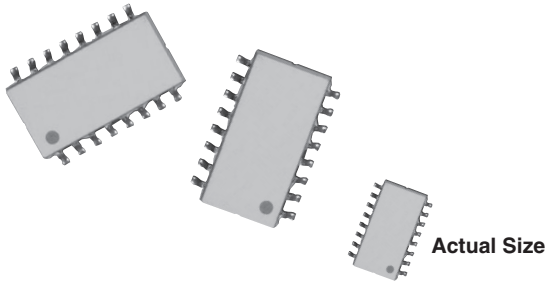
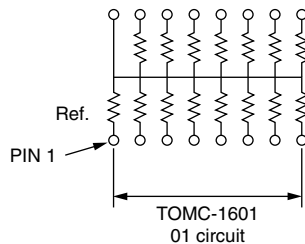


Molded, 50 mil Pitch, Dual-In-Line Thin Film Resistor, Surface Mount Network



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 k Ω . 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, ± 25 ppm/°C (-55 °C to +125 °C)
- Wide resistance range 100 Ω to 100 k Ω
- Isolated/bussed circuits
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



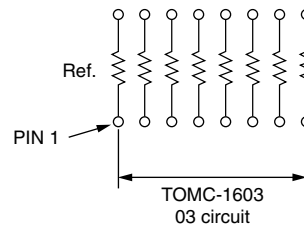
RoHS*
COMPLIANT
HALOGEN
FREE

Note

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

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
	TCR	25
TOL.	ABSOLUTE	RATIO
	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.

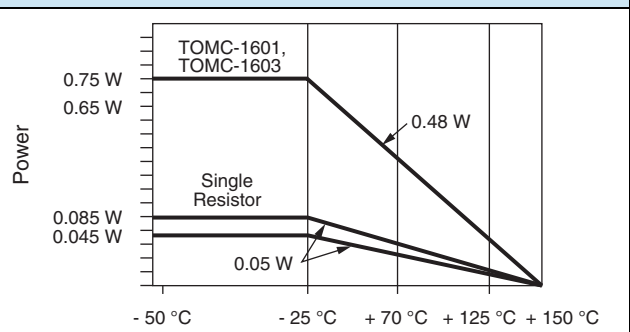
STANDARD ELECTRICAL SPECIFICATIONS		
TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	16	-
Resistance Range	100 Ω to 100 k Ω per resistor	-
TCR: Absolute	± 25 ppm/°C	-55 °C to +125 °C
TCR: Tracking	± 5 ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	$\pm 0.1\%$ to 1%	+25 °C
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 μ 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

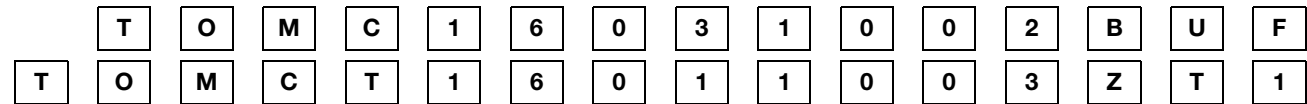
DIMENSION	INCHES	MILLIMETERS
A	0.350	8.89
B	0.400	10.16
C	0.440	11.176
D	0.050	1.27
E	0.018	0.457
F	0.160	4.06
G	0.08	2.03
H	0.036	0.914
J	0.22	5.59
K	0.244	6.20
L	0.30	7.52
M	0.045	1.14
N	0.003	0.076
P	0.005	1.27
Q	0.008	0.203
R	0.085	2.16
S	0.003	0.076

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



GLOBAL MODEL (4 or 5 digits)	PINS	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	PACKAGING
TOMC (Tin lead)	16	01 = 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 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

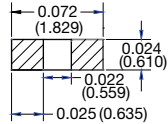
1. Scope

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.

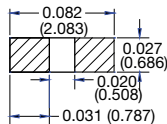
2. Product Series

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

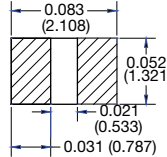
0402 Land Pattern



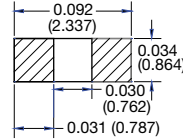
0502 Land Pattern



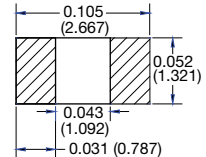
0505 Land Pattern



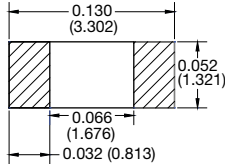
0603 Land Pattern



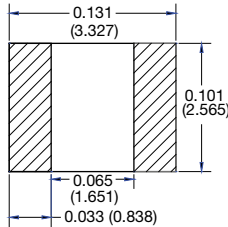
0705 Land Pattern



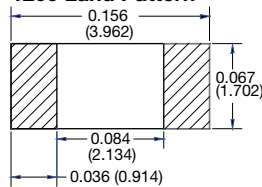
1005 Land Pattern



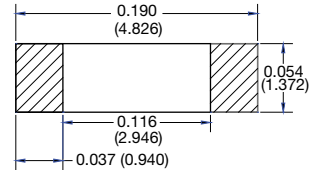
1010 Land Pattern



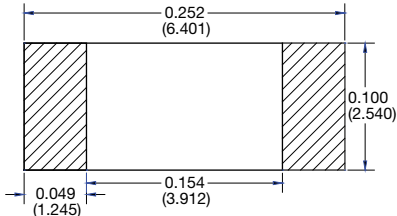
1206 Land Pattern



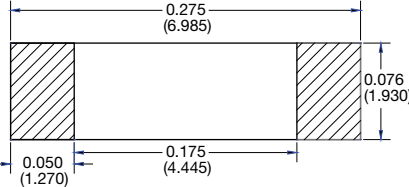
1505 Land Pattern



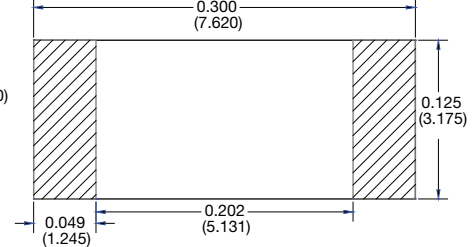
2010 Land Pattern



2208 Land Pattern

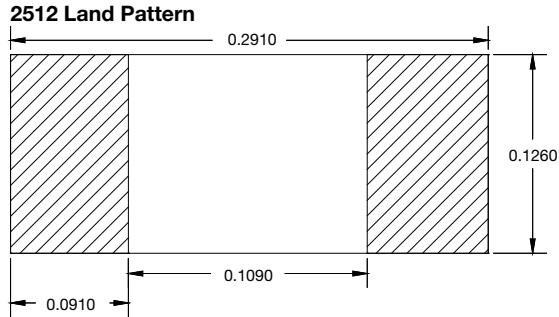
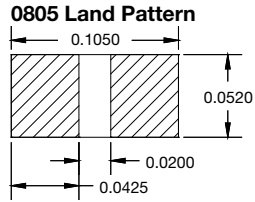
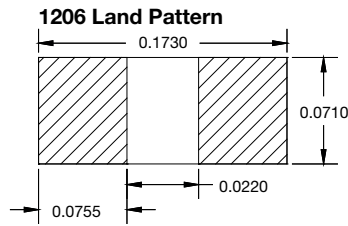
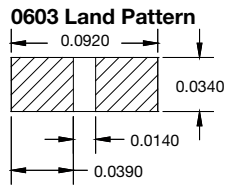


2512 Land Pattern

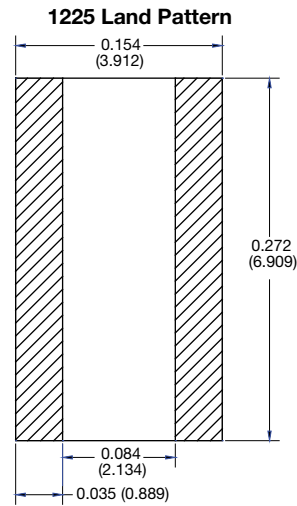
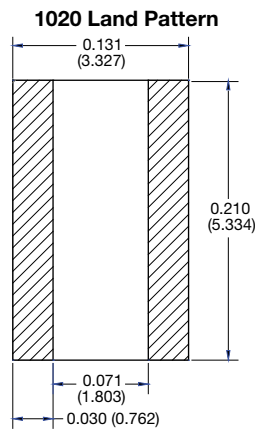
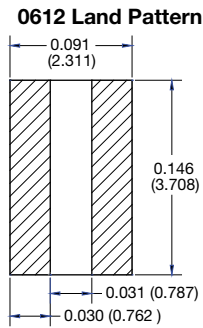
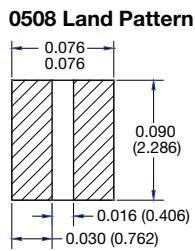




Thin Film Surface Mount Chip Resistors (PHP, PCAN Series)

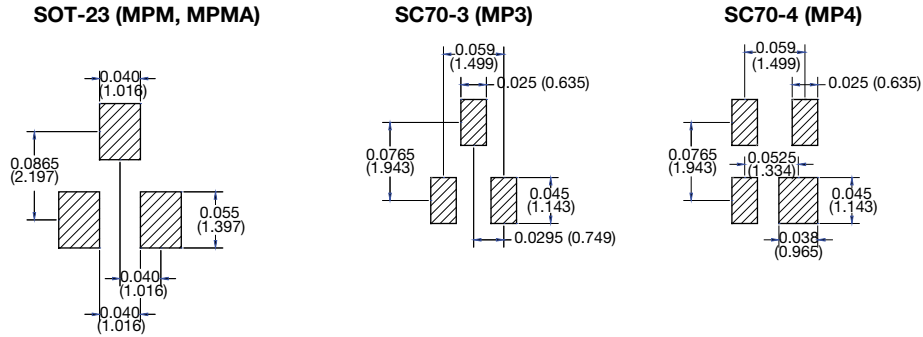


Thin Film Surface Mount Chip Resistors Long Axis Termination (L Series)

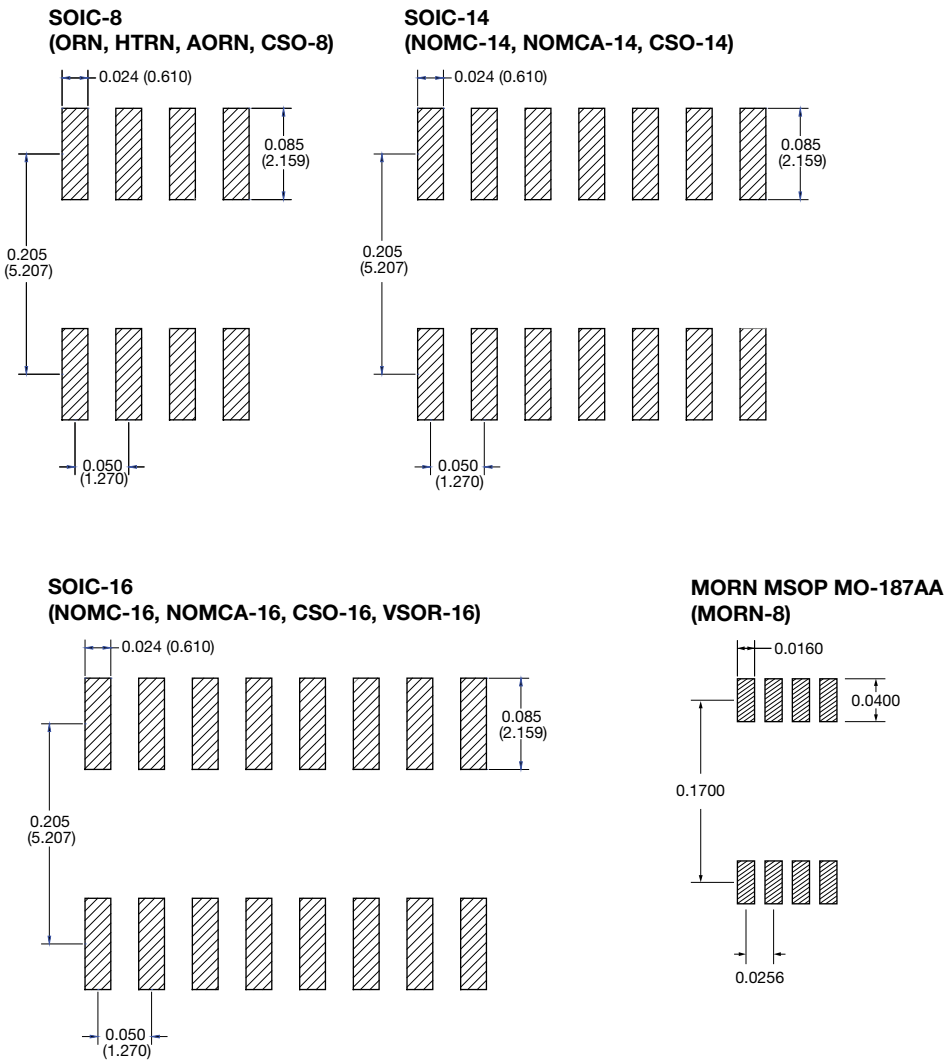




Surface Mount Networks (MPM, MP3, MP4 Series)

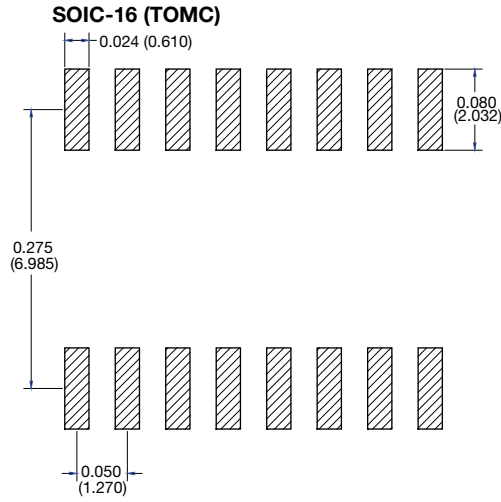


Surface Mount Networks SOIC Narrow Body 150 mils (ORN, CSO, MOMC, HTRN, AORN, MORN Series)

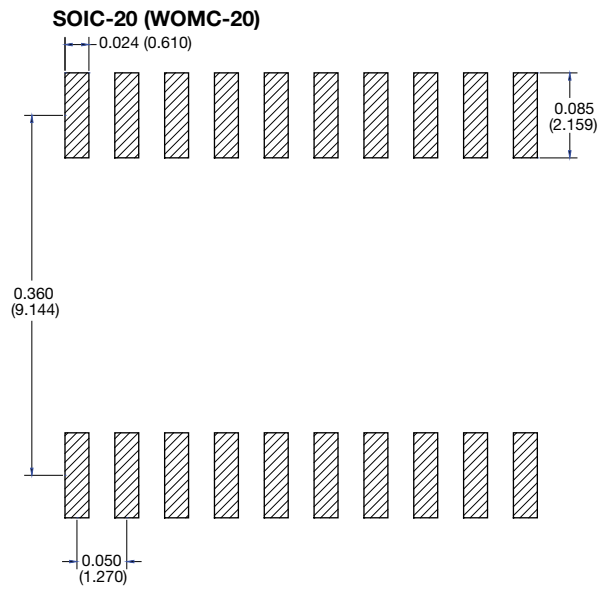
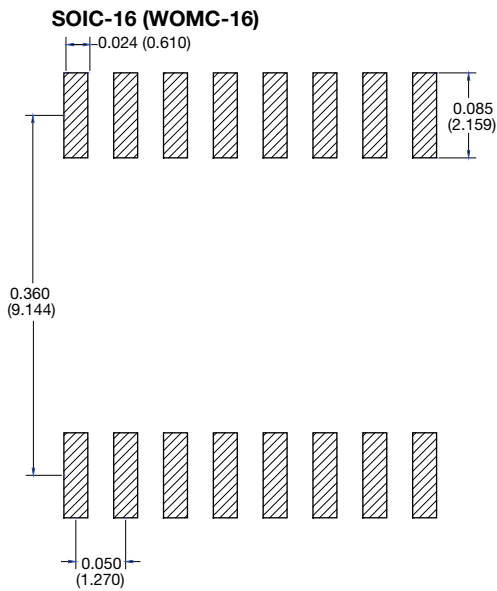




Surface Mount Networks SOIC Medium Body 220 mils (TOMC Series)



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

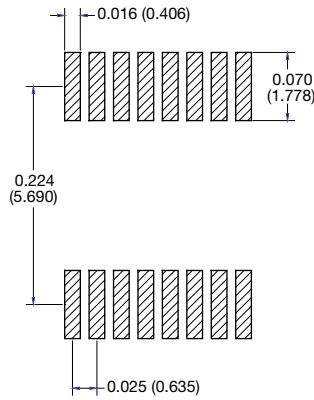




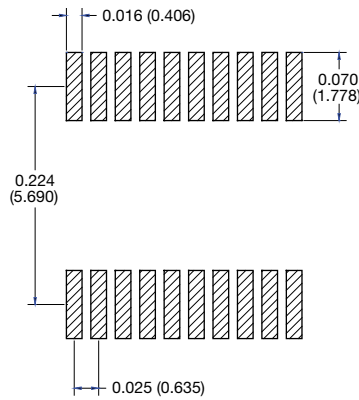
Surface Mount Networks High Density SSOP, TSOP (VSSR, VTSR Series)

SSOP MO-137

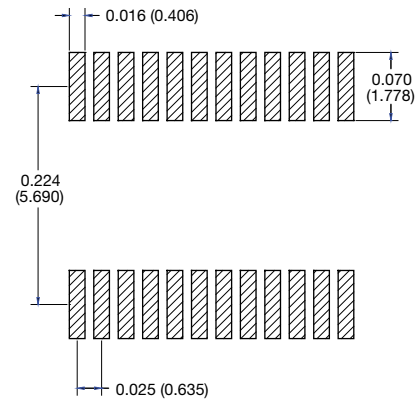
OSOP-16, VSSR-16



OSOP-20, VSSR-20

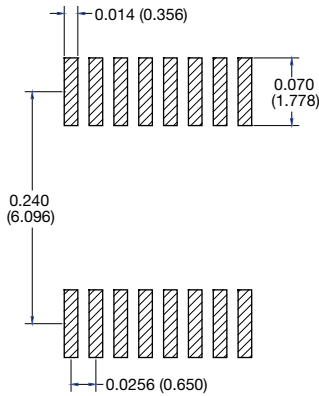


OSOP-24, VSSR-24, HD-CSO-24

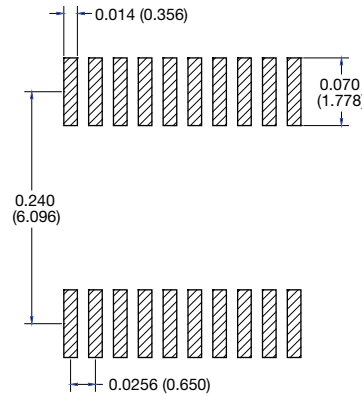


TSSOP MO-153

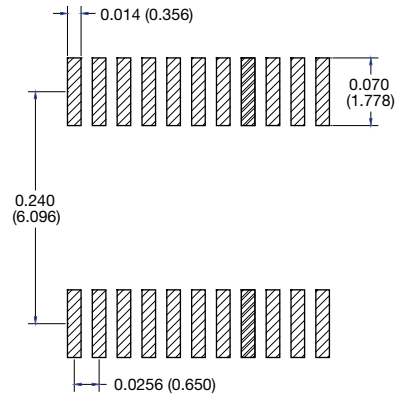
VTSR-16



VTSR-20

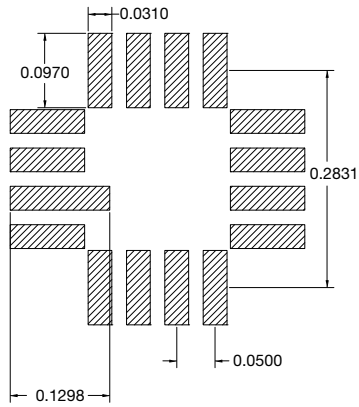


VTSR-24

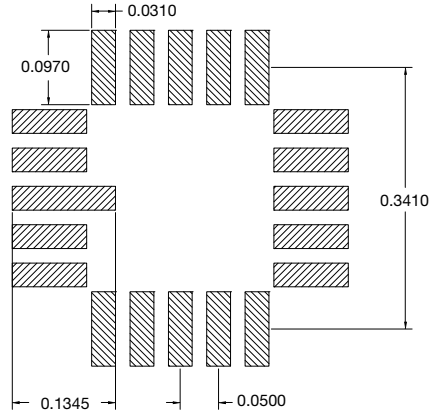


Surface Mount Leadless Networks (LCC Series)

16 Pin LCC

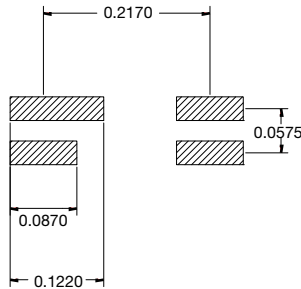


20 Pin LCC



Surface Mount Leadless Networks (MPH Series)

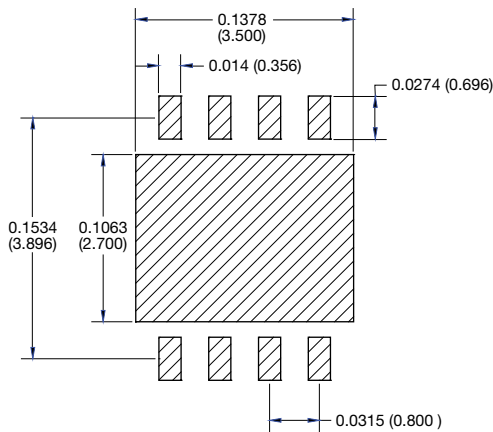
4 Pin LCC



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

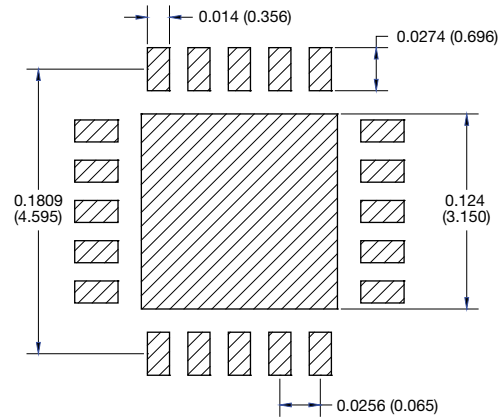
DFN MLP

DFN-8 4 x 5 mm Sq



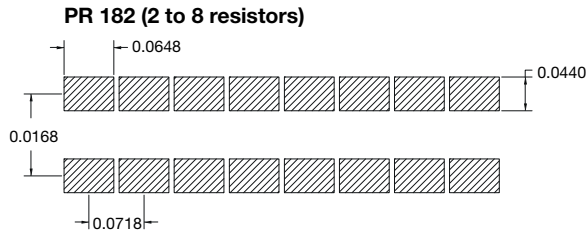
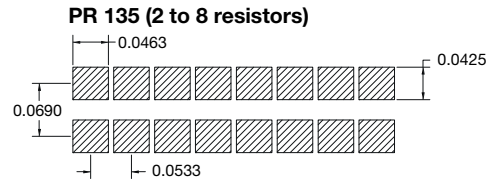
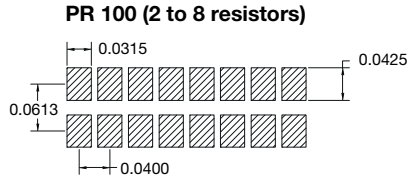
QFN MLP

QFN-20 5 x 5 mm Sq





Surface Mount Leadless Resistor Arrays (PR Series)

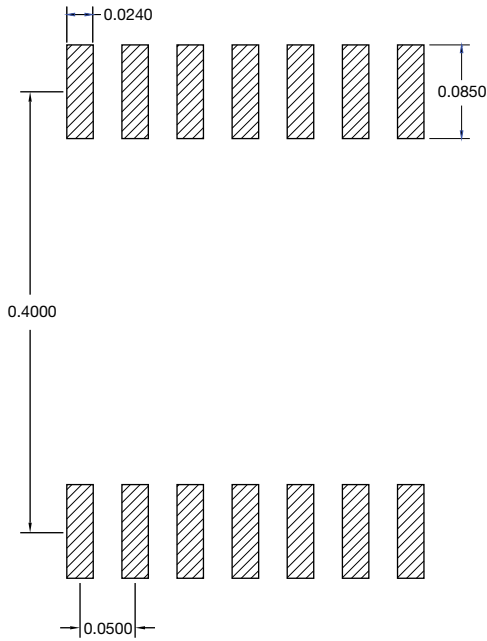


Note

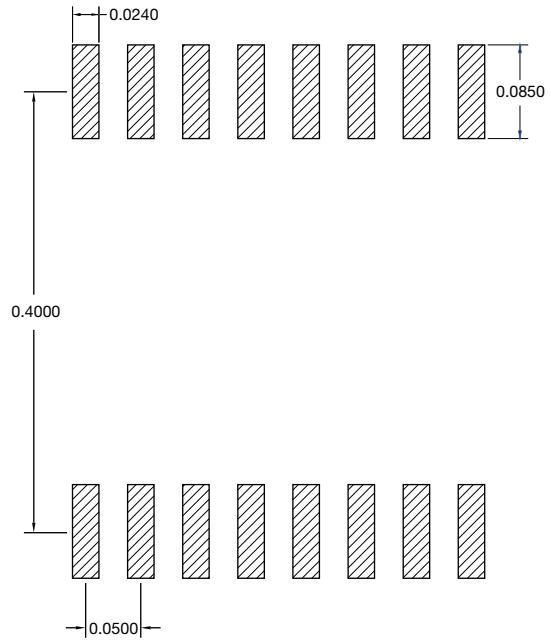
- All dimensions in inches (mm)

Flatpack

14 Pin Bottom Brazed Flatpack



16 Pin Bottom Brazed Flatpack





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[M8340108K3322FCD03](#) [M8340108K4991FGD03](#) [M8340108K6192FGD03](#) [M8340108K6202GGD03](#) [M8340109K2002FCD03](#)
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[ACAS06S0830339P100](#) [ACAS06S0830343P100](#) [ACAS06S0830344P100](#) [RM2012A-102/104-PBVW10](#) [RM2012A-102503-PBVW10](#)
[RM2012A-502104-PBVW10](#) [RM3216B-102302-PBVW10](#) [L091S102LF](#) [ACAS06S0830341P100](#) [ACAS06S0830342P100](#)
[ACAS06S0830345P100](#) [EXB-14V300JX](#) [EXB-U14220JX](#) [EXB-U14470JX](#) [EXB-U18330JX](#) [EXB-V4N100JV](#) [EXB-V8V220GV](#) [PRA100I2-](#)
[10KBWN](#) [PRA100I4-10KBWN](#) [CSC09A014K70JEK](#) [M8340102M4701JAD04](#) [M8340105K1002GGD03](#)