

VTSRC, VSSRC, VSORC-AC



Vishay Thin Film

25 or 50 Mil Pitch, Termination Resistor/Capacitor Networks

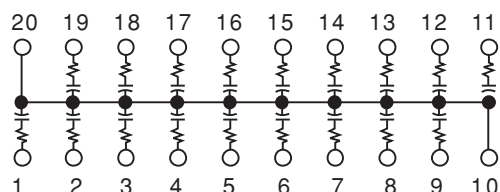


Small Outline, Surface Mount, EMI/RFI Reduction, Terminator Networks

Vishay Thin Film's termination RC network' Schematic AC, can support 18 data lines reducing overall cost. Impedance matching of transmission lines is easily done using VTF thin film integrated RC networks. Our product is designed with all components integrated within a single die. It is then packaged in JEDEC standard plastic packages. The use of surface mount technology offers improved design capability through reduced parasitic inductance and capacitance.

Available packages SOIC, SSOP and TSSOP.

SCHEMATIC AC



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	250
	X	X	27	47
	X	X	30	100
	X	X	33	47
	X	X	47	33
	X	X	47	47
X	X	X	50	10
X	X	X	50	20
X	X	X	50	50
X	X	X	50	100
	X	X	50	200
	X	X	50	240
	X	X	50	250
X	X	X	75	20
	X	X	75	50
	X	X	75	56
X	X	X	75	75
	X	X	100	33
	X	X	100	100
	X	X	470	33

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
MATERIAL	TANTALUM NITRIDE ON SILICON	
Resistance Range	10ohms to 750ohm	
TCR:	Tracking	$\pm 10\text{ppm}/^\circ\text{C}$
	Absolute	$\pm 200\text{ppm}/^\circ\text{C}$
Tolerance:	Absolute	$\pm 10\%$ standard (R)
	Absolute	$\pm 20\%$ standard (C)
Power Rating:	Package	1 W - (T)SSOP. 1.2 W - SOIC
Capacitance Range	10pF to 150pF - (T)SSOP/10pF to 250pF - SOIC	
Stability (ΔR Ratio)	$\pm 2\%$	
ESD Protection	$>2\text{kV}$	
Breakdown Voltage	35 - 50V	
Operating Temperature Range	0 to $+70^\circ\text{C}$	
Storage Temperature Range	-55°C to $+125^\circ\text{C}$	
Power Rating / Resistor	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
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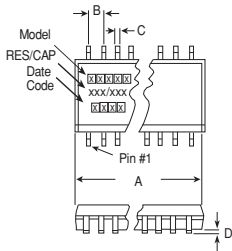


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25 or 50 Mil Pitch, Termination R/C Networks

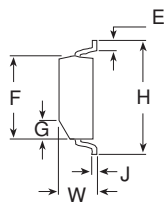
Vishay Thin Film

DIMENSIONS in inches and millimeters



MODEL	VTSRC20-AC		VSSRC20-AC		VSORC20-AC	
	INCHES	MILLIMETERS	INCHES	MILLIMETERS	INCHES	MILLIMETERS
A	0.256 ± 0.003	6.5 ± 0.08	0.351 Max.	8.92 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 ± .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.

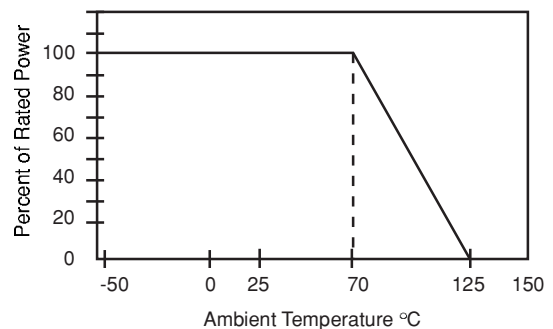


IMPRINTING

VSORC, VSSRC, VTSRC	20	AC	XXX / XXX
MODEL	PIN COUNT	SCHEMATIC	RESISTANCE / CAPACITANCE Code: e.g. 100 = 10 ohm 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	.0005 Inches
Marking Resistance to Solvents	Permanency testing per MIL-STD-202, Method 215

DERATING CURVE



PACKING INFORMATION			
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	AC	xxxK / xxxM	Tape & Reel or Tubes
VSSRC	20	AC		
VSORC	20	AC		

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

K = 10%
M = 20%

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