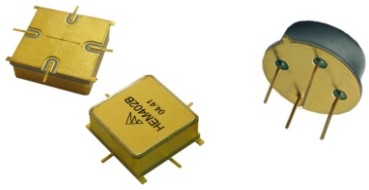
HE402B/HEM402B
Broadband VCO

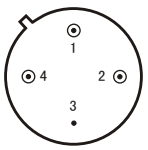


Features
- Low phase noise
- Hyperabrupt varactor octave bandwidth
- Perfect tuning linearity
- Reliable thin film hybrid construction
- TO-8C、SMO-8C packages available
- Operating temperature range：-55℃～+85℃

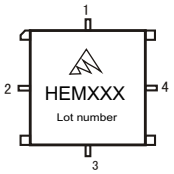
Specifications(T_A=25℃,V_{CC}=+12V)

Parameter	Symbol	Unit	Guaranteed	Typical	Test Condition
Frequency Range	f_L～f_H	MHz	500～1000	–	V_T:0～20V
Power Output	P_O	dBm	≥13	14	V_T=10V
Power Output Variation	△P_O	dB	≤±1.5	–	f_{L-H}:500～1000MHz
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}:500～1000MHz
Harmonics	R_{fn}	dBc	–	-10	f_{L-H}:500～1000MHz
SSB Phase Noise	S_Φ	dBc/Hz	–	-105	V_T=10V, f_m=10KHz
Frequency Drift	△f	MHz	–	18	V_T=10V, T_A:-55～+85℃
Current	I_{CC}	mA	–	30	–
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℃

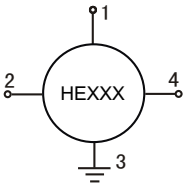


TO-8C



SMO-8C

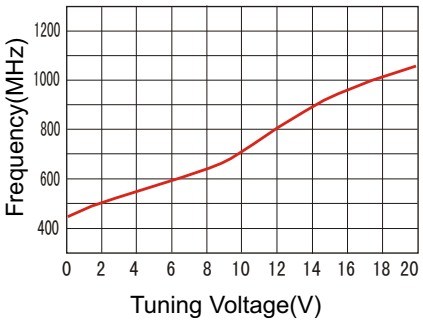
Application Notes
1. This device is only an oscillator;an external buffer amplifier or isolator is required to lower the frequency pulling
2. See assembly section for mounting information
3. ESD observe handing precautions
4. Equivalent to MTO-8060 of HP



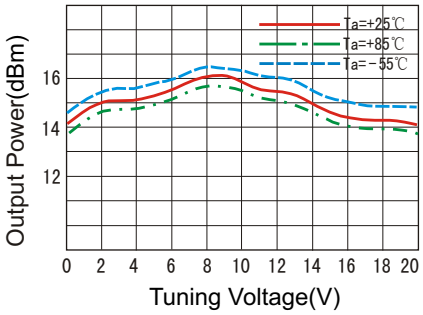
1. Vcc 3. GND
2. V_T 4. Po

Typical Performance

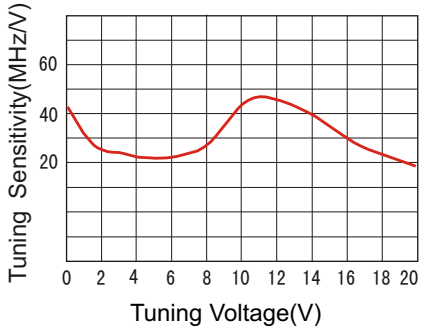
Frequency vs Tuning Voltage



Power Output vs Tuning Voltage



Tuning Sensitivity vs Tuning Voltage



Phase Noise vs Offset Frequency