

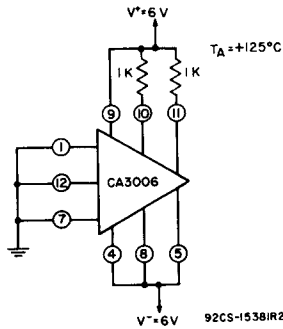
CA3006/...

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		
<i>STATIC</i>										
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	Terminal 4	Terminal 5	0.6	0.6	0.5	1.7	1.6	1.4	mA
		NC	NC							
	I ₁₁	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
Device Dissipation	P _D	Terminal 4	Terminal 5	16	16	14	50	45	45	mW
		NC	NC							
		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
<i>DYNAMIC (Performed for Group A testing only)</i>										
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 $T_A = 25^\circ\text{C}$, $V^+ = +6\text{V}$, $V^- = -6\text{V}$ (I1 only)

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS	UNITS
			Max. Δ	
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 $T_A = 25^\circ\text{C}$, $V^+ = +6\text{V}$, $V^- = -6\text{V}$

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS		UNITS				
			Min.	Max.					
Input Bias Current	I_{IB}	—	—	40	μA				
Quiescent Operating Current	I_{10} or I_{11}	Terminal <table style="display: inline-table; border-collapse: collapse; vertical-align: middle;"> <tr><td style="border: 1px solid black; padding: 2px;">4</td><td style="border: 1px solid black; padding: 2px;">5</td></tr> <tr><td style="border: 1px solid black; padding: 2px;">NC</td><td style="border: 1px solid black; padding: 2px;">NC</td></tr> </table>	4	5	NC	NC	0.6	1.6	mA
4	5								
NC	NC								
Device Dissipation	P_D	Terminal <table style="display: inline-table; border-collapse: collapse; vertical-align: middle;"> <tr><td style="border: 1px solid black; padding: 2px;">4</td><td style="border: 1px solid black; padding: 2px;">5</td></tr> <tr><td style="border: 1px solid black; padding: 2px;">NC</td><td style="border: 1px solid black; padding: 2px;">NC</td></tr> </table>	4	5	NC	NC	16	45	mW
4	5								
NC	NC								
Power Gain (Cascode)	G_P	$f = 100\text{ MHz}$	16	—	dB				