actual size

SMU3 · AEC-Q200

2 Pad Version · 11.5 x 4.8 mm

- AEC-Q200 qualified
- recommended for automotive applications
- reflow soldering temperature: 260 °C max.
- package height 4.0 mm max.

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type	SMU3	
frequency range	3.2768 ~ 33.0 MHz	(fund. AT-cut)
	27.0 ~ 60.0 MHz	(3rd OT AT-cut)
frequency tolerance at 25 °C	± 20 ppm / ± 30 ppm / ± 50 ppm	
load capacitance C_L	12 pF ~ 32 pF or series	
shunt capacitance C_o	< 5 pF	
storage temperature	-40 °C ~ +125 °C	
shock resistance	> 100 g	(half sine pulse, 6.0 ms)
drive level max.	300 µW	(100 µW recommended)
aging	< ± 5 ppm first year	

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
3.276 ~ 3.499	fund.-AT	200	100
3.579 ~ 3.999	fund.-AT	120	80
4.000 ~ 5.999	fund.-AT	80	60
6.000 ~ 6.999	fund.-AT	70	35
7.000 ~ 8.999	fund.-AT	50	25
9.000 ~ 13.99	fund.-AT	35	15
14.00 ~ 33.00	fund.-AT	30	10
27.00 ~ 60.00	3rd OT-AT	100	60

Frequency Stability vs. Temperature

		± 20 ppm	± 30 ppm	± 50 ppm	± 100 ppm	± 150 ppm
-20 °C ~ +70 °C	STD.	○	○	●		
-40 °C ~ +85 °C	T1			○	●	
-40 °C ~ +105 °C	T2			○	○	
-40 °C ~ +125 °C	T3					○

● standard

○ available

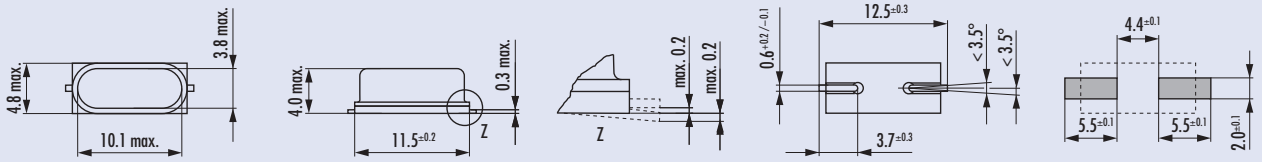
Marking

frequency with load capacitance code

company code / date code / internal code

	Jan.	Febr.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2012	n	p	q	r	s	t	u	v	w	x	y	z
2013	A	B	C	D	E	F	G	H	J	K	L	M
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015	a	b	c	d	e	f	g	h	j	k	l	m

Dimensions



top view — side view — side view — bottom view — pad layout — in mm

Order Information

Q – frequency – type – load capacitance – stability at 25 °C / stability vs. temp. range – option

Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	3.2768 ~ 60.0 MHz	SMU3	12 pF ~ 32 pF S for series	20 = ± 20 ppm 30 = ± 30 ppm 50 = ± 50 ppm	20 = ± 20 ppm 30 = ± 30 ppm 50 = ± 50 ppm 100 = ± 100 ppm 150 = ± 150 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz 3OT = 3rd overtone AEC = AEC-Q200 qualified

Example: Q 30.0-SMU3-30-30/50-T2-FU-AEC-LF (Suffix LF = RoHS compliant / Pb free pins or pads)

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full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com