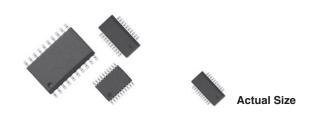


Vishay Dale Thin Film

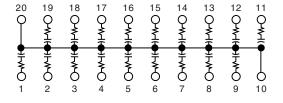
25 mil or 50 mil Pitch, Termination Thin Film Surface Mount Resistor/Capacitor Network



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 94 V-0 flame resistant
- Rugged, molded case construction
- Compliant to RoHS Directive 2002/95/EC

TYPICAL PERFORMANCE

	TCR	TOLERANCE
RESISTOR	200	10
	TCC	TOLERANCE
CAPACITOR	200	20

STANDARD VALUES					
MODELS		R (Ω)	C (pF)		
VSORC	VSSRC	VTSRC	11 (52)	O (pi)	
X			50	220	
	Х		50	250	
	Х		75	56	
Х			100	100	

STANDARD ELECTRICAL SPECIFICATIONS				
TEST	SPECIFICATIONS	CONDITIONS		
Material	Tantalum nitride on silicon	-		
Pin/Lead Number	20	-		
Resistance Range	10 Ω to 750 Ω	-		
TCR: Absolute	± 200 ppm/°C	0 °C to + 70 °C		
TCR: Tracking	± 10 ppm/°C	-		
Tolerance: Absolute	± 10 % standard (R), ± 20 % standard (C)	At 1 MHz and V _{RMS} over + 10 °C to + 70 °C		
Power Rating: Resistor	100 mW	-		
Power Rating: Package	(T)SSOP: 1 W, SOIC: 1.2 W	See derating curve		
Stability: Ratio	± 2 %	1000 h		
Operating Temperature Range	0 °C to + 70 °C	-		
Storage Temperature Range	- 55 °C to + 125 °C	-		
Capacitance Range	TSSOP: 10 pF to 150 pF, SOIC/SSOP: 10 pF to 250 pF	-		
ESD Protection	> 2 kV	MIL-STD-883, method 3015		
Breakdown Voltage	35 V to 50 V	-		

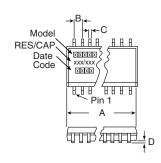
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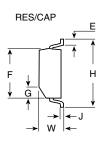


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DIMENSIONS in inches and millimeters

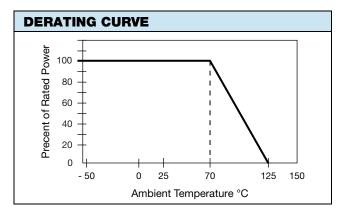




DIMENSION	JEDEC M0-153AC, VTSRC20-AC		JEDEC M0-137AD, VSSRC20-AC		JEDEC MS-013AC, VSORC20-AC	
DIMENSION	INCHES	MILLIMETERS	INCHES	MILLIMETERS	INCHES	MILLIMETERS
Α	0.256 ± 0.003	6.5 ± 0.08	0.344 max.	8.74 max.	0.500 ± 0.010	12.7 ± 0.25
B (ref.)	0.025	0.65	0.025	0.64	0.050	1.27
C (ref.)	0.0087	0.22	0.010	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 x 45°	0.38	0.015 x 45°	0.38	0.025 x 45°	0.64
Н	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. $100 = 10 \Omega$	/	CAPACITANCE Code: e.g. 101 = 100 pF
		XXXX			
		Date code	Opti	onal ma	arking

MECHANICAL SPECIFICATIONS			
Resistive Element	Tantalum nitride		
Substrate Material	Silicon		
Body	Molded epoxy		
Terminals	Copper alloy		
Plating	100 % matte Sn		
Lead Coplanarity	0.0005"		
Marking Resistance to Solvents	Permanency testing per MIL-STD-202, method 215		



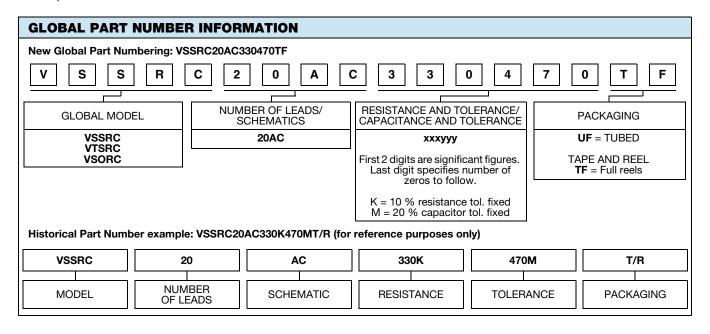
PACKING INFORMATION				
MODEL	LEADS	TAPE AND REEL	TUBES	
JEDEC M0-153AC, VTSRC (TSSOP)	20	2500	74	
JEDEC M0-137AD, VSSRC (SSOP)	20	2500	55	
JEDEC MS-013AC, VSORC (SOIC)	20	1000	38	

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VTSRC20-AC, VSSRC20-AC, VSORC20-AC

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