

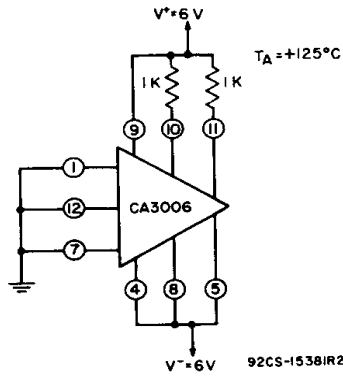
CA3006/...

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 $V^+ = 6\text{ V}, V^- = 6\text{ V}$	Limits for Indicated Temp. ($^{\circ}\text{C}$)						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} 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		
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		
		<i>DYNAMIC (Performed for Group A testing only)</i>										
		Power Gain	G_p	$f = 100\text{ MHz}$	Cascode Configuration	—	16	—	—	—	—	dB
		Noise Figure	NF	$f = 100\text{ MHz}$	Cascode Configuration	—	—	—	—	9	—	dB
AGC Range (Max. Voltage Gain to Complete Cutoff)	AGC	$f = 1.75\text{ MHz}$		—	-60	—	—	—	—	dB		



Burn-in and operating life test circuit

TABLE B. DELTA LIMITS at $T_A = 25^\circ\text{C}$, $V^+ = +6\text{V}$, $V^- = -6\text{V}$ (/1 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 $\begin{array}{c c} 4 & 5 \\ \hline \text{NC} & \text{NC} \end{array}$	0.6	1.6	mA
Device Dissipation	P_D	Terminal $\begin{array}{c c} 4 & 5 \\ \hline \text{NC} & \text{NC} \end{array}$	16	45	mW
Power Gain (Cascode)	G_p	$f = 100\text{ MHz}$	16	—	dB