AN6480

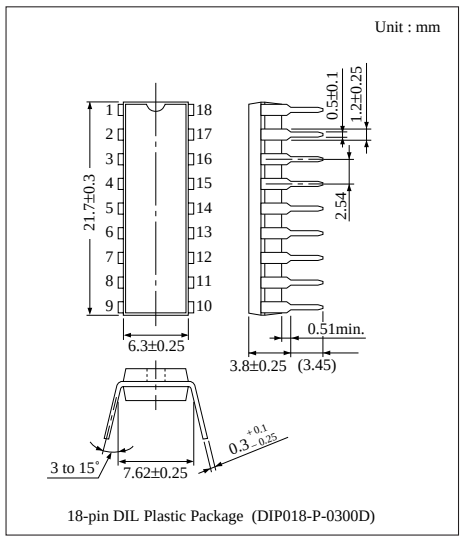
IF Amplifier for Car Telephone

■ Overview

The AN6480 is an integrated circuit designed for IF amplifier for car telephone and wireless installation.

■ Features

- Excellent output voltage linearity for level detector
- Low temperature coefficiency of output voltage for level detector
- Voltage stabilizer built-in

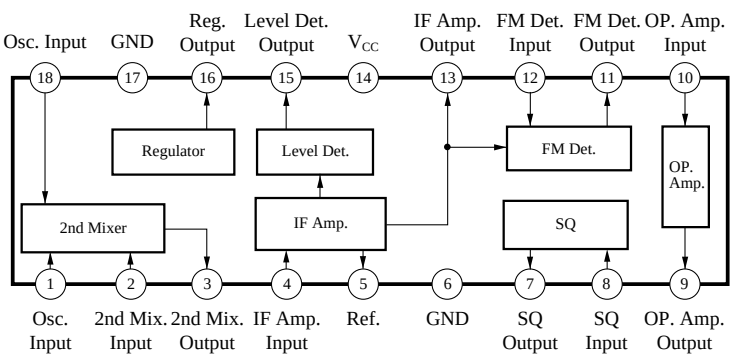


18-pin DIL Plastic Package (DIP018-P-0300D)

■ Pin Descriptions

Pin No.	Pin name	Pin No.	Pin name
1	Oscillator input	10	OP. amp. input
2	Second mixer input	11	FM detector output
3	Second mixer output	12	FM detector input
4	IF amp. input	13	IF amp. output
5	Reference input	14	V_{CC}
6	GND	15	Level detector output
7	Squelch output	16	Voltage regulator output
8	Squelch input	17	GND
9	O.P amp. output	18	Oscillator input

■ Block Diagram



■ Absolute Maximum Ratings (Ta=25˚C)

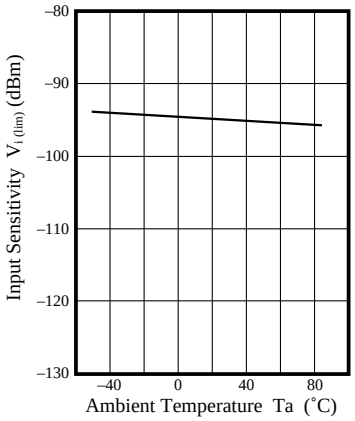
Parameter		Symbol	Rating	Unit
Supply voltage		V_{CC}	8.5	V
Supply current		I_{CC}	15	mA
Power dissipation (Ta=75˚C)		P_D	130	mW
Temperature	Operating ambient temperature	T_{opr}	–30 to + 85	˚C
	Storage temperature	T_{stg}	–55 to +125	˚C

■ Electrical Characteristics (Ta=25˚C)

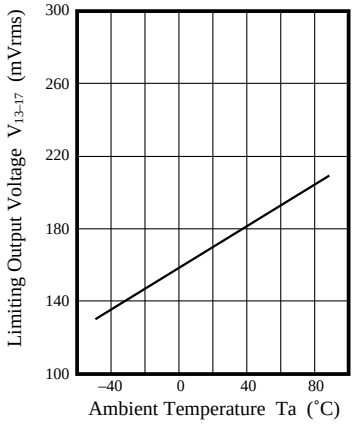
Parameter	Symbol	Condition	min	typ	max	Unit
Current consumption (no-signal)	I_{CC}		5	9	12.5	mA
IF amp. bias	$V_{4–17}$		5.8	6.1	6.4	V
IF amp. bias	$V_{5–17}$		5.8	6.1	6.4	V
Regulator output voltage	$V_{16–17}$		3.8	4.1	4.4	V
OP. amp. input voltage	$V_{10–17}$		1.7	2.0	2.3	V
OP. amp. output voltage	$V_{9–17}$		1.7	2.0	2.3	V
Level detector balance	I_{15}		–20	—	25	µA
SQ output “L” voltage	$V_{7–17}$		– 0.05	—	0.2	V
SQ output “H” voltage	$V_{7–17}$		4.7	—	5.1	V
Level detector voltage (no-signal)	$V_{15–17}$	SW_1···OFF, SW_2···OFF	2.9	—	4.3	V
Level detector min. output voltage	$V_{15–17}$	SW_1···OFF, SW_2···ON	1.3	—	2.25	V
FM detector output voltage	$V_{no\ (FM\ Det.)}$	SW_1···ON, SW_2···ON ±3kHz modulation	–8.5	—	—	dBs
FM detector residual noise	$V_{0\ (FM\ Det.)}$	SW_1···ON, SW_2···ON Non-modulation	—	—	–58	dBs

■ Characteristics Curve

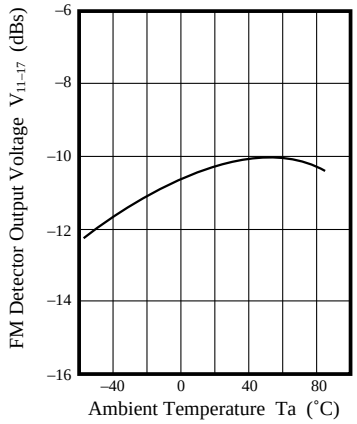
$V_{i\,(lim)}$–Ta



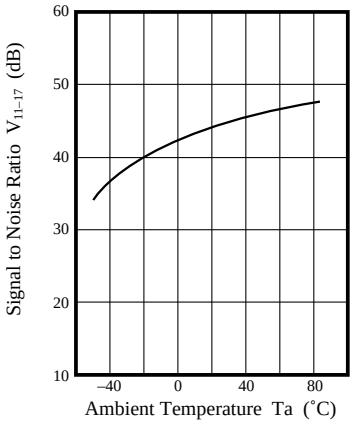
$V_{13–17}$–Ta



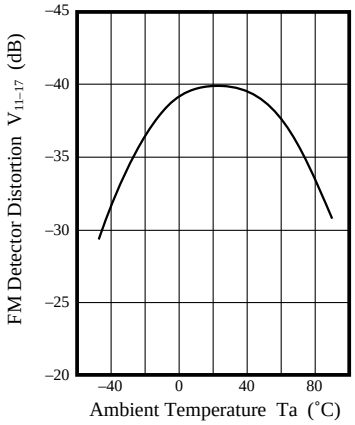
$V_{11–17}$–Ta



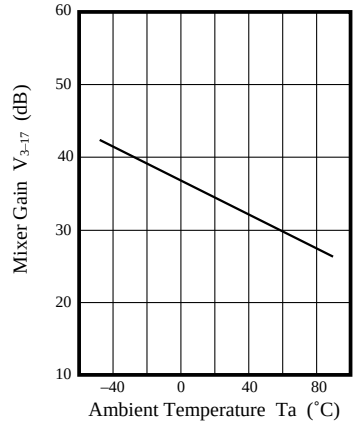
$V_{11–17}$–Ta



$V_{11–17}$–Ta



$V_{3–17}$–Ta



$V_{15–17}$–V_i