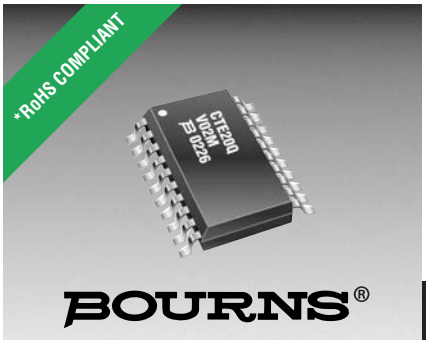


Features

- Lead free
- RoHS compliant*
- 9 RC termination circuits to IEEE 1284 standard
- Stable thin-film-on-silicon technology
- Ultra-miniature packages to JEDEC standards

Applications

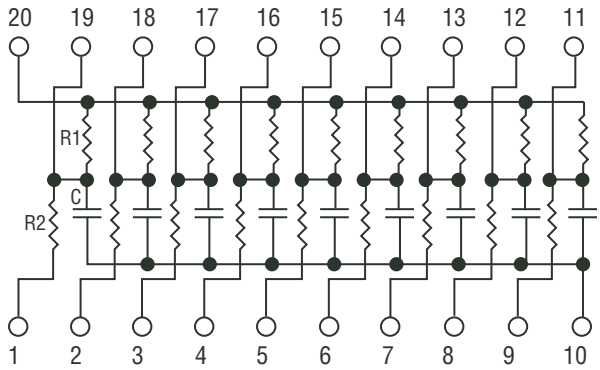
- Bidirectional parallel port communications
- Specially designed for PC/printer interface
- Ideal for space-constrained applications

Thin Film on Silicon 2CTE IEEE 1284 Terminator

General Information

The IEEE 1284 Terminator is used to provide filtering and pull-up termination on bidirectional, high-speed parallel ports connecting computer to printer. These Silicon-based, Tantalum-Nitride resistors and capacitors feature excellent stability, temperature coefficients and tracking performance. This product series conforms to JEDEC standards.

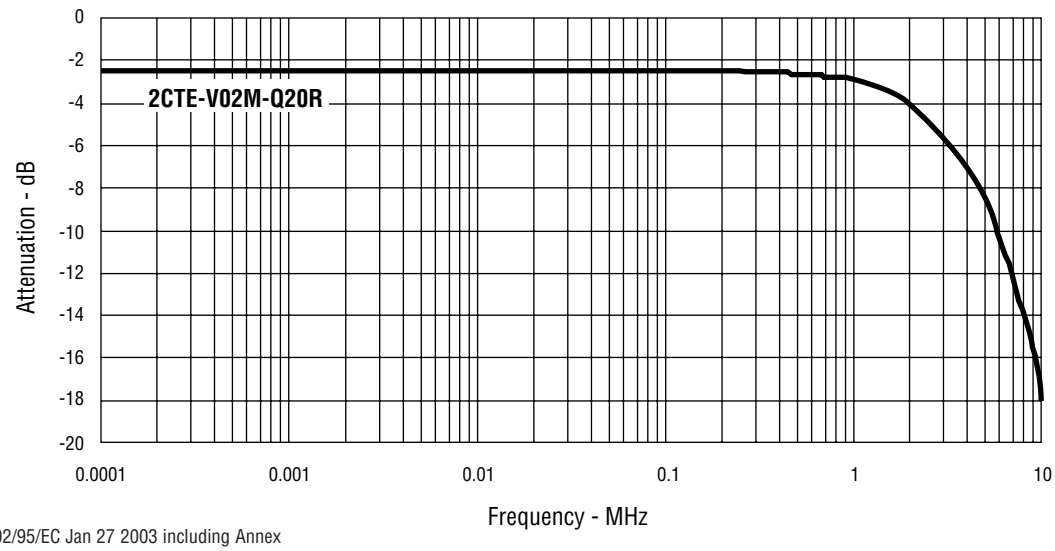
Package Schematic



Electrical & Environmental Characteristics

Electrical Characteristics	Symbol	Minimum	Nominal	Maximum	Unit
Resistance Range	R	10		4.7K	Ω
Resistor Tolerance			±10 %		Ω
Power Rating per Resistor @ 70 °C				0.1	Watt
Capacitor Range	C	33		220	pF
Capacitor Tolerance			±20 %		pF
Capacitor Breakdown Voltage		25	35		V
Operating Voltage				50	V
Environmental Characteristics ESD		2 K			V
Operating Temperature	T_J	-55		+125	°C
Storage Temperature	T_{stg}	-65		+150	°C
Power Rating per Package @ 70 °C				1.0	Watt

Filter Response

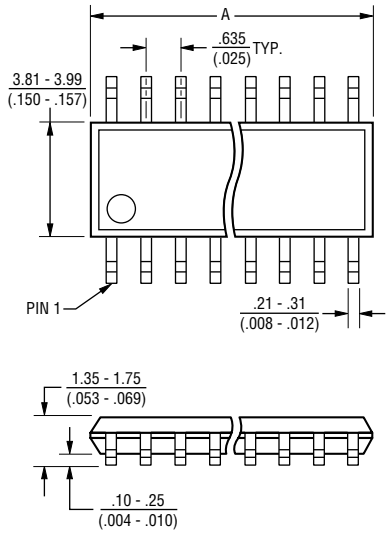


*RoHS Directive 2002/95/EC Jan 27 2003 including Annex

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

Mechanical Characteristics

QSOP Package Dimensions

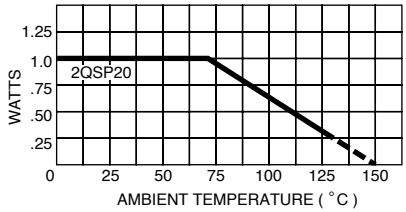


Model	A
2QSP20	8.56 - 8.74 (.337 - .344)

Governing dimensions are in mm. Dimensions in parentheses are in inches and are approximate.

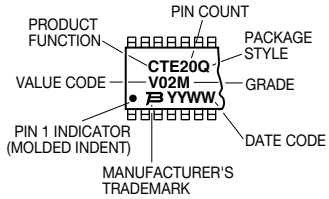
JEDEC Reference Number MO-137.

QSOP Package Power Temperature Derating Curve



Typical Part Marking

Represents total content. Layout may vary.



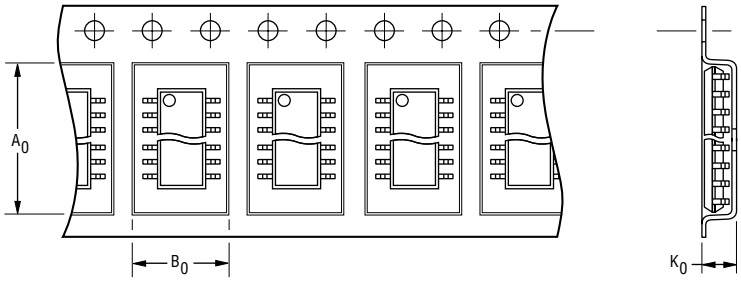
Standard RC Values

Value Code	R1 Value (ohms)	R2 Value (ohms)	C1 Value (pF)	Cap. BV (typ.)	Part Number (Tape & Reel)	Part Number (Tubes)
V01	1 K	33	180	25	2CTE-V01M-Q20R	2CTE-V01M-Q20T
V02	2.2 K	33	220	25	2CTE-V02M-Q20R	2CTE-V02M-Q20T
V03	4.7 K	10	180	25	2CTE-V03M-Q20R	2CTE-V03M-Q20T
V04	4.7 K	33	180	25	2CTE-V04M-Q20R	2CTE-V04M-Q20T
V05	4.7 K	270	33	25	2CTE-V05M-Q20R	2CTE-V05M-Q20T
V08	1 K	33	47	25	2CTE-V08M-Q20R	2CTE-V08M-Q20T
V09	2.2 K	33	47	25	2CTE-V09M-Q20R	2CTE-V09M-Q20T

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Dispensing

For large quantities, the product will be dispensed in Tape and Reel (see diagram below).



DIMENSIONS = MM (INCHES)

Package	A_0	B_0	K_0	Width	Pitch	No. of Pieces per 13 reel	No. of Pieces per tube
QSOP 20 Pin	6.5 (0.256)	9.0 (0.354)	2.1 (0.083)	16 (0.630)	8 (0.315)	3,500	56

How To Order

2 CTE-V02 M-Q 20 R LF

Product Class
Thin-Film-on-Silicon

Product Function
CTE = IEEE 1284 Terminator

Value Code
(Refer to Standard RC Value Table)

Standard Grade

	R Tol.	C Tol.
M =	±10 %	±20 %

Standard Package Style
Q = QSOP

Pin Count
Q = 20

Dispensing
R = Reel
T = Tube

Terminations
LF = 100 % Sn (lead free)

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