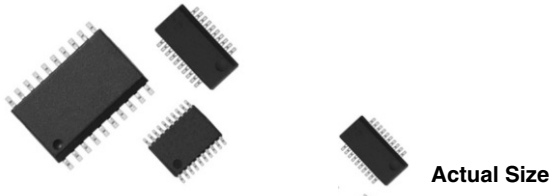




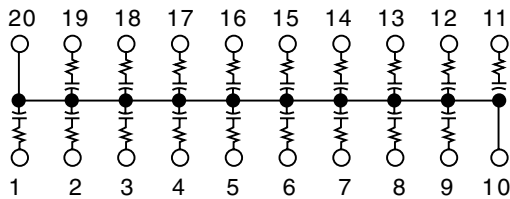
## 25 or 50 Mil Pitch, Termination Resistor/Capacitor Networks



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

- 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 %

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

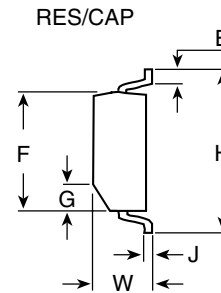
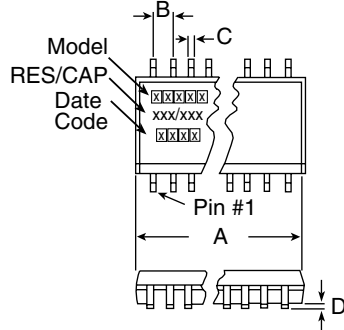
STANDARD ELECTRICAL SPECIFICATIONS			
TEST		SPECIFICATIONS	CONDITIONS
Material		Tantalum Nitride on Silicon	
Resistance Range		10 $\Omega$ to 750 $\Omega$	
TCR:	Tracking	$\pm 10$ ppm/ $^{\circ}$ C	
	Absolute	$\pm 200$ ppm/ $^{\circ}$ C	0 $^{\circ}$ C to + 70 $^{\circ}$ C
Tolerance:	Absolute	$\pm 10$ % Standard (R)	
	Absolute	$\pm 20$ % 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:	$\Delta R$ Ratio	$\pm 2$ %	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

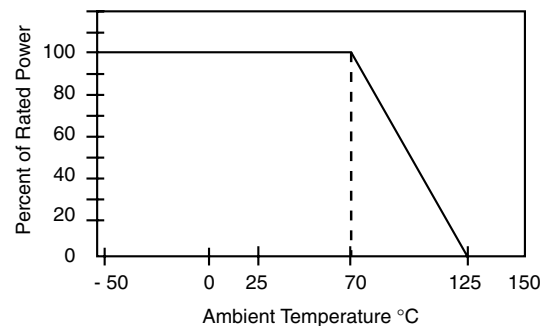
## IMPRINTING

VSORC, VSSRC, VTSRC	20	AC	XXX / XXX	
MODEL	PIN COUNT	SCHEMATIC	RESISTANCE Code: e.g. 100 = 10 Ω	CAPACITANCE Code: e.g. 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

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

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							
<b>VSSRC</b> <b>VTSRC</b> <b>VSORC</b> (Lead (Pb)-free) (e1)			<b>20AC</b>		<b>xxxyyy</b> First 2 digits are significant figures. Last digit specifies number of zeroes to follow. K = 10 % Capacitor Tol. fixed M = 20 % Resistance Tol. fixed				<b>UF = TUBED</b> TAPE AND REEL <b>TF = Full Reels</b>							
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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