

ECX-53B-DU SMD CRYSTAL



- -55 to +125°C Temp. Range
- 5 x 3.2 mm Footprint
- Pb Free/RoHS Compliant

DIMENSIONS (mm)

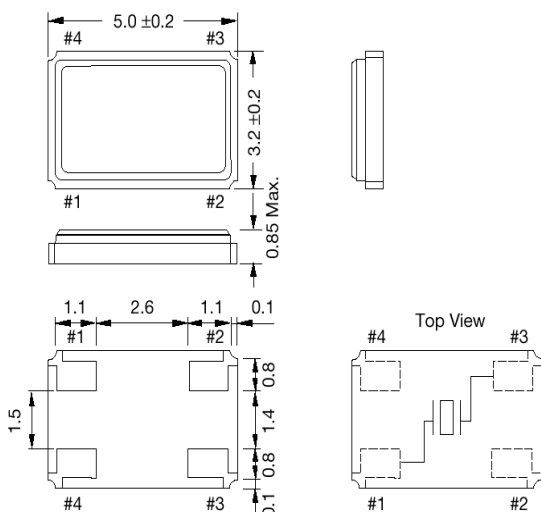


Figure 1) Top, Side, and Bottom

Crystal is symmetrical, pad 1 & 3 are interchangeable.
Chamfer on the bottom pad has no electrical significance.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECX-53B-DU			UNITS
		MIN	TYP	MAX	
Frequency		10.000		50.000	MHz
Mode of Oscillation	Fundamental				
Frequency Tolerance*	@ +25°C			± 30	ppm
Frequency Stability*	-55 ~ +125°C			± 100	ppm
Shunt Capacitance	Co			5	pF
Load Capacitance	Specify in P/N	8	20	Series	pF
Drive Level	DL			300	μW
Operating Temperature*	T _{opr}	-55		+125	°C
Storage Temperature	T _{stg}	-55		+125	°C
Aging (First Year)	@ +25°C ±3°C			±5	ppm

Frequency (MHz)	ESR Ω Max.
10.000 ~ 15.999	80
16.000 ~ 19.999	50
20.000 ~ 23.999	40
24.000 ~ 50.000	30

Pad Connections

1	In/Out
2	Gnd
3	Out/In
4	Gnd

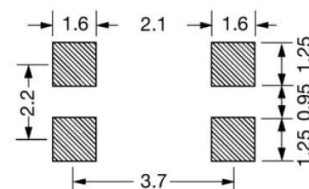
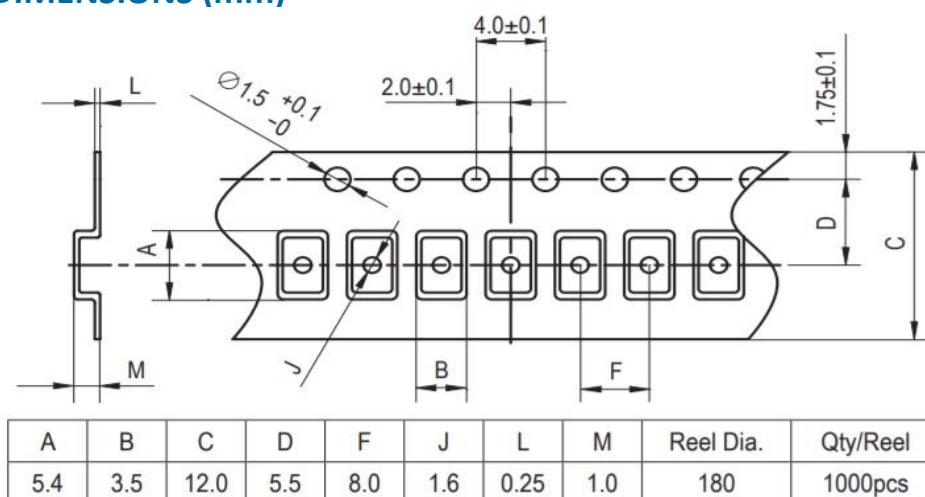


Figure 2) Suggested land

PART NUMBERING GUIDE: Example ECS-200-20-30B-DU-TR

ECS - FREQUENCY ABBREVIATION		LOAD CAPACITANCE	PACKAGE	Stability	Temp Range	PACKAGING
ECS	200 = 20.000 MHz See P/N Guide	20 = 20 pF S = Series	30B = ECX-53B	D= ±100 ppm	U = -55 ~ +125°C	TR = Tape & Reel 1K/Reel

POCKET TAPE DIMENSIONS (mm)



SOLDER PROFILE

Peak solder Temp +260°C Max 10 sec Max.

2 Cycles Max.

MSL 1, Lead Finish Au

DEVELOPED FREQUENCIES

Abbreviation	Frequency (MHZ)
100	10.000
120	12.000
143	14.31818
147.4	14.7456
160	16.000
200	20.000
240	24.000
250	25.000
270	27.000
300	30.000
320	32.000
400	40.000
480	48.000

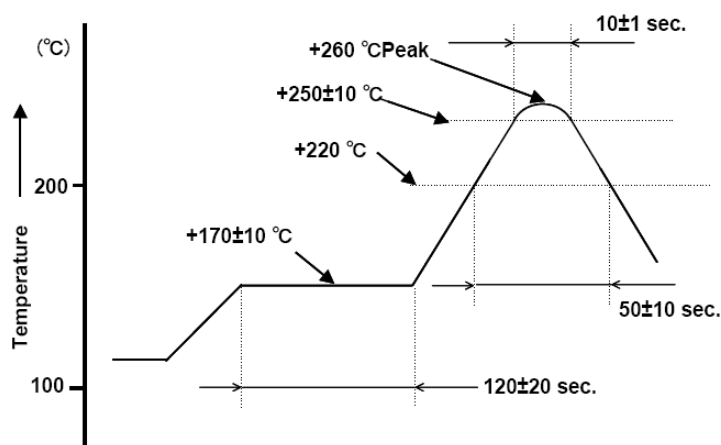


Figure 1) Suggested Reflow Profile

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ECS:

[ECS-300-20-30B-DU-TR](#) [ECS-400-20-30B-DU-TR](#) [ECS-200-20-30B-DU-TR](#) [ECS-240-20-30B-DU-TR](#) [ECS-270-20-30B-DU-TR](#) [ECS-120-20-30B-DU-TR](#) [ECS-100-20-30B-DU-TR](#) [ECS-480-20-30B-DU-TR](#) [ECS-143-20-30B-DU-TR](#) [ECS-160-20-30B-DU-TR](#) [ECS-320-20-30B-DU-TR](#) [ECS-250-20-30B-DU-TR](#) [ECS-160-20-30B-AGL-TR](#) [ECS-160-10-30B-CKM-TR](#) [ECS-200-18-30B-JEM-TR](#) [ECS-240-20-30B-AGL-TR](#) [ECS-480-10-30B-CKL-TR](#) [ECS-192-13-30B-AEM-TR](#) [ECS-160-18-30B-AGN-TR](#) [ECS-120-8-30B-RWY-TR](#) [ECS-200-20-30B-AEN-TR](#) [ECS-120-18-30B-AGN-TR](#) [ECS-200-10-30B-CKM-TR](#) [ECS-192-18-30B-AGM-TR](#) [ECS-300-18-30B-AGN-TR](#) [ECS-120-20-30B-AGL-TR](#) [ECS-135.60-10-30B-CKM-TR](#) [ECS-320-18-30B-AGN-TR](#) [ECS-184-18-30B-AGN-TR](#) [ECS-163.84-18-30B-AGN-TR](#) [ECS-160-20-30B-AEM-TR](#) [ECS-250-20-30B-AGL-TR](#) [ECS-153.6-10-30B-CKM-TR](#) [ECS-240-8-30B-CKM-TR](#) [ECS-320-18-30B-JEM-TR](#) [ECS-270-18-30B-JEM-TR](#) [ECS-250-10-30B-CKM-TR](#) [ECS-245.7-18-30B-JEM-TR](#) [ECS-120-13-30B-AEM-TR](#) [ECS-250-13-30B-AEM-TR](#) [ECS-240-18-30B-AGN-TR](#) [ECS-250-20-30B-AEN-TR](#) [ECS-240-13-30B-AEM-TR](#) [ECS-163.84-10-30B-CKM-TR](#) [ECS-120-12-30B-AGM-TR](#) [ECS-80-10-30B-CWN-TR](#) [ECS-250-18-30B-JTN-TR](#) [ECS-300-18-30B-JEM-TR](#) [ECS-320-10-30B-CKM-TR](#) [ECS-130-10-30B-CKM-TR](#) [ECS-270-10-30B-CKM-TR](#) [ECS-286.3-18-30B-AGM-TR](#) [ECS-294.912-10-30B-CKL-TR](#) [ECS-240-20-30B-AEN-TR](#) [ECS-200-18-30B-AGN-TR](#) [ECS-135.60-18-30B-AGN-TR](#) [ECS-147.4-18-30B-AGN-TR](#) [ECS-250-12-30B-AGM-TR](#) [ECS-169.344-10-30B-CKM-TR](#) [ECS-160-18-30B-AEN-TR](#) [ECS-110.5-18-30B-AGN-TR](#) [ECS-128-13-30B-AEM-TR](#) [ECS-160-18-30B-JEM-TR](#) [ECS-400-12-30B-AGM-TR](#) [ECS-480-18-30B-JEM-TR](#) [ECS-240-18-30B-CHN-TR](#) [ECS-250-18-30B-AKM-TR](#) [ECS-122.8-20-30B-AEM-TR](#) [ECS-153.6-18-30B-JEM-TR](#) [ECS-147.4-13-30B-AEM-TR](#) [ECS-300-10-30B-CKM-TR](#) [ECS-200-13-30B-AEM-TR](#) [ECS-271.2-10-30B-CKM-TR](#) [ECS-120-10-30B-CKM-TR](#) [ECS-480-18-30B-AGN-TR](#) [ECS-184-18-30B-JEM-TR](#) [ECS-128-15-30B-CTN-TR](#) [ECS-270-18-30B-AGN-TR](#) [ECS-80-18-30B-AGN-TR](#) [ECS-160-8-30B-RWY-TR](#) [ECS-160-13-30B-AEN-TR](#) [ECS-271.2-10-30B-CWN-TR](#) [ECS-147.4-10-30B-CKL-TR](#) [ECS-260-10-30B-CKM-TR](#) [ECS-260-18-30B-AGM-TR](#) [ECS-160-12-30B-AGM-TR](#) [ECS-120-20-30B-AEN-TR](#) [ECS-221-18-30B-AGN-TR](#) [ECS-100-18-30B-AGN-TR](#) [ECS-122.8-18-30B-JEM-TR](#) [ECS-200-20-30B-AGL-TR](#) [ECS-240-10-30B-CKM-TR](#)