

Molded, SOT-23 Thin Film Surface Mount Resistor/Capacitor Network



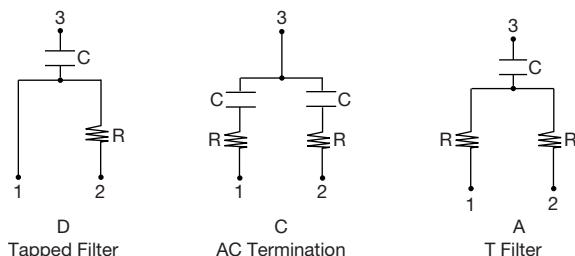
Vishay's R/C Network, packaged in the standard SOT-23, can be strategically placed on your PC board to do localized filtering. The R/C Network can be located at the point of emission before transients are carried through the design.

The sophisticated process of integrating the Resistor and Capacitor on a single substrate provides you with higher performance and more consistent results over discrete components. A real estate savings will also be gained.

Applications include EMI/RFI suppression and AC termination. These networks, in the SOT-23, along with Vishay's high component count R Networks and R/C Networks in a variety of standard IC packages, provides you with the exact solution for your redesign or new design.

Visit our website for the total picture on available R Networks and R/C Networks from our guaranteed stock program.

SCHEMATIC



FEATURES

- Resistor and capacitor **integrated** into a Thin Film network
- Filters at the source of emissions
- More consistent performance characteristics than discretes
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE

TYPICAL PERFORMANCE

	TCR	TOLERANCE
RESISTOR	200	10
	TCC	TOLERANCE
CAPACITOR	200	20

VR TOOLED VALUES (1)

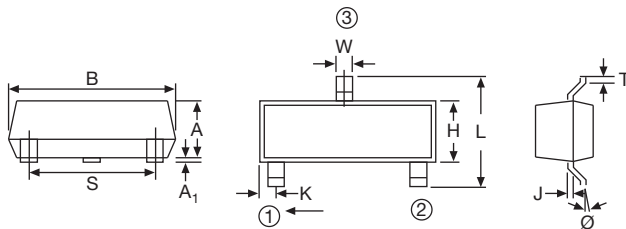
SCHEMATIC	R (Ω)	C (pF)
D	33	47
C	47	47
A	100	80

Note

- Consult application engineering for custom values

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Tantalum nitride	-
Pin/Lead Number	3	-
Resistance Range	10 Ω to 500 Ω	-
TCR: Absolute	± 200 ppm/ $^{\circ}$ C	0 $^{\circ}$ C to + 70 $^{\circ}$ C
TCR: Tracking	-	-
Tolerance: Absolute	± 10 % standard (R), ± 20 % standard (C)	At 1 MHz and V_{RMS} over + 10 $^{\circ}$ C to + 70 $^{\circ}$ C
Power Rating: Resistor	100 mW	-
Power Rating: Package	1 W	at + 70 $^{\circ}$ C
Stability: Ratio	-	-
Operating Temperature Range	0 $^{\circ}$ C to + 70 $^{\circ}$ C	-
Storage Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C	-
Capacitance Range	10 pF to 80 pF	-
ESD Protection	-	-
Breakdown Voltage	25 V to 45 V	-

DIMENSIONS in inches and millimeters


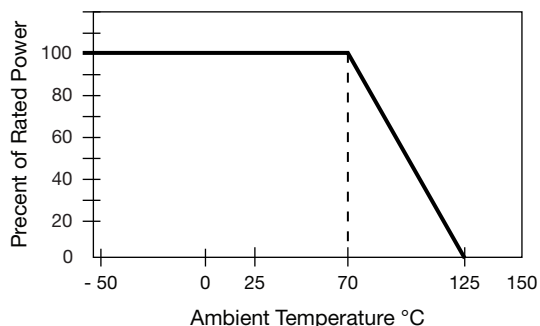
DIMENSION	JEDEC STANDARD TO-236			
	INCHES		MILLIMETERS	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
A	0.027	0.040	0.70	1.02
A ₁	0.001	0.004	0.02	0.15
B	0.105	0.120	2.67	3.04
S	0.071	0.079	1.80	2.00
W	0.015	0.021	0.38	0.54
L	0.083	1.03	2.10	2.64
H	0.047	0.055	1.20	1.40
T	0.050	0.157	0.13	0.40
J	0.003	0.008	0.089	0.15
K	0.017	0.022	0.44	0.55
Ø	0	8°	0	8°

IMPRINTING

	SCHEMATIC
VRA	AA
VRC	AC
VRD	AD

MECHANICAL SPECIFICATIONS

Resistive Element	Tantalum nitride
Capacitive Material	Thin film
Substrate Material	Silicon
Body	Molded epoxy
Terminals	Copper alloy
Plating	100 % matte Sn
Lead Coplanarity	0.0005"
Marking Resistance to Solvents	Permanency testing per MIL-STD-202, method 215

DERATING CURVE

PACKAGING INFORMATION

MODEL	LEADS	TAPE AND REEL
VR	3	3000



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: VRD330K470MTF

V R D 3 3 0 K 4 7 0 M T F

GLOBAL MODEL

VR

SCHEMATICS

D = Tapped filter
C = AC termination
A = T filter

RESISTANCE AND TOLERANCE/
CAPACITANCE AND TOLERANCE

xxxK/yyyM

First 2 digits are significant figures. Last digit specifies number of zeros to follow
e.g.
330K/470M = 330 W 10 % 47 pF 20 %
K = 10 %
M = 20 %

PACKAGING

UF = TUBED

TAPE AND REEL
TF = Full reels

Historical Part Number example: VRD330K479MT/R (for reference purposes only)

VR

D

330K

470M

T/R

MODEL

SCHEMATIC

RESISTANCE

TOLERANCE

PACKAGING



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