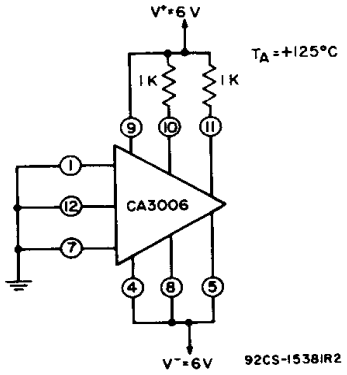
CA3006/...

High-Reliability RF Amplifier

The CA3006 Slash (/) Series types are supplied in the 12-lead TO-5 style package.

TABLE A. POST BURN-IN, FINAL ELECTRICAL AND GROUP A SAMPLING TESTS

CHARACTERISTIC	SYMBOL	TEST CONDITIONS $V^+ = 6$ V, $V^- = 6$ V		Limits for Indicated Temp. (°C)						UNITS
				Minimum			Maximum			
				−55	+25	+125	−55	+25	+125	
STATIC										
Input Offset Voltage	V_{IO}	–		–	–	–	2	1	1.5	mV
Input Offset Current	I_{IO}	–		–	–	–	4	2	1	μA
Input Bias Current	I_{IB}	–		–	–	–	60	40	30	μA
Quiescent Operating Current	I_{10} I_{11}	Terminal 4	Terminal 5							
		NC	NC	0.6	0.6	0.5	1.7	1.6	1.4	mA
		NC	V−	1.6	1.6	1.4	4.5	4.4	4	mA
		V−	NC	0.25	0.25	0.25	0.85	0.75	0.85	mA
		V−	V−	0.7	0.8	0.75	2.3	2.4	2.2	mA
Device Dissipation	P_D	Terminal 4	Terminal 5							
		NC	NC	16	16	14	50	45	45	mW
		NC	V−	45	45	40	125	120	110	mW
		V−	NC	10	10	9	30	30	30	mW
		V−	V−	20	25	20	70	70	70	mW
DYNAMIC (Performed for Group A testing only)										
Power Gain	G_p	f = 100 MHz	Cascode Configuration	–	16	–	–	–	–	dB
Noise Figure	NF	f = 100 MHz	Cascode Configuration	–	–	–	–	9	–	dB
AGC Range (Max. Voltage Gain to Complete Cutoff)	AGC	f = 1.75 MHz		–	−60	–	–	–	–	dB



Burn-in and operating life test circuit

TABLE B. DELTA LIMITS *at T_A = 25°C, V^+ = +6V, V^- = -6V (/1 only)*

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS Max.Δ	UNITS
Input-Bias Current	I_{IB}	–	±4	μA
Quiescent Operating Current	I_{10} or I_{11}	Terminal 4: NC Terminal 5: NC	±0.2	mA
Device Dissipation	P_D	Terminal 4: NC Terminal 5: NC	±5.4	mW

TABLE C. GROUPS C AND D END-POINT TESTS *at T_A = 25°C, V^+ = +6 V, V^- = -6 V*

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS Min.	LIMITS Max.	UNITS
Input Bias Current	I_{IB}	–	–	40	μA
Quiescent Operating Current	I_{10} or I_{11}	Terminal 4 | 5 NC | NC	0.6	1.6	mA
Device Dissipation	P_D	Terminal 4 | 5 NC | NC	16	45	mW
Power Gain (Cascode)	G_P	f = 100 MHz	16	–	dB