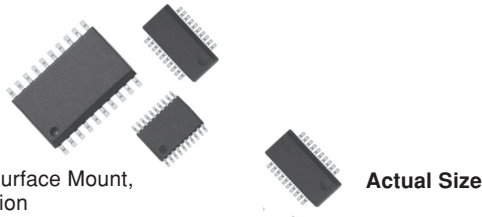


## 25 or 50 Mil Pitch, T-Filter Resistor/Capacitor Networks



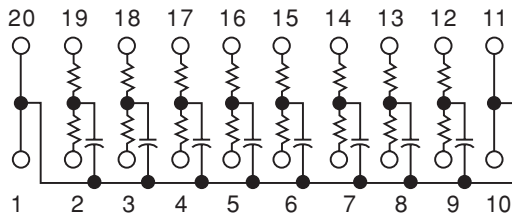
Small Outline, Surface Mount,  
EMI/RFI Reduction

Actual Size

Vishay Thin Film's T filter network is an integrated thin film network on a single die. Noise suppression is at a maximum with the use of thin film technology. The T filter network, schematic AA is designed to suppress EMI/RFI noise with such applications as I/O ports of personal computers and peripherals, workstations and Local Area Networks. With a rugged molded case to protect the circuit from the environment and an integrated thin film network this product is your choice when reduced size, improved accuracy and surface mount capability are your goals.

Available packages SOIC, SSOP and TSSOP.

### SCHEMATIC AA



### FEATURES

- Resistors and capacitors on a single chip
- Saves board space
- Reduces total assembly costs
- Uniform performance characteristics
- Compatible with automatic surface mounting equipment
- UL 94V-0 flame resistant
- Rugged, molded case construction

### TYPICAL PERFORMANCE

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

VSORC	MODELS		STANDARD VALUES	
	VSSRC	VTSRC	R (Ohms)	C (pF)
X			10	47
	X	X	10	100
	X	X	15	47
X			25	50
	X	X	25	150
X	X	X	25	200
X	X	X	47	33
	X	X	50	100
X			100	33
X			100	390

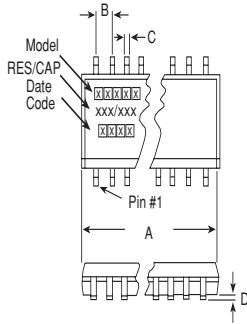
### STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
<b>MATERIAL</b>	<b>TANTALUM NITRIDE ON SILICON</b>	
<b>Resistance Range</b>	10 ohms to 750 ohm	
<b>TCR:</b>	<b>Tracking</b>	± 10ppm/°C
	<b>Absolute</b>	± 200ppm/°C
<b>Tolerance:</b>	<b>Absolute</b>	± 10% standard (R)
	<b>Absolute</b>	± 20% standard (C)
<b>Power Rating:</b>	<b>Package</b>	1W - (T)SSOP 1.2W - SOIC See Derating Curve
<b>Capacitance Range</b>	10pF to 150pF - (T)SSOP/10pF to 250pF - SOIC	
<b>Stability (Δ R Ratio)</b>	± 2%	1000 hrs.
<b>ESD Protection</b>	> 2kV	MIL-STD-883, Method 3015
<b>Breakdown Voltage</b>	35 - 50V	
<b>Operating Temperature Range</b>	0 to + 70°C	
<b>Storage Temperature Range</b>	- 55°C to + 125°C	
<b>Power Rating/Resistor</b>	100mW	

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 • ITALY + 39.2.300.11919 FAX: +39.2.300.11999 • JAPAN +81.42.729.0661 FAX: +81.42.729.3400 • SINGAPORE +65.788.6668 FAX: +65.788.0988  
 • SWEDEN +46.8.594.70590 FAX: +46.8.594.70581 • UK +44 191 514 8237 FAX: +44 1953 457 722 • USA: (610) 407-4800 FAX: (610) 640-9081

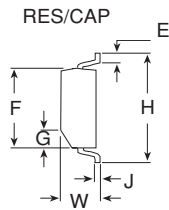


## DIMENSIONS AND IMPRINTING in inches and millimeters



MODEL	VTSRC20-AA		VSSRC20-AA		VSORC20-AA	
	INCHES	MILLIMETERS	INCHES	MILLIMETERS	INCHES	MILLIMETERS
A	0.256 ± 0.003	6.5 ± 0.08	0.351 Max.	8.91 Max.	0.500 ± 0.010	12.7 ± 0.25
B (Ref.)	0.025	0.65	0.025	0.64	0.050	1.27
C (Ref.)	0.0087	0.22	0.010	0.25	0.016	0.41
D	0.004	0.10	0.006	0.15	0.008	0.20
E (Typ.)	0.024	0.61	0.025	0.64	0.030	0.76
F	0.173 ± 0.003	4.39 ± 0.08	0.154 ± 0.003	3.9	0.293 ± 0.003	7.44
G	0.015 x 45°	0.38	0.015 x 45°	0.38	0.025 x 45°	0.64
H	0.252 ± 0.005	6.4 ± 0.13	0.236 ± 0.008	6.0 ± 0.20	0.406 ± 0.005	10.31
J (Ref.)	0.005	0.13	0.010	0.25	0.010	0.25
W	0.043 ± 0.005	1.09 ± 0.13	0.064 ± 0.005	1.6	0.100 ± 0.005	2.59

**NOTE:** Mold flash not included in body dimensions.

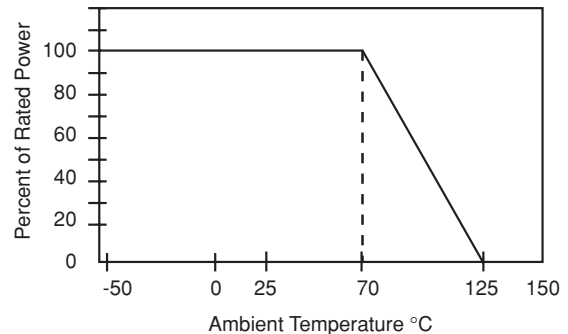


## IMPRINTING

VSORC, VSSRC, VTSRC	20	AA	XXX / XXX
MODEL	PIN COUNT	SCHEMATIC	RESISTANCE / CAPACITANCE Code: e.g. 100 = 10 ohm    Code: e.g. 101 = 100pF
		XXXX	
		Date Code	*Optional marking

MECHANICAL SPECIFICATIONS	
Resistive Element	Tantalum Nitride
Substrate Material	Silicon
Body	Molded Epoxy
Terminals	Copper Alloy
Plating	Tin Lead
Lead Coplanarity	0.0005 Inches
Marking Resistance to Solvents	Permanency testing per MIL-STD-202, Method 215

## DERATING CURVE



PACKING			
MODEL	LEADS	TAPE AND REEL	TUBES
VTSRC (TSSOP)	20	2,500	74
VSSRC (SSOP)	20	2,500	55
VSORC (SOIC)	20	1,000	38

## How to Order

MODEL	Number of Leads	Schematic	Resistance Value (Code Ω) / Capacitor Tolerance (Code pF)	Packaging
VTSRC	20	AA	xxxK / xxxM	Tape & Reel or Tubes
VSSRC	20	AA		
VSORC	20	AA		

First 2 digits are significant figures. Last digit specifies number of zeros to follow.

K = 10%  
M = 20%