TaNCap™ IEEE 1284 Integrated Filter Network

TT electronics

Welwyn Components

QRC1284x2™ Series

- **Single chip parallel port solution**
- **Small 28-pin QSOP package**
- **Built-in ESD protection into 17 lines**
- **Highly integrated - Replaces 43 discretes**
- **Proven TaNCap™ Thin film technology**
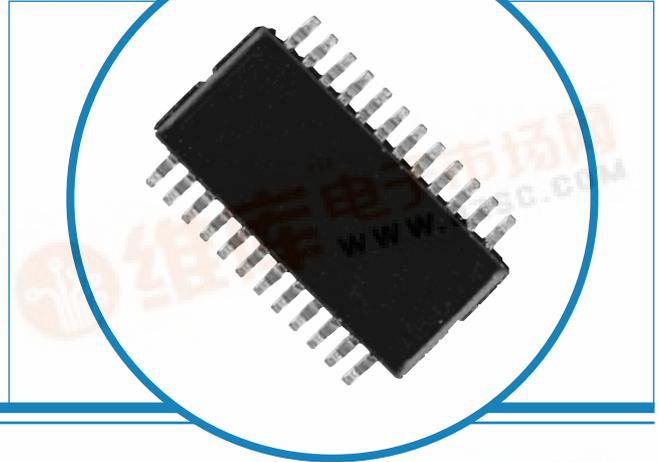
Electrical Data

|		Resistors	Capacitors
Tolerance	%	±10	±20
TCR	ppm/°C	±100	N/A
Operating temperature range	°C	-40 to +85	-40 to +85
Maximum power dissipation	watts	0.1 per resistor	N/A
Operating voltage	volts	±6 volts	

The TaNCap™ QRC1284x2 is a single package solution designed for the IEEE1284 enhanced parallel port interface and other digital interface applications. This highly integrated TaNCap™ thin film technology network offers four different functions in a single 28-pin QSOP package.

R1 is a pull-up resistor for, R2 is a series termination resistor and C is a low pass filter capacitor. ESD protection is provided for each termination line.

The 28-pin in QSOP package offers a high level of integration in a single surface mount device. 43 discrete passive components are replaced by one IEEE 1284x2 filter network.

The TaNCap series of resistor-capacitor networks are manufactured using military and space proven tantalum nitride thin film technology. For high reliability combined with superior performance.

Schematic
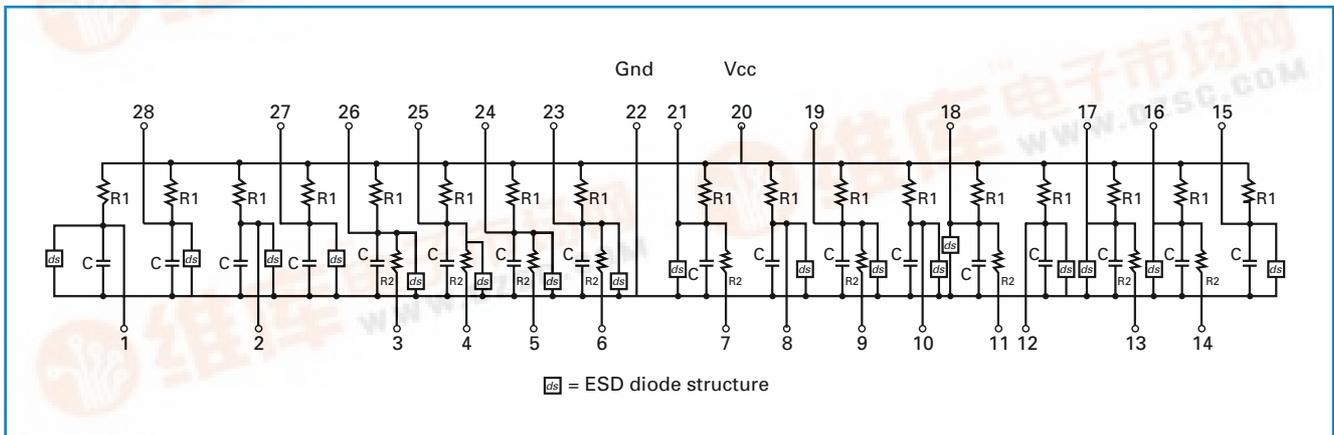
ds = ESD diode structure

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QRC1284x2 Pin-Out Chart

Signal (compatible model)	Source	Termination Resistor R2	Filter Capacitor	Pull-up Resistor R1	1284x2 Pin	ESD* Protection	1284x2 Pin	ESD* Protection	Circuit Diagram
Data 1	Bi-directional	X	X	X	25	8KV	4	8KV	1
Data 2	Bi-directional	X	X	X	24	8KV	5	8KV	1
Data 3	Bi-directional	X	X	X	23	8KV	6	8KV	1
Data 4	Bi-directional	X	X	X	21	8KV	7	8KV	1
Data 5	Bi-directional	X	X	X	19	8KV	9	8KV	1
Data 6	Bi-directional	X	X	X	18	8KV	11	8KV	1
Data 7	Bi-directional	X	X	X	17	8KV	13	8KV	1
Data 8	Bi-directional	X	X	X	16	8KV	14	8KV	1
nAck	Peripheral		X	X	15	8KV			2
Busy	Peripheral		X	X	12	8KV			2
PError	Peripheral		X	X	10	8KV			2
Select	Peripheral		X	X	8	8KV			2
nFault	Peripheral		X	X	27	8KV			2
nInit	Host		X	X	1	8KV			2
nSelectIn	Host		X	X	2	8KV			2
nStrobe	Host	X	X	X	26	8KV	3	8KV	1
nAutoFd	Host		X	X	28	8KV			2

* Human body model per MIL-STD-883 Method 3015.

Circuit diagram 1

Vcc

R1

R2

8KV ESD Protection

C

ds

8KV ESD Protection
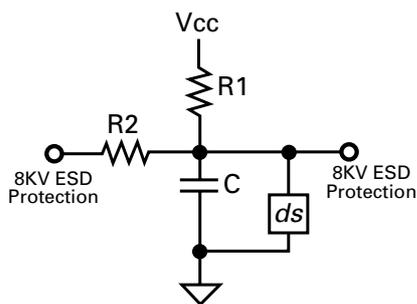
For specific pin numbers, refer to Pin-out table above

Circuit diagram 2

Vcc

R1

C

ds

8KV ESD Protection
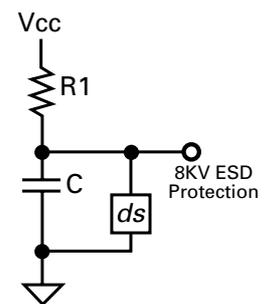
For specific pin numbers, refer to Pin-out table above

ds = ESD diode structure