HE718/HEM718

VCO with built-in buffer amplifier

Features

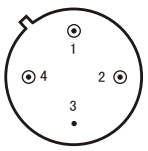
- ●Built-in buffer amplifier low frequency pulling
- ●Low phase noise
- ●Hyperabrupt varactor broad tuning bandwidth
- ●Thin film hybrid construction
- ●TO-8D、SMO-8D、SP-1、SP-3 packages availalble
- ●Operating temperature range：-55℃～+85℃

Specifications(T_A=25℃,V_{CC}=+12V)

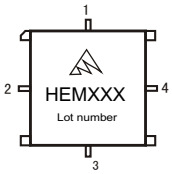
Parameter	Symbol	Unit	Guaranteed	Typical	Test Condition
Frequency Range	f_L～f_H	GHz	9～10	–	V_T:0～12V
Power Output	P_O	dBm	10	10	V_T=5V
Power Output Variation	△P_O	dB	≤±1.5	–	f_{L-H}:9～10GHz
Tuning Voltage	V_T	V	0～12	–	–
Pushing	K_{VC}	MHz/V	–	15	V_{CC}=11～13V, V_T=5V
Spurious	R_{fs}	dBc	≤-60	–	f_{L-H}:9～10GHz
Harmonics	R_{fn}	dBc	–	-20	f_{L-H}:9～10GHz
SSB Phase Noise	S_Φ	dBc/Hz	–	-98	V_T=5V, f_m=100KHz
Frequency Drift	△f	MHz	–	180	V_T=5V, T_A:-55～+85℃
Current	I_{CC}	mA	–	85	–
Tuning Port Capacitance	C_T	pF	–	45	–

Absolute Ratings

Maximum DC Voltage : +15V
Maximum Tuning Voltage : +24V
Minimum Tuning Voltage : -0. 7V
Maximum Storage Temp:＋125℃



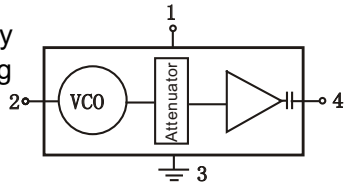
TO-8D



SMO-8D

Application Notes

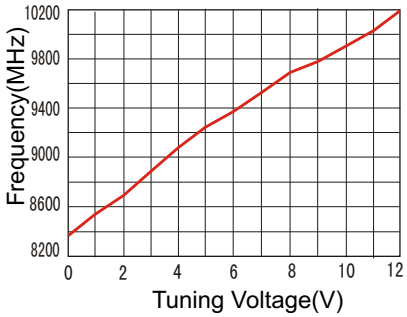
1.Isolator is required for high frequency
2.See assembly section for mounting information
3.ESD observe handling precautions



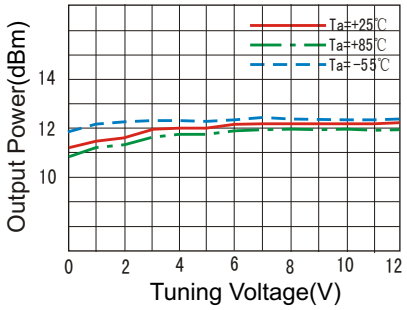
1. Vcc 3. GND
2. V_T 4. Po

Typical Performance

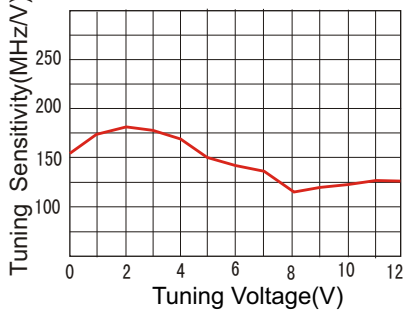
Frequency vs Tuning Voltage



Power Output vs Tuning Voltage



Tuning Sensitivity vs Tuning Voltage



Phase Noise vs Offset Frequency