

The ECS-HSF-400 is a SAW (surface acoustic wave) filter for 1st IF circuit for use in GSM (Global System Mobile) communication applications. This double mode SAW (DMS) filter offers low-loss characteristics for narrowband applications. Using low electro-mechanical coupling parameter of ST cut quartz crystals as piezo electric substrates, the ECS-HSF-400S offers peak stability at room temperature as well as sharp filtering for narrowband applications.

### FEATURES

- Compact and low profile
- Flat pass band width
- Low insertion loss
- Tape & Reel (1,000 pcs)

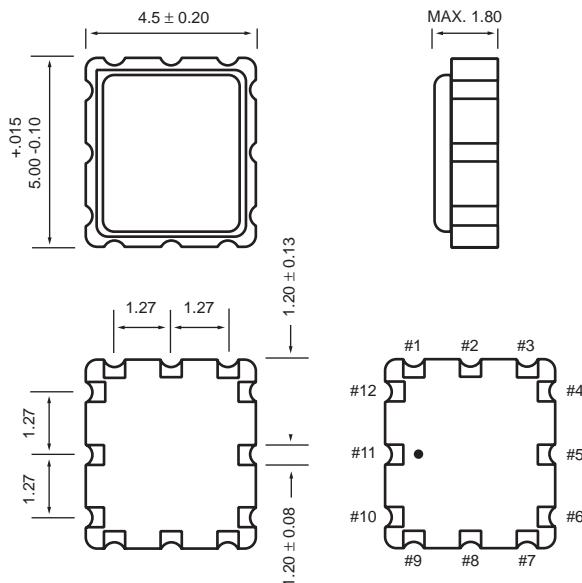
### PART NUMBERING GUIDE

PART NUMBER
ECS-HSF-400S

### OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
CENTER FREQUENCY			400.000		MHz
3db BANDWIDTH		$\pm 80$			KHz
INSERTION LOSS				7	dB
GUARANTEED ATTENUATION	@ fo $\pm 400$ KHz	20			dB
	@ fo $\pm 600$ KHz	35			dB
	@ fo $\pm 800$ KHz	40			dB
	@ fo $\pm (1.0 \sim 3.0)$ MHz	35			dB
	@ fo $\pm (3.0 \sim 20.0)$ MHz	45			dB
	@ fo $\pm 26$ MHz	67			dB
RIPPLE	@ fo $\pm 80$ KHz			1.5	dB
GROUP DELAY TOLERANCE	@ fo $\pm 80$ KHz			1.5	$\mu$ sec
MATCHING IMPEDANCE	950 ohm//1.8pF				
OPERATING TEMP. RANGE		-20°		+75°	°C
STORAGE TEMP. RANGE		-30°		+85°	°C

### PACKAGE DIMENSIONS (mm)



PIN CONNECTIONS	
#1	GROUND
#2	GROUND
#3	GROUND
#4	GROUND
#5	OUTPUT
#6	GROUND
#7	GROUND
#8	GROUND
#9	GROUND
#10	GROUND
#11	INPUT
#12	GROUND

ECS-HSF-400S – Top, Side and Bottom views