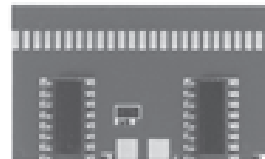


Multicomps, Custom Networks and Screened Substrates

MULTIPLE COMPONENT MODULES (MULTICOMPS)



CUSTOM NETWORKS AND SCREENED SUBSTRATES



APPLICATIONS

- Reduce Component Count
- Simplify Board Layout
- Reduce Cross Talk
- Filtering
- Enhance Motherboard Performance

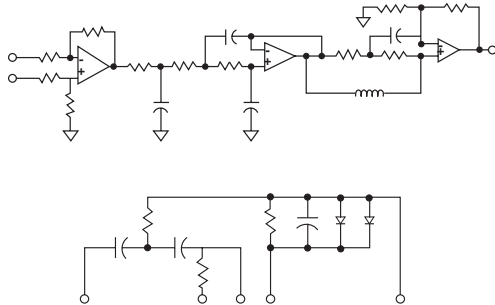
Vishay Dale has the extensive technical capability you need for your custom design requirements.

Since all custom products are unique and actual performance may vary, some examples are given on the next page. When you are ready to submit your custom design for us to review, please call or fax us; or contact your local Vishay Dale representative.

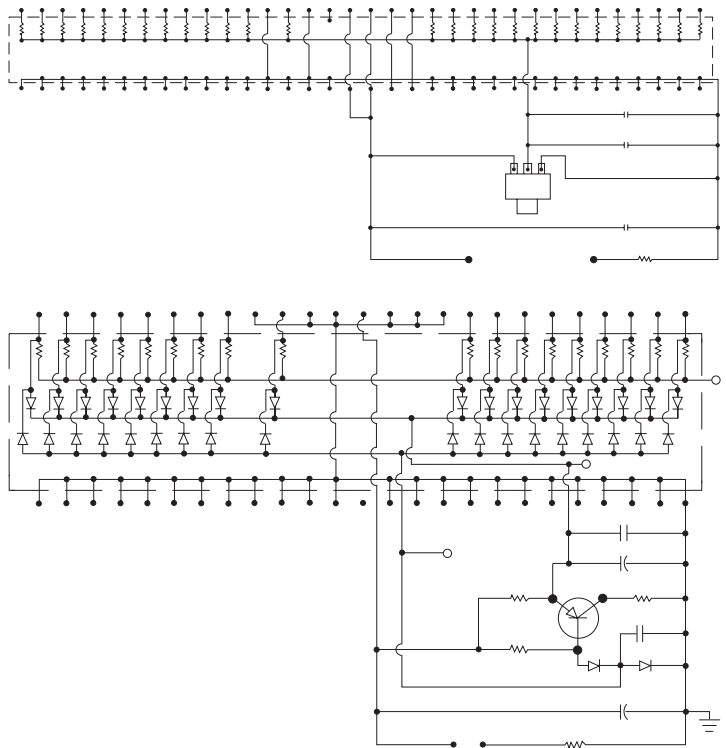


SCHEMATICS

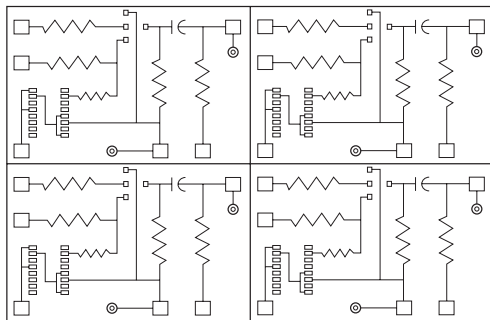
MULTIPLE COMPONENT MODULES (MULTICOMPS)



CUSTOM NETWORKS



SCREENED SUBSTRATES



FEATURES AND TYPICAL SPECIFICATIONS*

Thick Film Materials: Pd/Ag conductors, Ruthenium based cermet resistors, glass glazes, multi-layer dielectric systems, polymer protective coating.

Thick Film Printing Techniques: Multi-layer printing, through-hole metallization, crossovers, double-sided designs.

Substrate Material: 96 % alumina

Substrate Thickness: 0.025" [0.635 mm], 0.030" [0.762 mm], 0.045" [1.143 mm]. Thicker substrates for higher power applications available

SMT Devices: Inductors, diodes, thermistors, transistors, thin film resistors, integrated circuits

SMT Capacitors: Ceramic: X7R, COG

Capacitance = 10 pF to 0.1 μ F \pm 10 % tolerance

Tantalum: Capacitance = 0.1 μ F to 100 μ F \pm 10 % tolerance

Package Configurations:

SIP: 4 - 22 pins. Missing pins available. Maximum length, 2.2" [55.88 mm]. Maximum height, 1.0" [25.4 mm]. Lead length, 0.185" [4.699 mm] maximum

Lead Spacing: 0.100" [2.54 mm], SIP. 0.050" [1.27 mm], SMT

Encapsulation Method: Conformal resin. Screened silicon insulator

Note

* Consult factory for possible exceptions to listed specifications

ELECTRICAL SPECIFICATIONS - RESISTORS

Range: 10 Ω to 5 M Ω , standard. < 10 Ω , consult factory

Tolerance:

100 Ω to 1 M Ω : \pm 1 %, \pm 2 %

< 100 Ω : \pm 2 % or \pm 1 %

> 1 M Ω : \pm 5 %, standard. Specials: Consult factory

Ratios: \pm 0.5 %, \pm 1 %. Specials: Consult factory

Temperature Coefficient (absolute): \pm 200 ppm/ $^{\circ}$ C, standard. \pm 100 ppm/ $^{\circ}$ C, special

TCR Tracking: \pm 50 ppm/ $^{\circ}$ C (like values) and \pm 100 ppm/ $^{\circ}$ C (mixed values)

Operating Temperature: - 55 $^{\circ}$ C to + 125 $^{\circ}$ C, standard
- 55 $^{\circ}$ C to + 150 $^{\circ}$ C (consult factory)

ELECTRICAL SPECIFICATIONS - SCREENED CAPACITORS

Capacitance: 33 pF to 270 pF. Other values, consult factory

Tolerance: \pm 30 %, standard. \pm 20 %, consult factory

Temperature Coefficient: \pm 15 %, standard

Dielectric Breakdown Voltage: 2.5 x rated voltage at 5 s, standard

Rated Voltage: 25 volts maximum, standard

Operating Temperature: 0 $^{\circ}$ C to + 70 $^{\circ}$ C, standard