HE713/HEM713

VCO with built-in buffer amplifier

Features

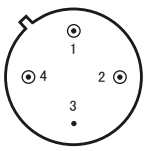
- Built-in buffer amplifier low frequency pulling
- Low phase noise
- Hyperabrupt varactor broad tuning bandwidth
- Thin film circuit high reliability
- TO-8D、SMO-8D、SP-1 packages availalble
- Operating temperature range：-55℃～+85℃

Specifications(T_A=25℃,V_{CC}=+12V)

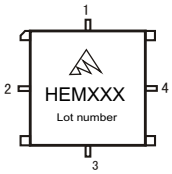
Parameter	Symbol	Unit	Guaranteed	Typical	Test Condition
Frequency Range	f_L～f_H	MHz	1500～2100	–	V_T:0～20V
Power Output	P_O	dBm	⩾10	12	V_T=10V
Power Output Variation	△P_O	dB	⩽±1.5	±1.0	f_{L-H}:1500～2100MHz
Tuning Voltage	V_T	V	0～20	–	–
Pushing	K_{VC}	MHz/V	–	2.0	V_{CC}=11～13V, V_T=10V
Spurious	R_{fs}	dBc	⩽-70	–	f_{L-H}:1500～2100MHz
Harmonics	R_{fn}	dBc	–	-15	f_{L-H}:1500～2100MHz
SSB Phase Noise	S_Φ	dBc/Hz	–	-95	V_T=10V, f_m=10KHz
Frequency Drift	△f	MHz	–	35	V_T=10V, T_A:-55～+85℃
Current	I_{CC}	mA	–	70	–
Tuning Port Capacitance	C_T	pF	–	90	–

Absolute Ratings

Maximum DC Voltage : +15V
Maximum Tuning Voltage : +30V
Minimum Tuning Voltage : -0.7V
Maximum Storage Temp:+125℃



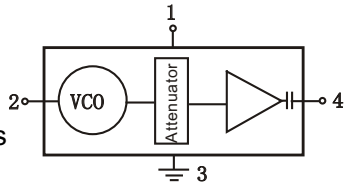
TO-8D



SMO-8D

Application Notes

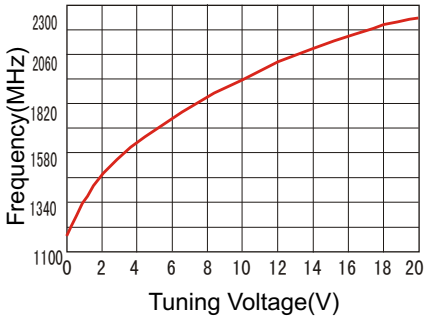
1.See assembly section for mounting information
2.ESD observe handling precautions



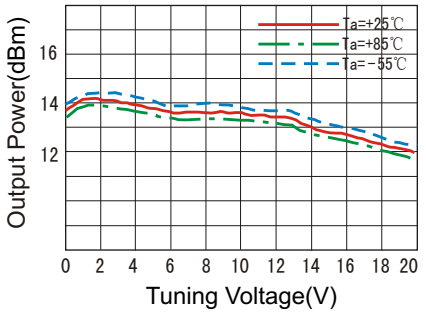
1. Vcc 3. GND
2. V_T 4. Po

Typical Performance

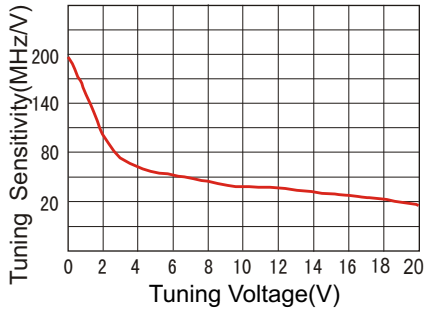
Frequency vs Tuning Voltage



Power Output vs Tuning Voltage



Tuning Sensitivity vs Tuning Voltage



Phase Noise vs Offset Frequency