

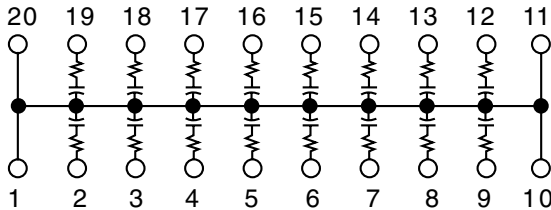
25 or 50 Mil Pitch, Termination Resistor/Capacitor Networks



Small Outline, Surface Mount, EMI/RFI Reduction

If your design calls for the elimination of transmission line effects on high speed data lines Vishay Thin Film's integrated RC network, schematic AB is the answer. The planar design of our single die thin film networks offer low noise and predictable component behavior over a wide frequency range. Care must be taken when choosing matching networks that their frequency response matches that of the transmission line. Our product will reduce total assembly costs through surface mount technology, reduced component count and improved performance characteristics. Available packages SOIC, SSOP and TSSOP.

SCHEMATIC AB



FEATURES

- Lead (Pb)-free available
- 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		47	33

RC NETWORKS

STANDARD ELECTRICAL SPECIFICATIONS			
TEST		SPECIFICATIONS	CONDITION
MATERIAL		TANTALUM NITRIDE ON SILICON	
Resistance Range		10 Ohms to 750 Ohms	
TCR:	Tracking	± 10 ppm/°C	
	Absolute	± 200 ppm/°C	0 °C to + 70 °C
Tolerance:	Absolute	± 10 % Standard (R)	
	Absolute	± 20 % Standard (C)	at 1 MHz & V _{RMS} over + 10 °C to + 70 °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 hrs. at + 70 °C
ESD Protection		> 2 kV	MIL-STD-883, Method 3015
Breakdown Voltage		35 - 50 V	
Operating Temperature Range		0 °C to + 70 °C	
Storage Temperature Range		- 55 °C to + 125 °C	
Power Rating/Resistor		100 mW	

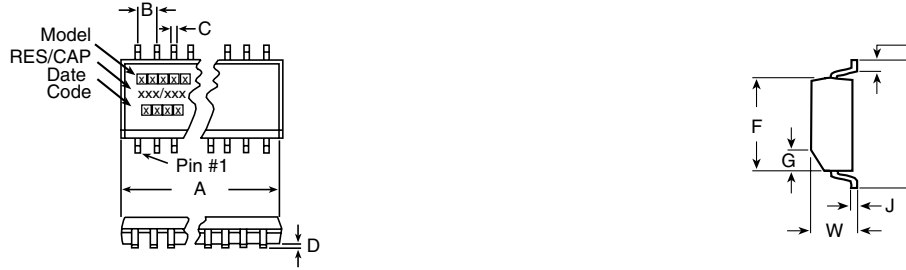
* Pb containing terminations are not RoHS compliant, exemptions may apply



VTSRC, VSSRC, VSORC-AB

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

DIMENSIONS AND IMPRINTING in inches and millimeters



MODEL	VTSRC20-AB		VSSRC20-AB		VSORC20-AB	
	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

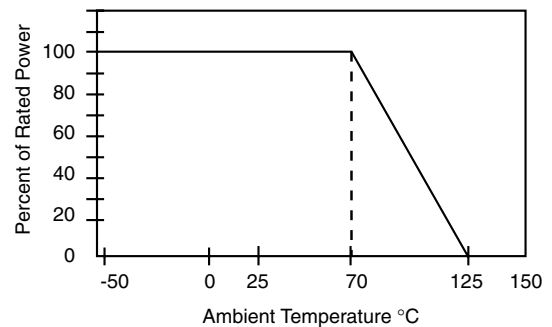
IMPRINTING

VSORC, VSSRC, VTSRC	20	AB	XXX / XXX
MODEL	PIN COUNT	SCHEMATIC	RESISTANCE Code: e.g. / 100 = 10 ohm
		XXXX Date Code	CAPACITANCE Code: e.g. 101 = 100 pF
			* 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
Lead (Pb)-free Option	100 % Sn Matte
Lead (Pb)-free Finish	Plated

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

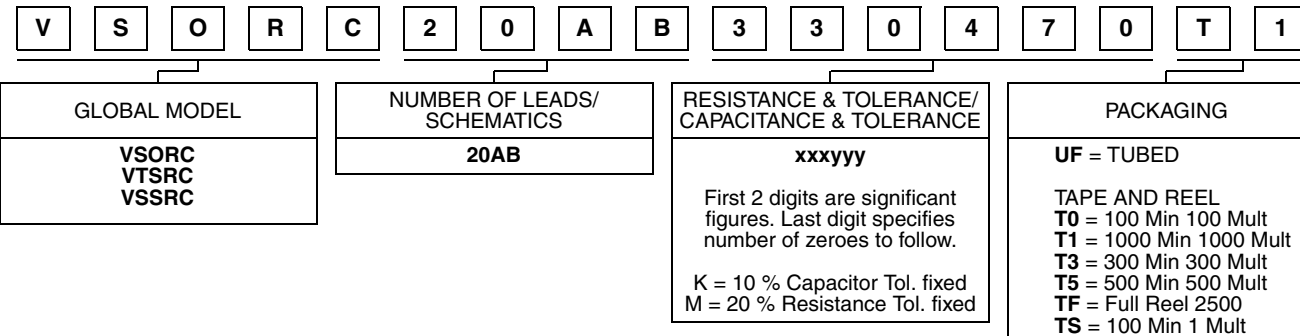
VTSRC, VSSRC, VSORC-AB

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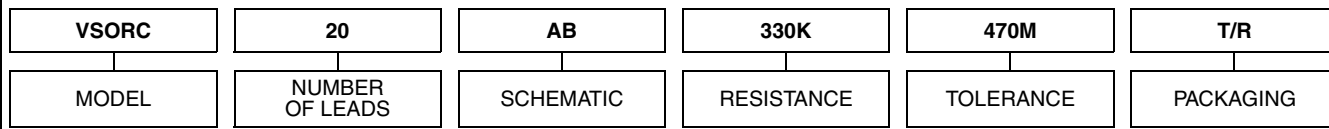


GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: VSORC20AB330470T1 (preferred part number format)



Historical Part Number example: VSORC20AB330K470MT/R (will continue to be accepted)





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