



FM IF Amplifier for Car Radio

Functions

- 3 stage differential IF amplifier.
- Differential peak detector.

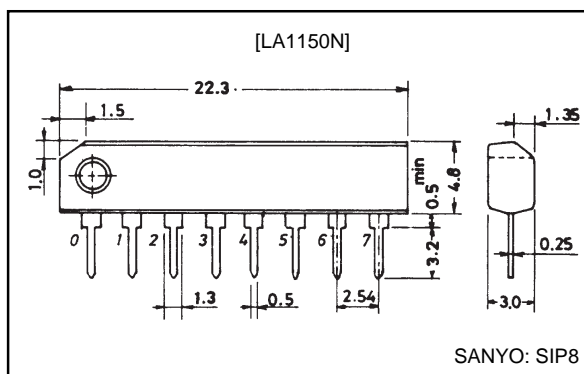
Features

- Easy adjustment.
- Large output voltage.
- Good limiter characteristic.
- Wide operating voltage.
- Low distortion.
- Fewer peripheral parts.
- Excellent AM rejection ratio.

Package Dimensions

unit: mm

3060-SIP8



Specifications

Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max		16	V
Input voltage	V _{IN}		0.7	mVrms
Allowable power dissipation	P _d max		*400	mW
Operating temperature	T _{opr}		-20 to +80	°C
Storage temperature	T _{stg}		-40 to +125	°C

* Derate 4mW/°C above Ta=25°C

Operating Condition at Ta=25°C

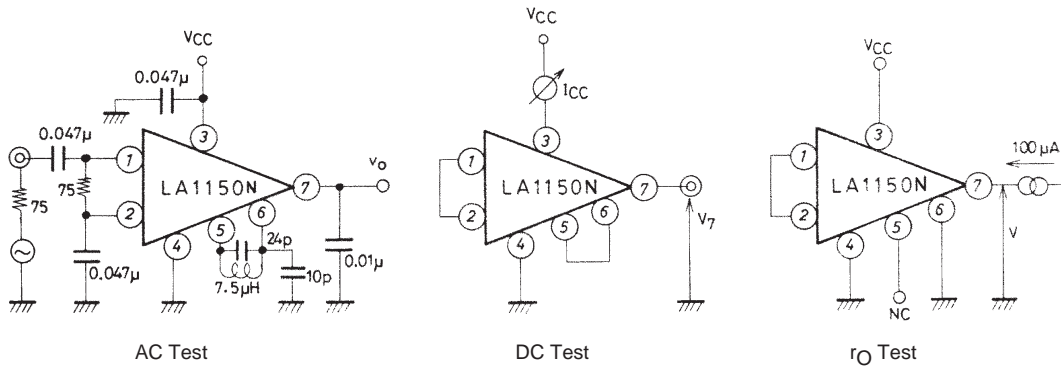
Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V _{CC}		12	V

Operating Characteristics at Ta=25°C, V_{CC}=12V, f=10.7MHz, f_M=400Hz 100% mod.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current dissipation	I _{CC}		8	12	15	mA
DC voltage at pin 7	V ₇		3.7	4.4	5.2	V
Demodulated output	V _O	V _{IN} =80dBμV	400	500	600	mVrms
Input limiting voltage	V _{IN(lim)}	-3dB limiting		50	55	dBμV
Total harmonic distortion	THD	V _{IN} =80dBμV		0.2	0.3	%
Signal to noise ratio	S/N	V _{IN} =80dBμV	70	80		dB
AM rejection ratio	AMR	AM 1kHz 30% mod	47	53		dB
Output resistance	r _O	f=400Hz	6.2	7.7	9.5	kΩ

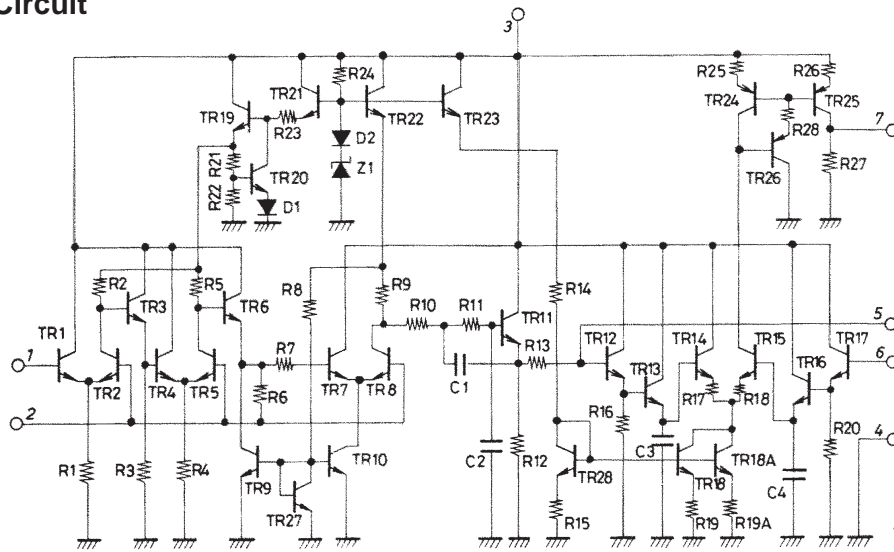
LA1150N

Test Circuit

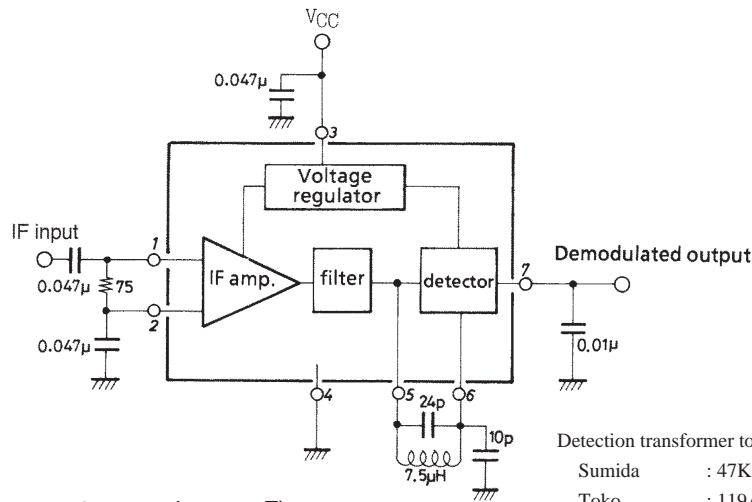


Unit (resistance : Ω, capacitance : F)

Equivalent Circuit

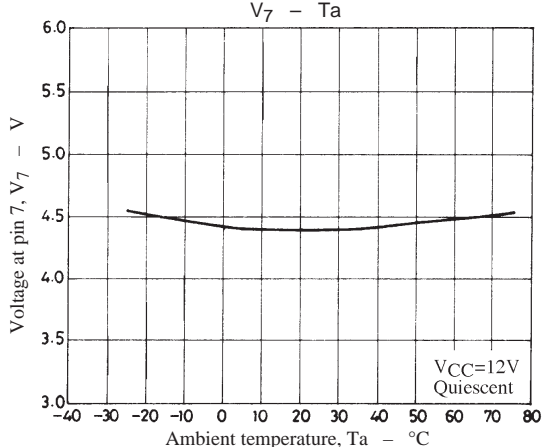
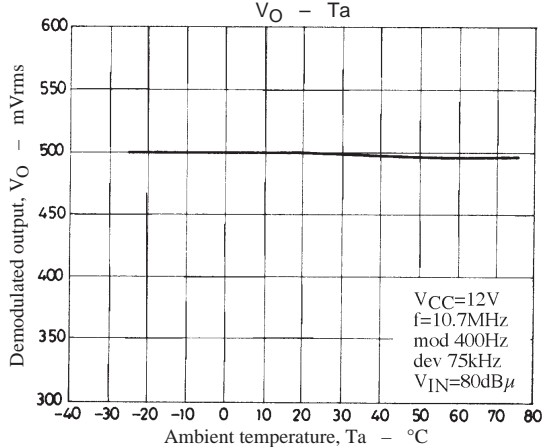
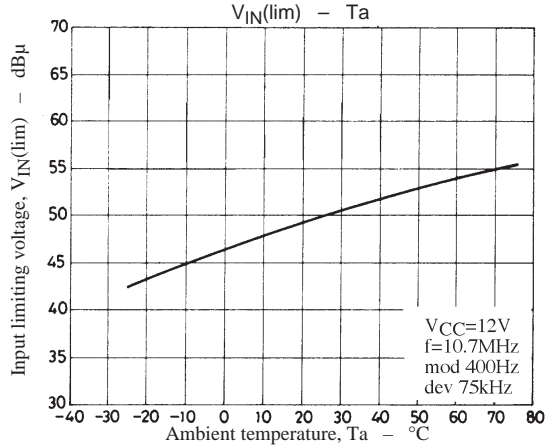
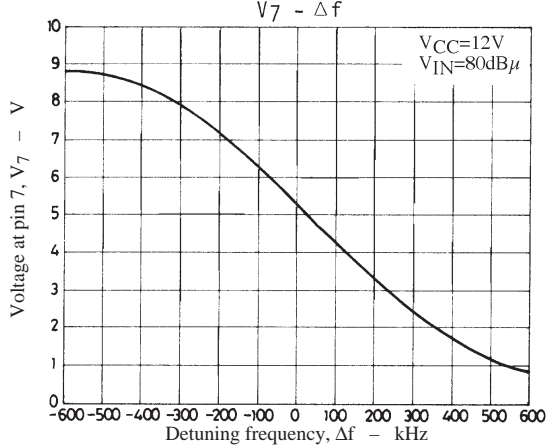
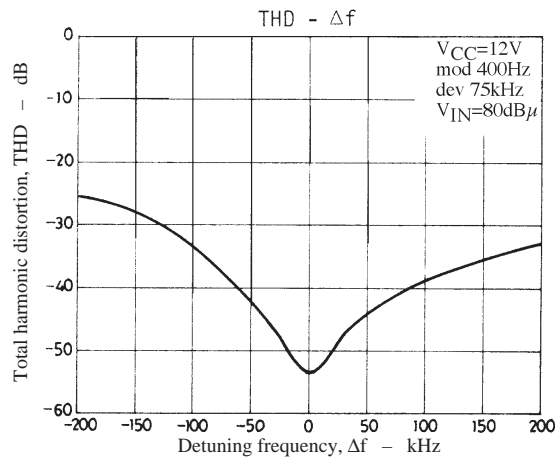
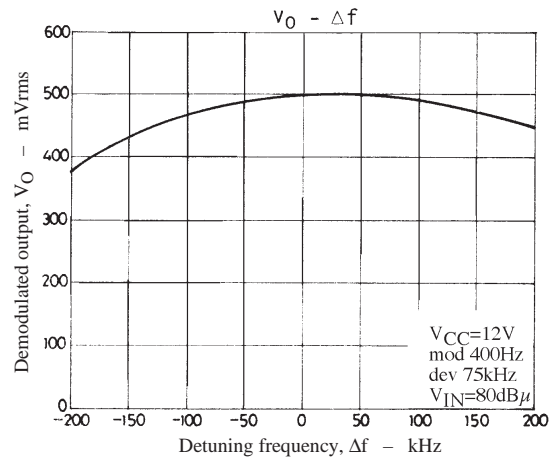
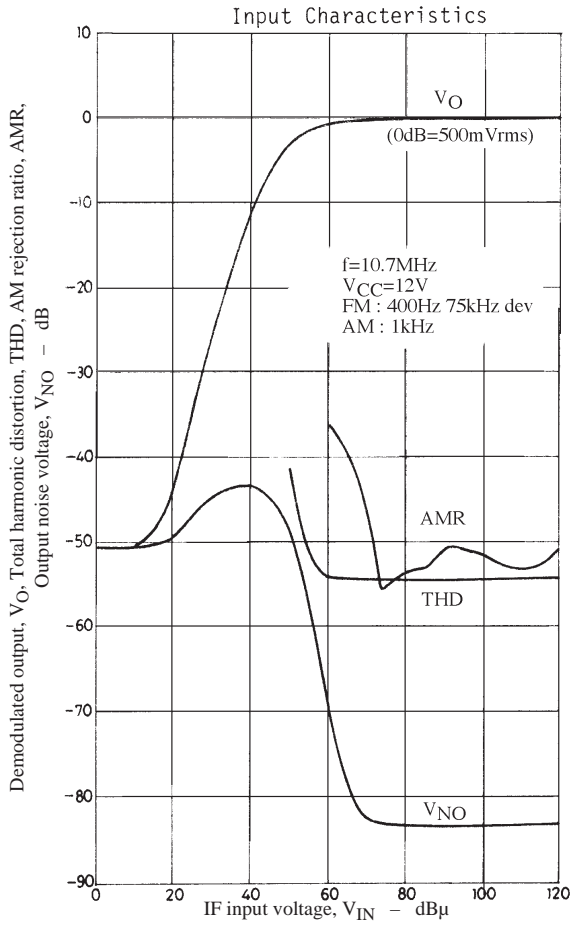


Sample Application Circuit

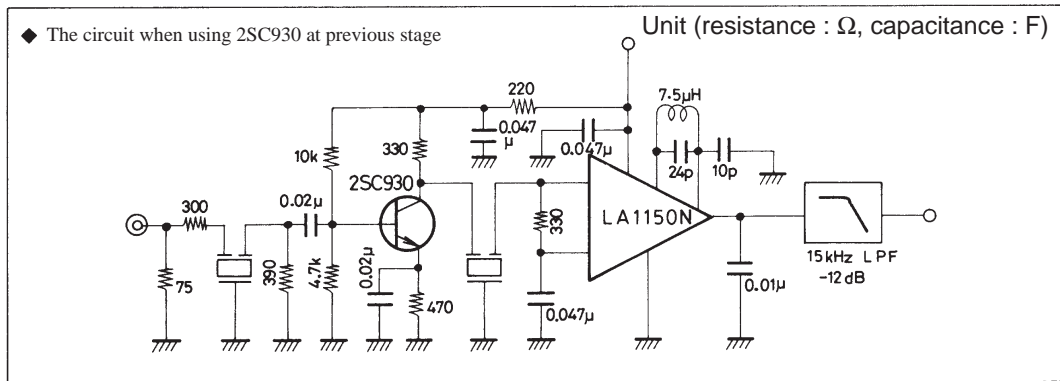
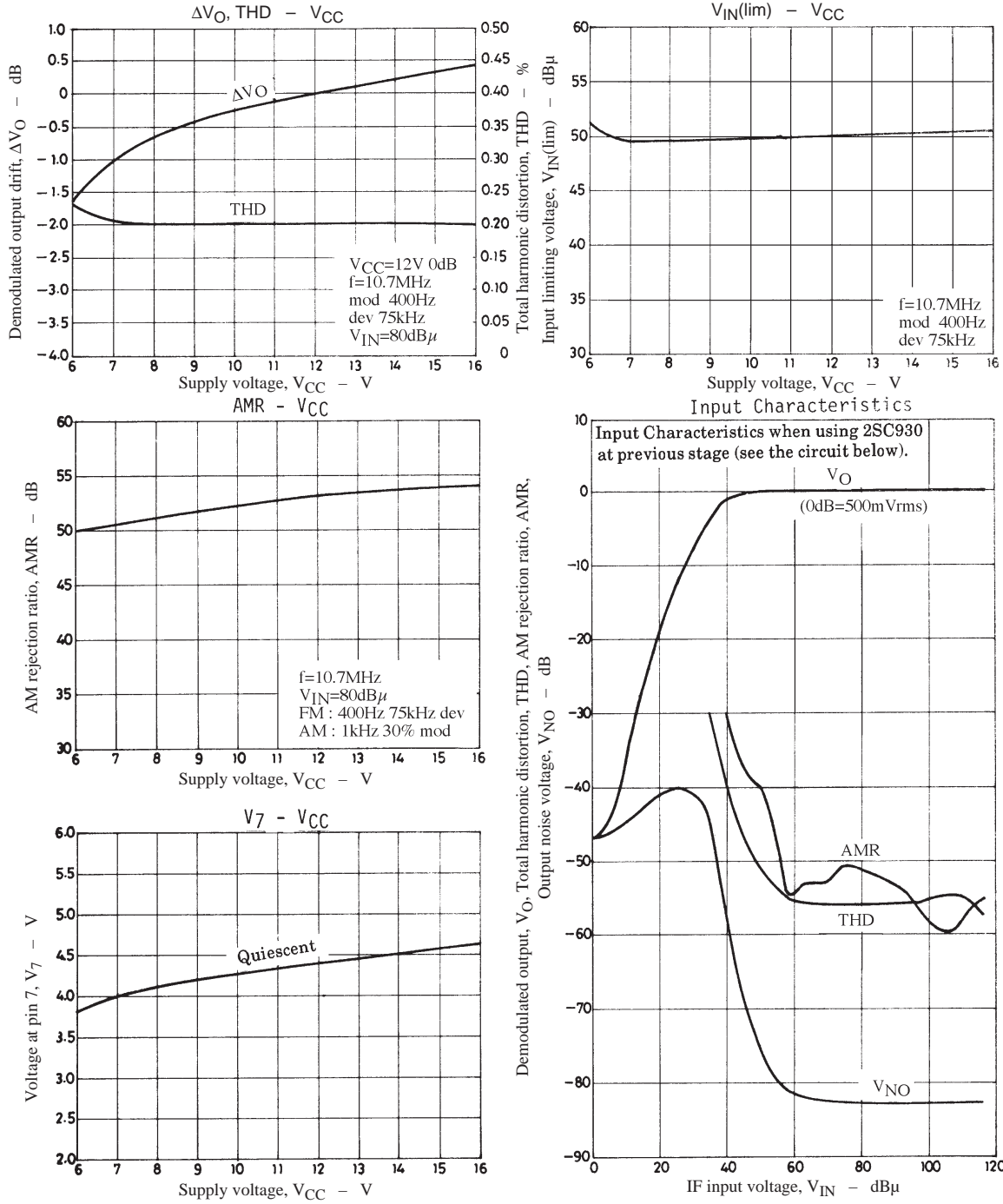


Unit (resistance : Ω, capacitance : F)

Detection transformer to be used with LA1150
 Sumida : 47K-074-003, 44M-052-1440
 Toko : 119AN-13922Z, 199CN-10504Z
 Sankyo Musen : DC-10, DC-7



LA1150N



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