



CRYSTAL FILTER (MCF) 2520 size FOR MINIATURE SIZE RADIO EQUIPMENT /IF

HF-232A

- Number of poles : 2 pole
- Available frequency range : 70 MHz to 180 MHz
- Old name : TF2-D0AD6

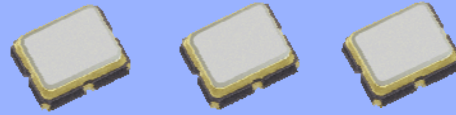
HF-233A

- Number of poles : 3 pole
- Available frequency range : 100 MHz to 150 MHz
- Old name : TF3-D0AC7

- High frequency and outstanding mechanical strength with original inverted-mesa structure.
- High frequency 3 pole filters with original process technology.
- Applications : Various kinds of miniature size radio equipment



Product number (please contact us)
 HF-232A : X1F000011xxxx00
 HF-233A : X1F000021xxxx00



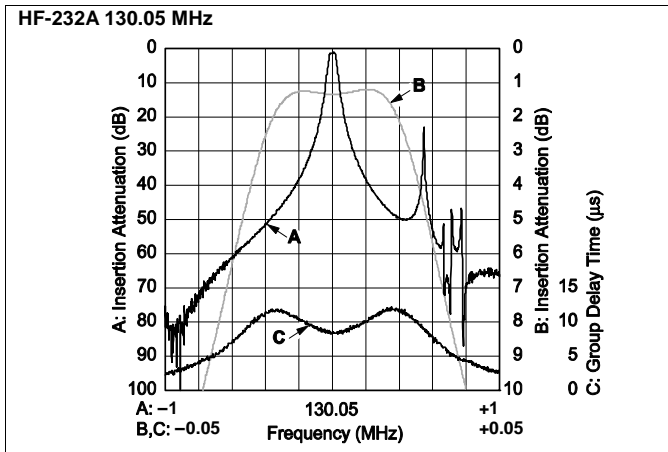
Actual size



Specifications (characteristics)

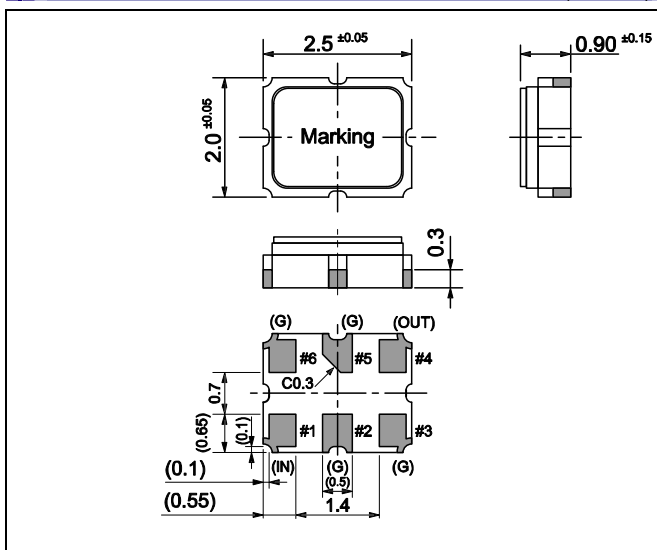
Item	Symbol	HF-232A	HF-233A	Remarks
Nominal frequency	f_nom	130.05 MHz	130.05 MHz	Other frequency and pass bandwidth are available upon request.
Storage temperature range	T_stg	-40 °C to +85 °C	-40 °C to +85 °C	
Operating temperature range	T_use	-30 °C to +85 °C	-30 °C to +85 °C	
Number of poles	—	2	3	
Pass bandwidth	P_Bw	f_nom ±15 kHz Min.	f_nom ±15 kHz Min.	
Insertion loss	IL	3 dB Max.	4 dB Max.	
Ripple	Ripple	1 dB Max.	1 dB Max.	
Stop bandwidth	S_Bw	10 dB Min.	20 dB Min.	f_nom ±50 kHz
Guaranteed attenuation	G_Att	70 dB Min.	70 dB Min.	f_nom -900 kHz
Terminating impedance	Zt	200 Ω // 1.7 pF	250 Ω // -1.0 pF	
Package	—	TS-2520	TS-2520	

Electrical DATA



External dimensions

(Unit:mm)



Footprint (Recommended)

(Unit:mm)

