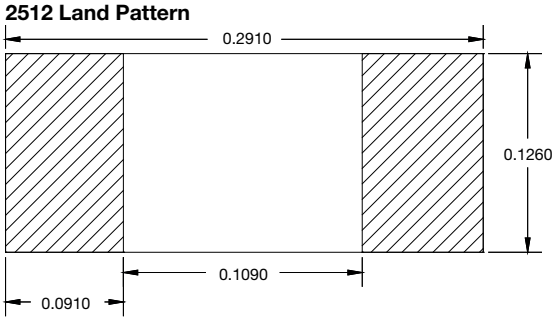
1206 Land Pattern



0805 Land Pattern

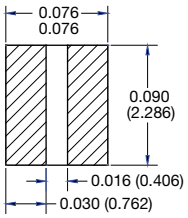


2512 Land Pattern

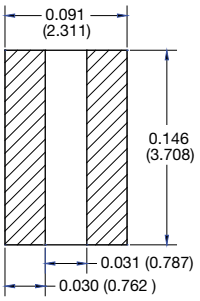


Thin Film Surface Mount Chip Resistors Long Axis Termination (L Series)

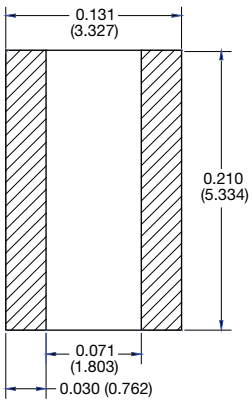
0508 Land Pattern



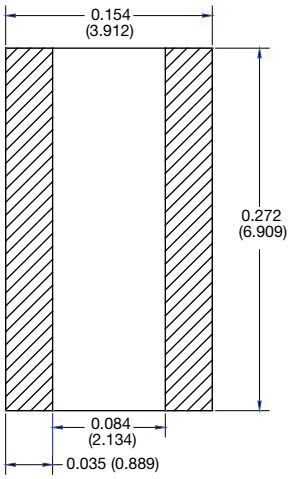
0612 Land Pattern



1020 Land Pattern

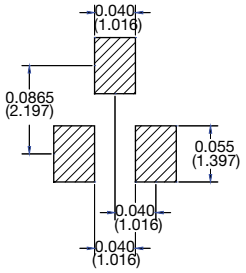


1225 Land Pattern

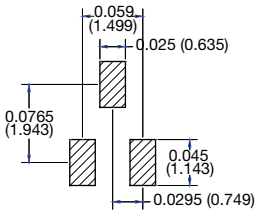


Surface Mount Networks (MPM, MP3, MP4 Series)

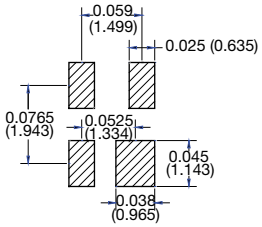
SOT-23 (MPM, MPMA)



SC70-3 (MP3)

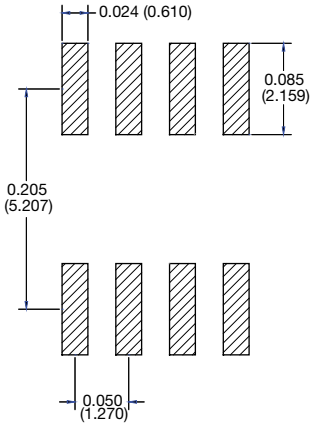


SC70-4 (MP4)

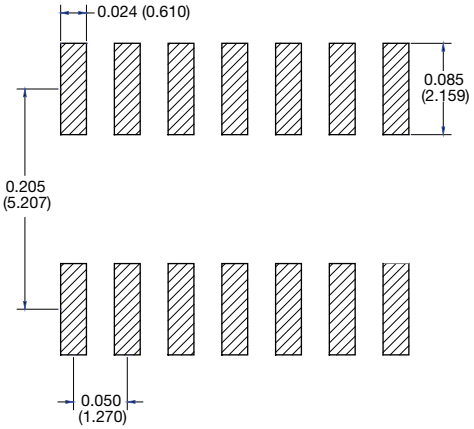


Surface Mount Networks SOIC Narrow Body 150 mils (ORN, CSO, MOMC, HTRN, AORN, MORN Series)

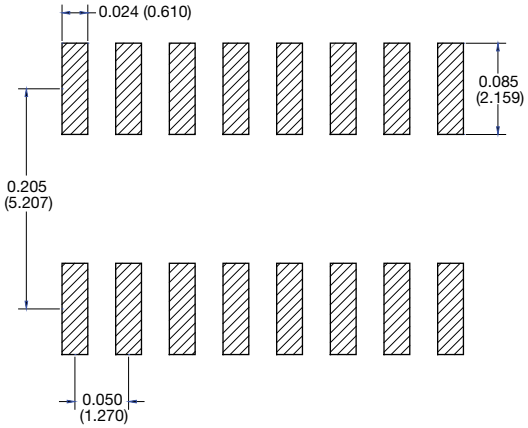
SOIC-8
(ORN, HTRN, AORN, CSO-8)



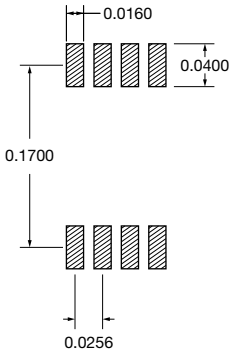
SOIC-14
(NOMC-14, NOMCA-14, CSO-14)



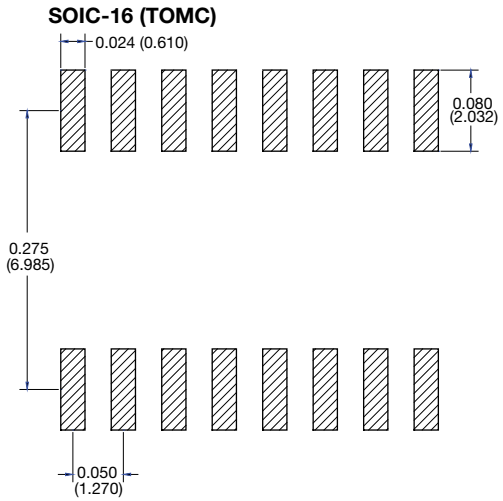
SOIC-16
(NOMC-16, NOMCA-16, CSO-16, VSOR-16)



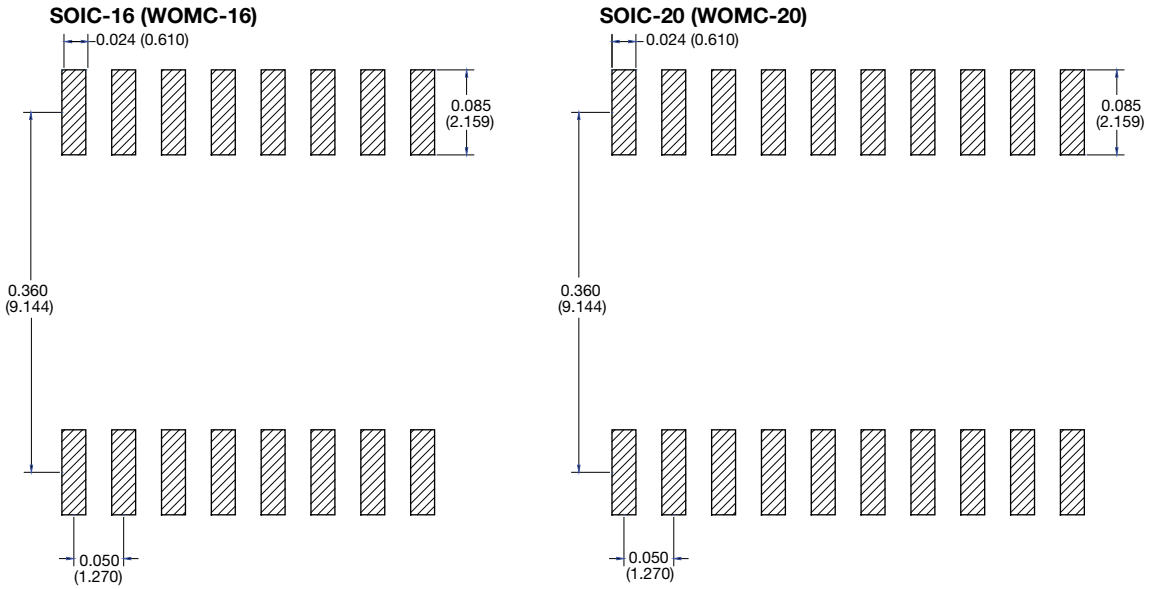
MORN MSOP MO-187AA
(MORN-8)



Surface Mount Networks SOIC Medium Body 220 mils (TOMC Series)



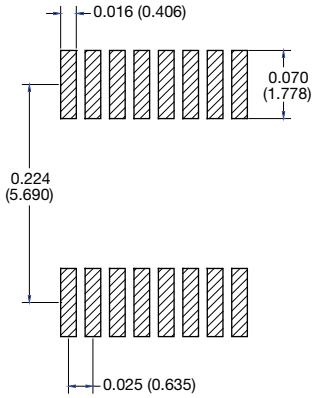
Surface Mount Networks SOIC Wide Body 300 mils (WOMC Series)



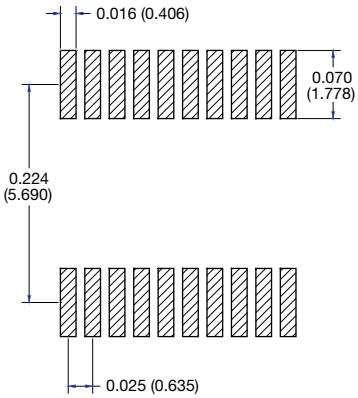
Surface Mount Networks High Density SSOP, TSOP (VSSR, VTSR Series)

SSOP MO-137

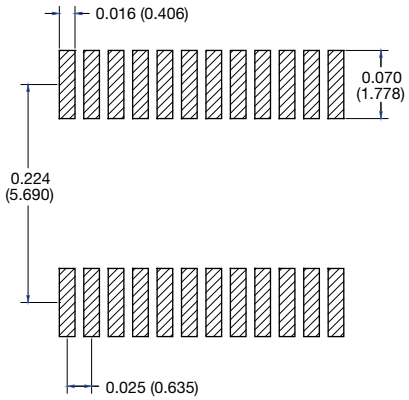
OSOP-16, VSSR-16



OSOP-20, VSSR-20

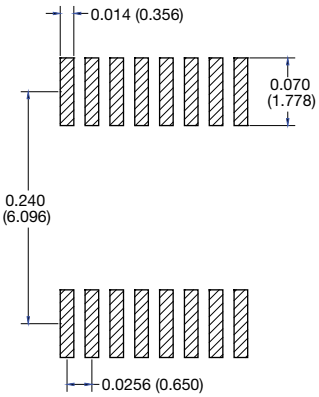


OSOP-24, VSSR-24, HD-CSO-24

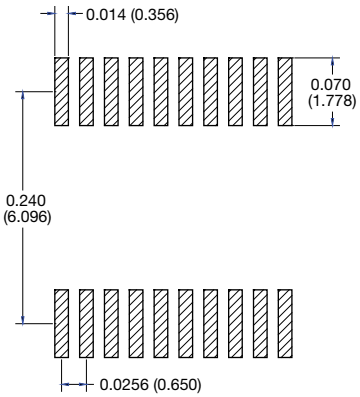


TSSOP MO-153

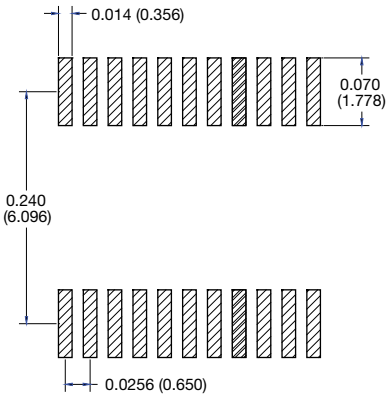
VTSR-16



VTSR-20

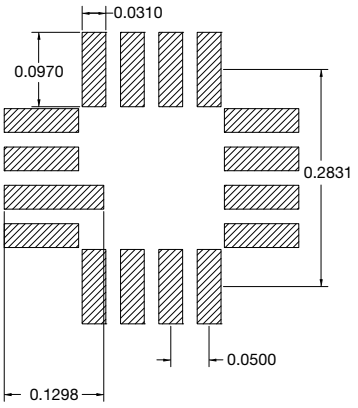


VTSR-24

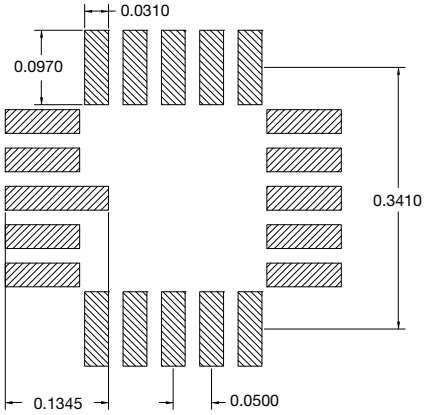


Surface Mount Leadless Networks (LCC Series)

16 Pin LCC

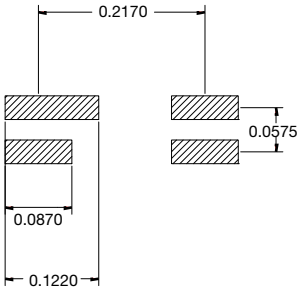


20 Pin LCC



Surface Mount Leadless Networks (MPH Series)

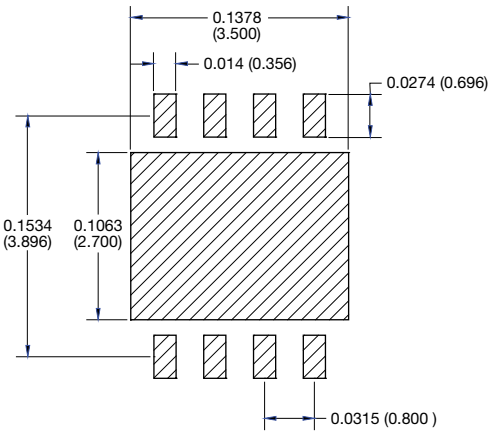
4 Pin LCC



Surface Mount Leadless Packages DUAL/ QUAD Flat No Lead (DFN, QFN Series)

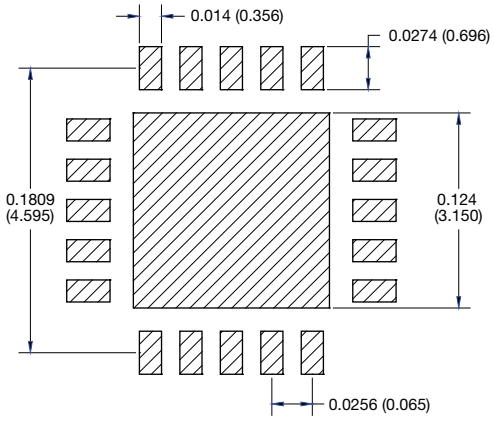
DFN MLP

DFN-8 4 x 5 mm Sq



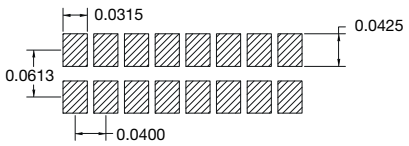
QFN MLP

QFN-20 5 x 5 mm Sq

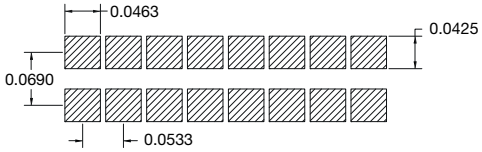


Surface Mount Leadless Resistor Arrays (PR Series)

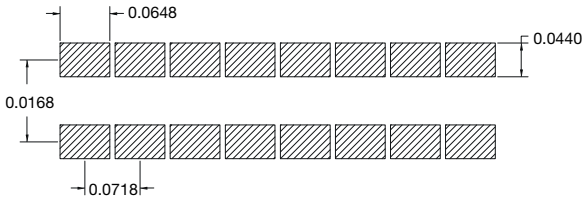
PR 100 (2 to 8 resistors)



PR 135 (2 to 8 resistors)



PR 182 (2 to 8 resistors)

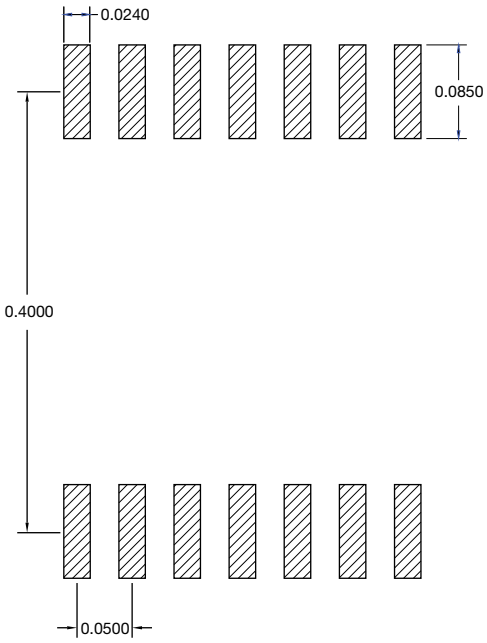


Note

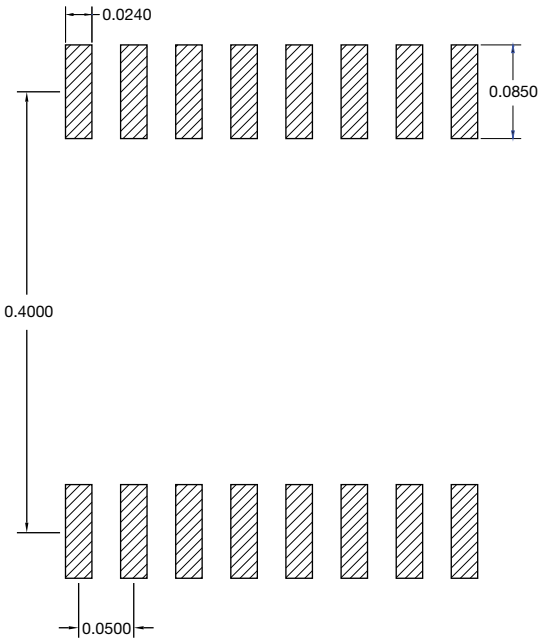
- All dimensions in inches (mm)

Flatpack

14 Pin Bottom Brazed Flatpack



16 Pin Bottom Brazed Flatpack



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for vishay ***manufacturer:***

Other Similar products are found below :

M39006/22-0577H Y00892K49000BR13L VSKT250-16PBF M8340109M6801GGD03 NTCALUG01A103F291L ITU1341SM3 VS-MBRB1545CTPBF 1KAB100E 1KAB20E IH10EB600K12 CP0005150R0JE1490 562R5GAD47RR S472M69Z5UR84K0R MKP1848C65090JY5L CRCW1210360RFKEA VSMF4720-GS08 TSOP34438SS1V CRCW04024021FRT7 001789X CRCW08054K00FKTA LVR10R0200FE03 CRCW12063K30FKEAHP 009923A CRCW2010331JR02 CRCW25128K06FKEG CS6600552K000B8768 CSC07A0110K0GPA M34C156K100BZSS M39003/01-2289 M39003/01-2784 M39006/25-0133 M39006/25-0228 M64W101KB40 M64Z501KB40 CW001R5000JS73 CW0055R000JE12 CW0056K800JB12 CW0106K000JE73 672D826H075EK5C CWR06JC105KC CWR06NC475JC MAL219699001E3 MCRL007035R00JHB00 PTF56100K00QYEK PTN0805H1502BBTR1K RCWL1210R130JNEA RH005220R0FE02 RH005330R0FC02 RH010R0500FC02 132B20103