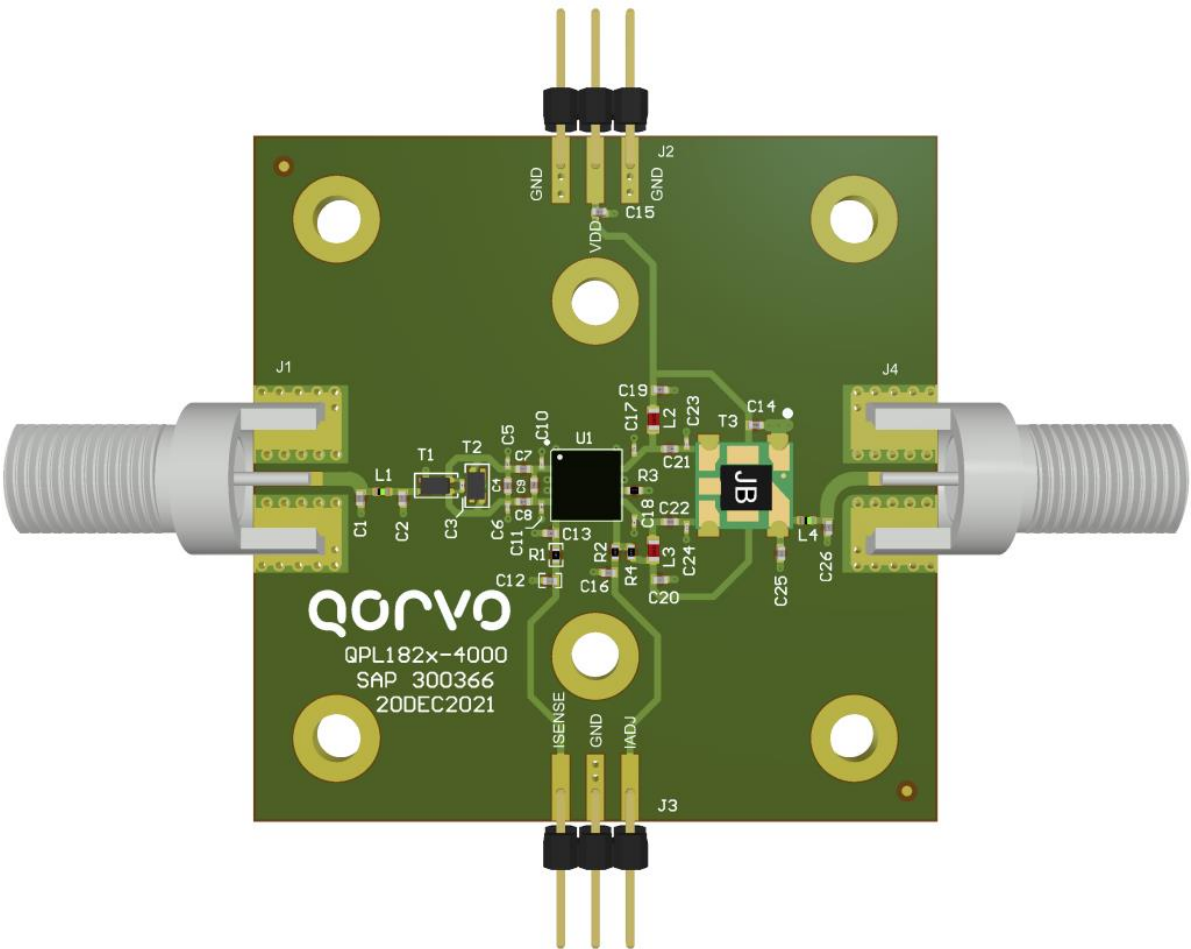




QPL1823

75 Ω 26 dB CATV Amplifier (50 – 1800MHz)

Evaluation Board Assembly Drawing



QPL1823 Evaluation Board

Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type
	Top Overlay			Legend
	Surface Material	0.0004	SM-001	Solder Mask
CF-004	Top Layer	0.0007		Signal
Core		0.0600	RO4003	Dielectric
CF-004	Bottom Layer	0.0007		Signal
Total thickness: 0.0618				

**QPL1823****75 Ω 26 dB CATV Amplifier (50 – 1800MHz)**

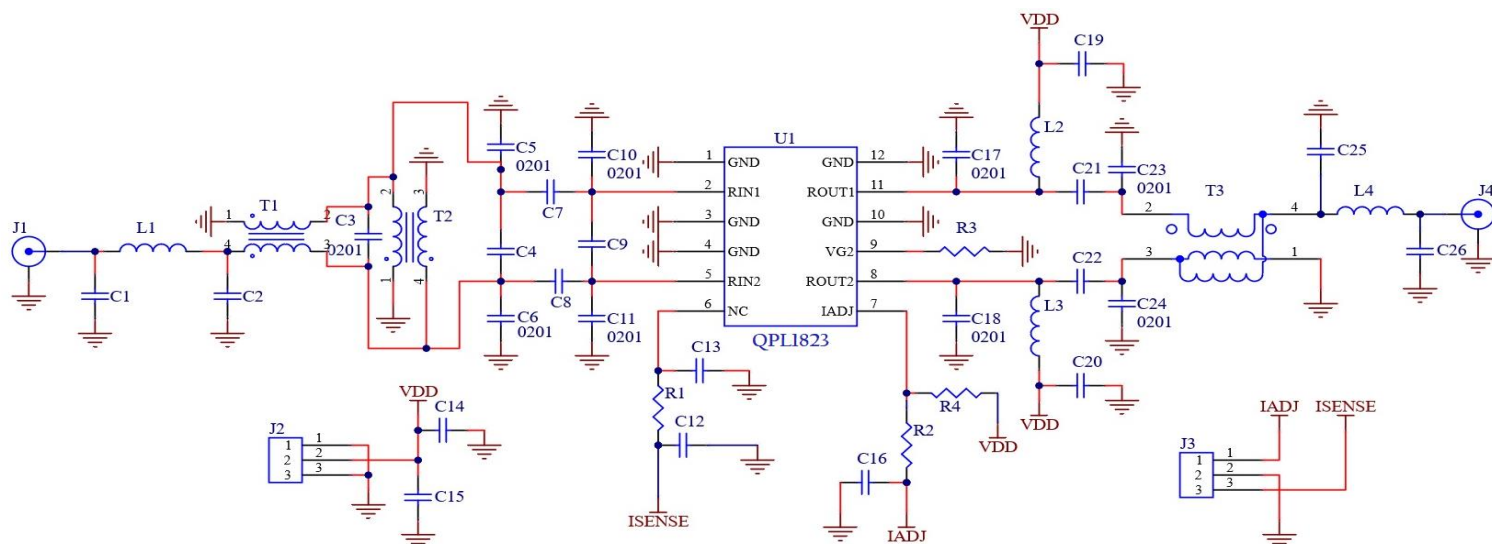
Evaluation Board Bill of Materials: 5V

Ref Des	Description	Manufacturer	Part Number
U1	1800MHz, Ultra-Linear Amp	Qorvo	QPL1823
PCB	EVb PCB, QPL182x-4000	Qorvo	SAP 300366
C2	CAP, 0.6pF, +/-0.1pF, 50V, HI-Q, 0402	Murata	GJM1555C1HR60BB01D
C3	CAP, 0.8pF, +/-0.1pF, 50V, C0G, 0201	Murata	GRM0335C1HR80BA01D
C14,C15,C16,C19,C20	CAP, 0.01uF, 10%, 0402	Murata	GCM155R71H103KA55D
C7,C8,C21,C22	CAP, 470pF, 5%, 50V, C0G, 0402	Murata	GRM1555C1H471JA01D
C17, C18	CAP, 1.3pF, +/-0.1pF, 25V, C0G, 0201	Murata	GRM0335C1E1R3BA01D
C23, C24	CAP, 0.2pF, +/-0.1pF, 25V, HI-Q, 0201	Murata	GJM0335C1ER20BB01D
C25	CAP, 0.2pF, +/-0.1pF, 50V, HI-Q, 0402	Murata	GJM1555C1HR20BB01D
L1	IND, 3nH, $\pm$ 0.1nH, W/W, HI-Q, 0402	Murata	LQW15AN3N0B00D
L2, L3	IND, 470nH, 5%, 1.4A, W/W, 0603	Coilcraft	0603AF-471XJRW
L4	RES, 0 Ω , 5%, 0402	Panasonic	ERJ-2GE0R00X
R3	RES, 3K, 5%, 1/16W, 0402	Kamaya	RMC1/16S-302JTH
R4	Res, 1.1K, 1%, 1/10W, 0402	Kamaya	RMC1/16SK1001FTH
T1, T2	BALUN, 1GHz ~ 1.5GHz, 75 / 75 OHM, 0805	Murata	DXW21BN7511SL-07
T3	XFMR, 1:1, 10 - 1800 MHz, 75 OHM, SMD	Mini-Circuits	TRS-1-182-75-4+
J1, J2	CONN, F FEM, 75 OHMS	Millimeter Wave	MW-846-C-DD-75
J3, J4	CONN, HDR, ST, 3-PIN, 0.100"	Samtec	TSW-103-07-G-S
Heatsink	HEATSINK, 50 x 50 x10, ALUMINUM	Alpha Nova Tech	S08EFV05-A
R1, R2, C1, C4, C5, C6, C9, C10, C11, C12, C13, C26	DNI		

BOM Changes for 8V Operation

R4	RES, 1.8K OHM, 1%, 1/10W, 0402	Panasonic	ERJ-2RKF1801X
C17, C18	CAP, 1.2pF, +/-0.1pF, 25V, C0G, 0201	Murata	GRM0335C1E1R2BA01D
R3	RES, 2.2K, 1%, 1/10W, 0402	Panasonic	ERJ-2RKF2201X
C1	CAP, 0.2pF, +/-0.1pF, 50V, HI-Q, 0402	Murata	GJM1555C1HR20BB01D
C23, C24	DNI		

Evaluation Board Schematic 50 MHz – 1800 MHz



Typical Application Schematic 50 MHz – 1800 MHz

