



25 or 50 Mil Pitch, Termination Resistor/Capacitor Networks

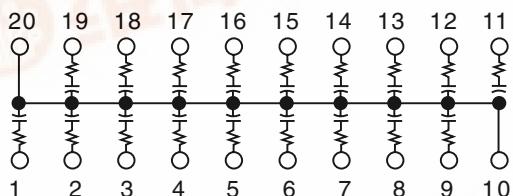


Actual Size

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

- Lead (Pb)-free standard
- 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



RoHS
COMPLIANT

TYPICAL PERFORMANCE

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

VSORC	MODELS		STANDARD VALUES	
	VSSRC	VTSRC	R (Ω)	C (pF)
X			50	220
	X		50	250
	X		75	56
X			100	100

STANDARD ELECTRICAL SPECIFICATIONS

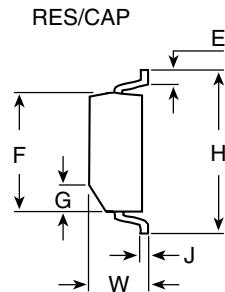
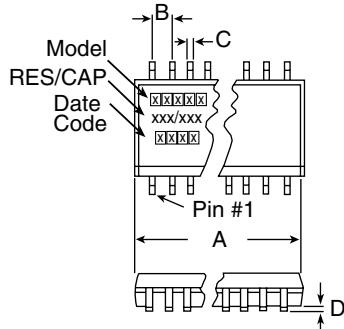
TEST	SPECIFICATIONS		CONDITIONS
Material	Tantalum Nitride on Silicon		
Resistance Range	10 Ω to 750 Ω		
TCR: Tracking	± 10 ppm/ $^{\circ}$ C		
	± 200 ppm/ $^{\circ}$ C		0 $^{\circ}$ C to + 70 $^{\circ}$ C
Tolerance: Absolute	± 10 % Standard (R)		
	± 20 % Standard (C)		at 1 MHz and V _{RMS} over + 10 $^{\circ}$ C to + 70 $^{\circ}$ C
Power Rating: Package	1 W - (T)SSOP. 1.2 W - SOIC		See Derating Curve
Capacitance Range	10 pF to 150 pF - TSSOP/10 pF to 250 pF - SOIC and SSOP		
Stability: ΔR Ratio	± 2 %		1000 h
ESD Protection	> 2 kV		MIL-STD-883, Method 3015
Breakdown Voltage	35 - 50 V		
Operating Temperature Range	0 $^{\circ}$ C to + 70 $^{\circ}$ C		
Storage Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C		
Power Rating/Resistor	100 mW		

VTSRC, VSSRC, VSORC-AC

Vishay Thin Film 25 or 50 Mil Pitch, Termination Resistor/Capacitor Networks



DIMENSIONS AND IMPRINTING 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	0.344 Max.	8.74 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 × 45°	0.38	0.015 × 45°	0.38	0.025 × 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

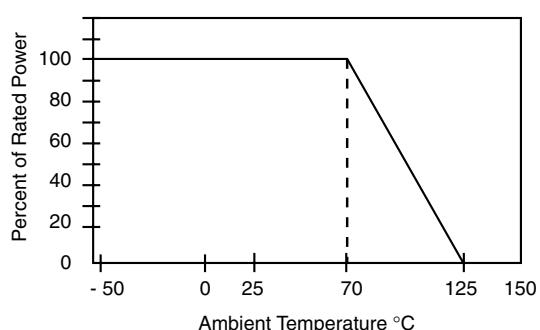
IMPRINTING

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

MECHANICAL SPECIFICATIONS

Resistive Element	Tantalum Nitride
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



PACKING INFORMATION

MODEL	LEADS	TAPE AND REEL	TUBES
VTSRC (TSSOP)	20	2500	74
VSSRC (SSOP)	20	2500	55
VSORC (SOIC)	20	1000	38



VTSRC, VSSRC, VSORC-AC

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GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: VSSRC20AC330470TF (preferred part number format)

V	S	S	R	C	2	0	A	C	3	3	0	4	7	0	T	F
GLOBAL MODEL				NUMBER OF LEADS/SCHEMATICS				RESISTANCE AND TOLERANCE/CAPACITANCE AND TOLERANCE				PACKAGING				
VSSRC VTSRC VSORC (Lead (Pb)-free) (e1)				20AC				xxxxyy				UF = TUBED TAPE AND REEL TF = Full Reels				

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

K = 10 % Capacitor Tol. fixed
M = 20 % Resistance Tol. fixed

Historical Part Number example: VSSRC20AC330K470MT/R (will continue to be accepted)

VSSRC	20	AC	330K	470M	T/R
MODEL	NUMBER OF LEADS	SCHEMATIC	RESISTANCE	TOLERANCE	PACKAGING



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Vishay

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