



AEC-Q200

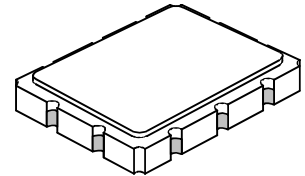
This component was always
RoHS compliant from the first
date of manufacture.

- *Designed for GSM BTS Receiver IF Applications*
- *Compatible with National Semiconductor Chip Set*
- *Very Flexible Impedance Matching*
- *Unbalanced or Balanced Input or Output*
- *9.1 x 7.1 mm Version of the SF1115A-1*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Tape and Reel Standard per ANSI/EIA-481*



SF1115A

**199 MHz
SAW Filter**



SM9171-10

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+15	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max. Soldering Profile	260°C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C		199.000			MHz
Passband	Insertion Loss at f_C	IL			7.0	dB
	1 dB Passband	BW_1	± 100			kHz
	Amplitude Ripple over $f_C \pm 100$ kHz				0.5	dB _{P-P}
	Group Delay Variation over $f_C \pm 100$ kHz	GDV			500	ns _{P-P}
Rejection	Room Temperature $f_C + 800$ to $f_C + 400$ kHz		10			dB
	Room Temperature $f_C - 800$ to $f_C - 400$ kHz		10			
	$f_C - 800$ to $f_C - 600$ and $f_C + 600$ to $f_C + 800$ kHz		20			
	$f_C - 30$ MHz to $f_C - 800$ kHz		30			
	$f_C + 800$ kHz to $f_C + 17$ MHz		30			
	$f_C - 80$ MHz to $f_C - 30$ MHz		35			
	$f_C + 17$ MHz to $f_C + 80$ MHz		35			
Operating Temperature Range	T_A		-35		+85	°C
Frequency Temperature Coefficient	FTC			0.032		ppm/°C ²

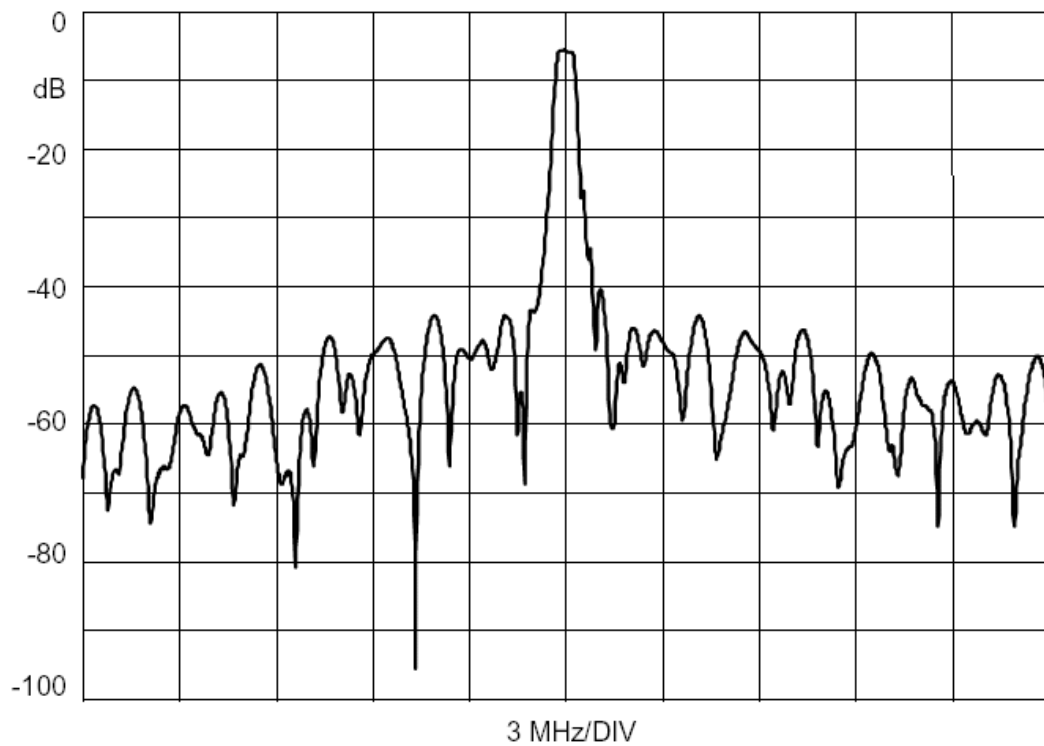
Impedance Matching to 50Ω Unbalanced	External L-C
Impedance Matching to 200Ω Balanced	External L-C
Impedance Matching to 50Ω Input / 400Ω Output	External L-C
Case Style	SMP9171-10 9.1 x 7.1 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week, S= shift)	RFM, SF1115A, <u>YYWWS</u>



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

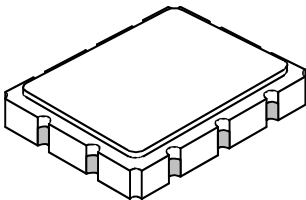
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.



SM9171-10 Case

10-Terminal Ceramic Surface-Mount Case

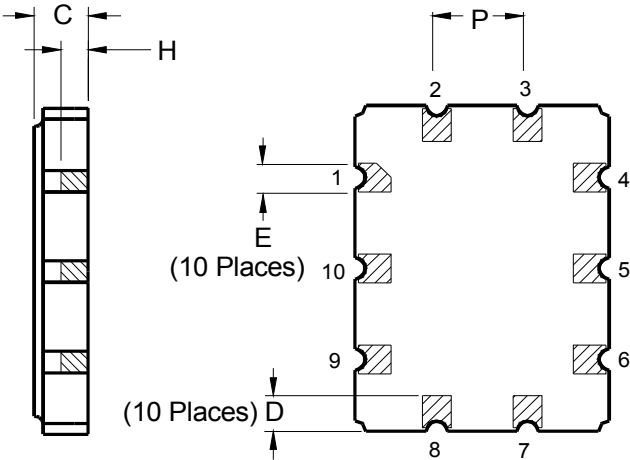
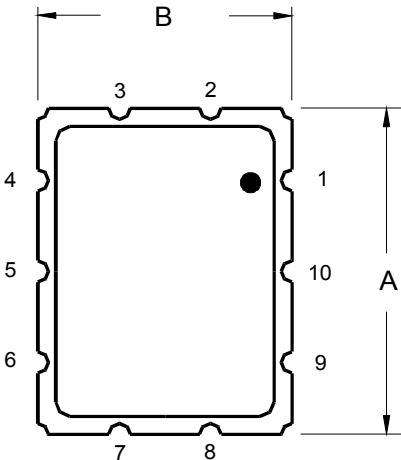
9.1 x 7.1 mm Nominal Footprint



Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	8.86	9.09	9.40	0.349	0.358	0.370
B	6.88	7.11	7.40	0.271	0.280	0.291
C		1.91	2.00		0.075	0.079
D		0.99			0.039	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

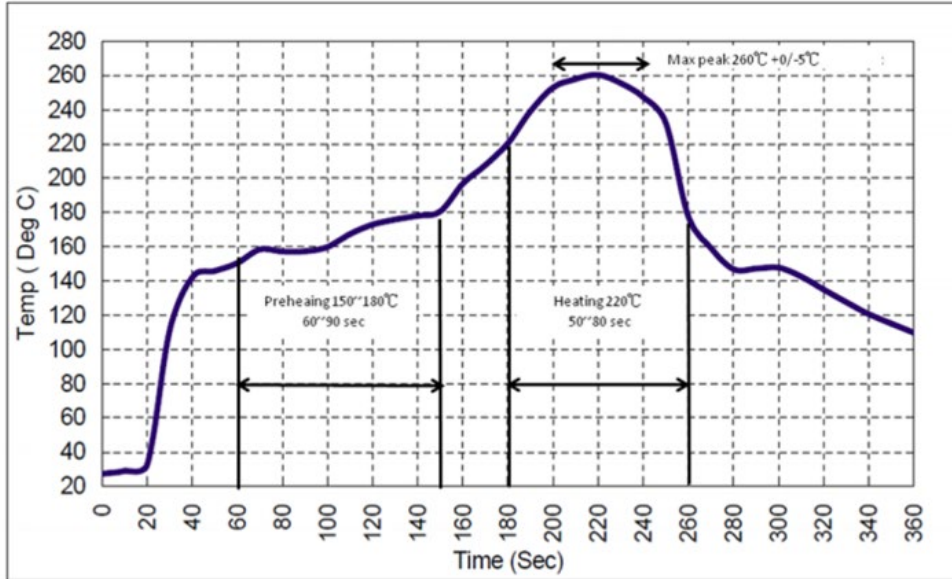
Materials	
Solder Pad Termination	Au plating 30 - 60 pinches (76.2-152 μm) over 80-200 pinches (203-508 μm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 pinches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

Electrical Connections		
Connection		Terminals
Port 1	Input or Return	6
	Return or Input	5
Port 2	Output or Return	1
	Return or Output	10
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.



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[SF1115A](#)