

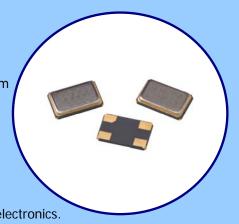
# MODEL SA534



## CRYSTAL - AUTOMOTIVE ELECTRONICS

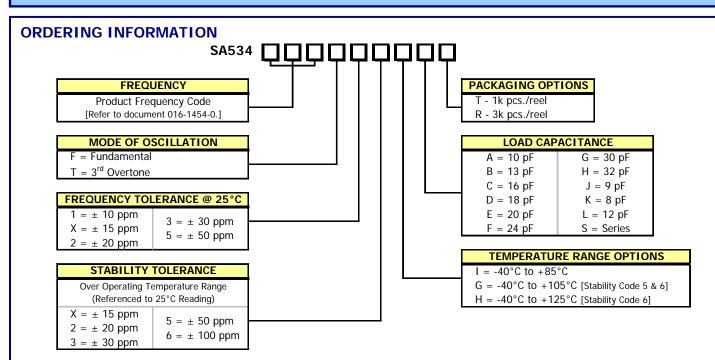
### **FEATURES**

- AEC-Q200 Compliant
- Standard 5.0mm x 3.2mm Seam Weld Package
- Fundamental Design
- Frequency Range 8 40 MHz Fundamental, 24 120 MHz 3<sup>rd</sup> Overtone
- Frequency Tolerance; ±10 ppm, ±15 ppm, ±20 ppm, ±30 ppm and ± 50 ppm
- Frequency Stability, reference Ordering Information
- Operating Temperature, -40°C to +105°C standard
- Tape & Reel Packaging Standard, EIA-481



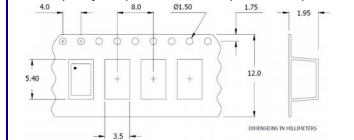
#### **APPLICATIONS**

Model SA534 is a low cost crystal specifically developed for use in automotive electronics.

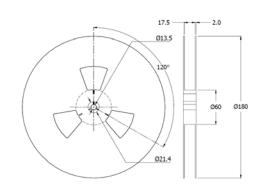


Not all performance combinations and frequencies may be available. Contact your local CTS Representative or CTS Customer Service for availability.

## PACKAGING INFORMATION [Reference]



Device quantity is 1k pcs. minimum and 3k pcs. maximum per 180mm reel.



DIRECTION OF FEED



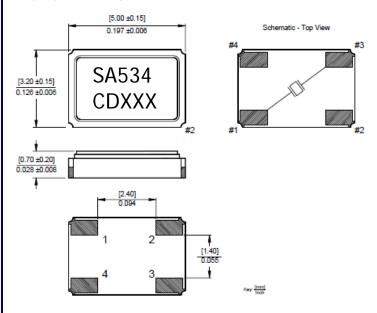
#### **ELECTRICAL CHARACTERISTICS**

	PARAMETER	VALUE							
	Operating Mode	Fundamental	3 <sup>rd</sup> Overtone						
	Frequency Range	8.0 MHz to 40.0 MHz 24.0 MHz to 120.0 MHz							
	Crystal Cut	AT-Cut							
	Frequency Tolerance @ 25°C	±10ppm, ±15ppm, ±20 ppm, ±30 ppm, ±50 ppm							
	Frequency Stability Tolerance <sup>1</sup>	±15 ppm, ±20 ppm, ±30 ppm, ±50 ppm, ±100 ppm							
RS	[Operating Temperature Range, Referenced to 25°C Reading]								
PARAMETERS	Operating Temperature Range <sup>1</sup>	-40°C to +85°C [All Stability Codes] -40°C to +105°C [Stability Code 3, 5, 6] -40°C to +125°C [Stability Code 5, 6]							
ELECTRICAL	Equivalent Series Resistance	8.000 MHz - 9.999 MHz 150 Ohms maximum 10.000 MHz - 15.999 MHz 60 Ohms maximum 16.000 MHz - 40.000 MHz 50 Ohms maximum	24.000 MHz - 53.999 MHz 54.000 MHz - 120.000 MHz 100 Ohms maximum						
LECT	Load Capacitance or Resonance Mode [See Ordering Information for More Options]	10pF, 12pF, 16p	F, Series standard						
ш.	Shunt Capacitance (C <sub>0</sub> )	3.0 pF typical, 5.0 pF maximum							
	Drive Level	10 μW typical, 100 μW maximum							
	Aging @ +25°C	±5 ppm/yr maximum							
	Insulation Resistance [@ DC 100V]	500M Ohms minimum							
	Storage Temperature Range	-40°C to +125°C							
	Reflow Condition, per JEDEC J-STD-020	+260°C maximum, 10 Seconds maximum							

<sup>1</sup> See Ordering Information.

## **MECHANICAL SPECIFICATIONS**

#### PACKAGE DRAWING



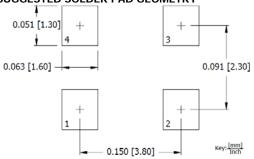
#### MARKING INFORMATION

- 1. SA534 CTS Model Series.
- 2. C CTS.
- 3. D Date code. See Table I for codes.
- 4. XXX Frequency code. [Reference CTS document 016-1450-0, Frequency Code Tables.]

#### NOTES

- Complete CTS part number, frequency value, date code and manufacturing site code information must appear on reel and carton labels.
- 2. Termination pads (e4); barrier plating is nickel [Ni] with gold [Au] flash plate.
- Reflow conditions per JEDEC J-STD-020; 260°C maximum, 10 seconds.

# SUGGESTED SOLDER PAD GEOMETRY



## TABLE I – DATE CODE

		MONTH				FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC
	YEAR					ILD	WAIX	Ark	IVIAI	JON	JOL	AUG	JLI	001	NOV	DEC
2001	2005	2009	2013	2017	Α	В	С	D	E	F	G	Н	J	K	L	М
2002	2006	2010	2014	2018	N	Р	Q	R	S	T	U	٧	W	Χ	Υ	Z
2003	2007	2011	2015	2019	а	b	С	d	е	f	g	h	j	k	I	m
2004	2008	2012	2016	2020	n	р	q	r	S	t	u	V	w	х	у	Z