

Molded, SOT-23 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.

FEATURES

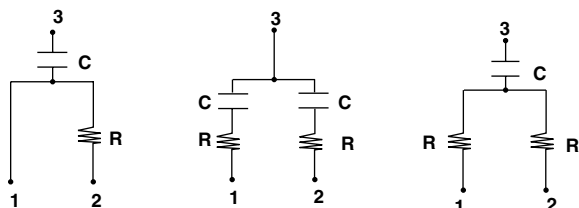
- Lead (Pb)-free standard
- Resistor and capacitor **integrated** into a Thin Film Network
- Filters at the source of emissions
- More consistent performance characteristics than discretes


RoHS
COMPLIANT

TYPICAL PERFORMANCE

	TCR	TOLERANCE
RESISTOR	200	10 %
	TCC	TOLERANCE
CAPACITOR	200	20 %

SCHEMATIC



D
Tapped Filter

C
AC Termination

A
T Filter

VR TOOLED VALUES ⁽¹⁾

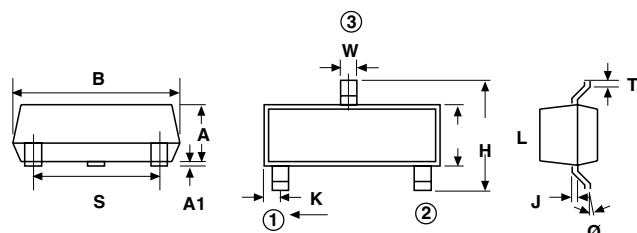
SCHEMATIC	R (Ω)	C (pF)
D	33	47
C	47	47
A	100	80

Note

⁽¹⁾ Consult Application Engineering for Custom Values

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Resistance Range	10 Ω to 500 Ω	
TCR:	Absolute ± 200 ppm/ $^{\circ}$ C	0 $^{\circ}$ C to + 70 $^{\circ}$ C
Tolerance:	Absolute ± 10 % Standard (R)	
	Absolute ± 20 % Standard (C)	at 1 MHz and V_{RMS} over + 10 $^{\circ}$ C to + 70 $^{\circ}$ C
Power Rating:	Package 1 W at + 70 $^{\circ}$ C	
Power Rating/Resistor	100 mW	
Capacitance Range (pF)	10 - 80	
Breakdown Voltage	25 - 45 V	
Operating Temperature Range	0 to + 70 $^{\circ}$ C	
Storage Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C	

DIMENSIONS AND IMPRINTING in inches and millimeters

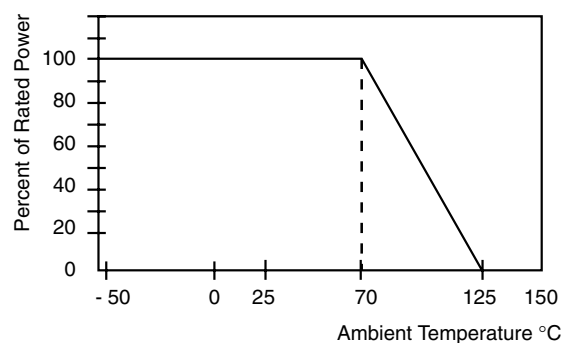
JEDEC STANDARD TO-236				
DIMENSION	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	0.027	0.040	0.70	1.02
A1	0.001	0.004	0.02	0.15
B	0.105	0.120	2.67	3.04
S	0.071	0.079	1.80	2.00
W	0.015	0.021	0.38	0.54
L	0.083	1.03	2.10	2.64
H	0.047	0.055	1.20	1.40
T	0.050	0.157	0.13	0.40
J	0.003	0.008	0.089	0.15
K	0.017	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 Element	Thin Film
Substrate Material	Silicon
Body	Molded Epoxy
Terminals	Copper Alloy
Plating	100 % Sn Matte
Lead Coplanarity	0.0005 Inches
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 (preferred part number format)

V	R	D	3	3	0	K	4	7	0	M	T	F
GLOBAL MODEL		SCHEMATICS		RESISTANCE AND TOLERANCE/ CAPACITANCE AND TOLERANCE						PACKAGING		
VR (Lead (Pb)-free) (e1)		D = Tapped Filter C = AC Termination A = T Filter		xxxK/yyyM First 2 digits are significant figures. Last digit specifies number of zeroes to follow e.g. 330K/470M = 330 W, 10 % 47 pF 20 % K = 10 % M = 20 %						UF = TUBED TAPE AND REEL TF = Full Reels		
Historical Part Number example: VRD330K479MT/R (will continue to be accepted)												
VR		D		330K		470M		T/R				
MODEL		SCHEMATIC		RESISTANCE		TOLERANCE		PACKAGING				



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