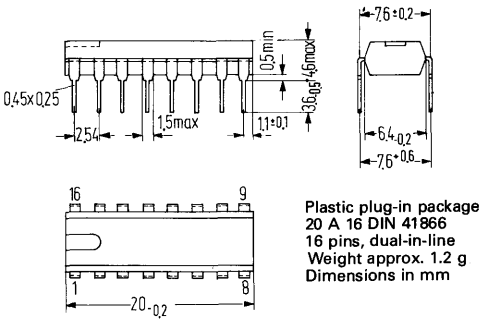
Not for new development

Integrated stereo decoder according to matrix procedure. Automatic mono-stereo switching and manual stereo-mono switching (forced mono). Driver for indicating lamp up to 100 mA.

Type	Ordering code
TBA 450N	Q67000-A621

Package outlines



Plastic plug-in package
20 A 16 DIN 41866
16 pins, dual-in-line
Weight approx. 1.2 g
Dimensions in mm

Absolute maximum ratings

Supply voltage	V_{cc}	18	V
Auxiliary voltage	V_{aux}	3	V
Lamp voltage	V_{lp}	18	V
Current for stereo indication	I_1	100	mA
Storage temperature	T_s	–40 to +125	°C
Junction temperature	T_j	150	°C
Thermal resistance (system-air)	R_{thsa}	120	K/W

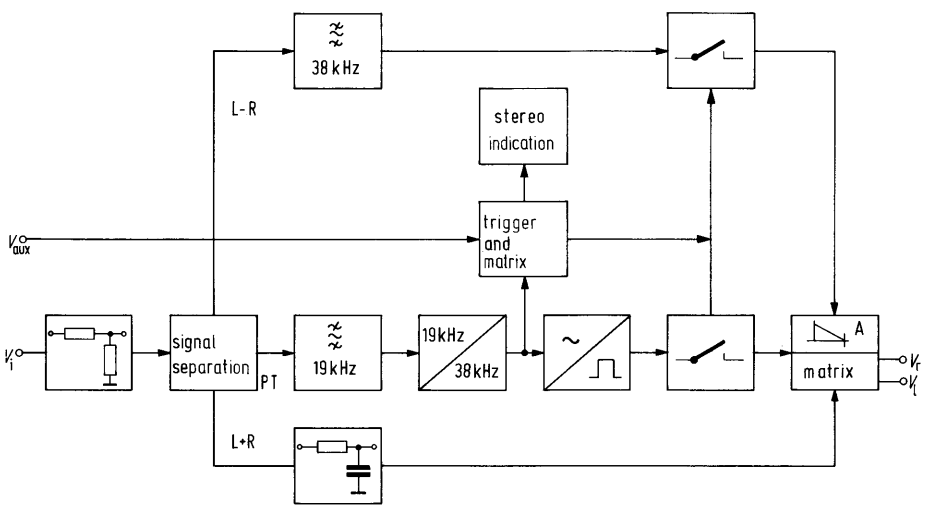
Range of operation

Supply voltage	V_{cc}	4.5 to 18	V
Ambient temperature in operation	T_{amb}	0 to +70	°C

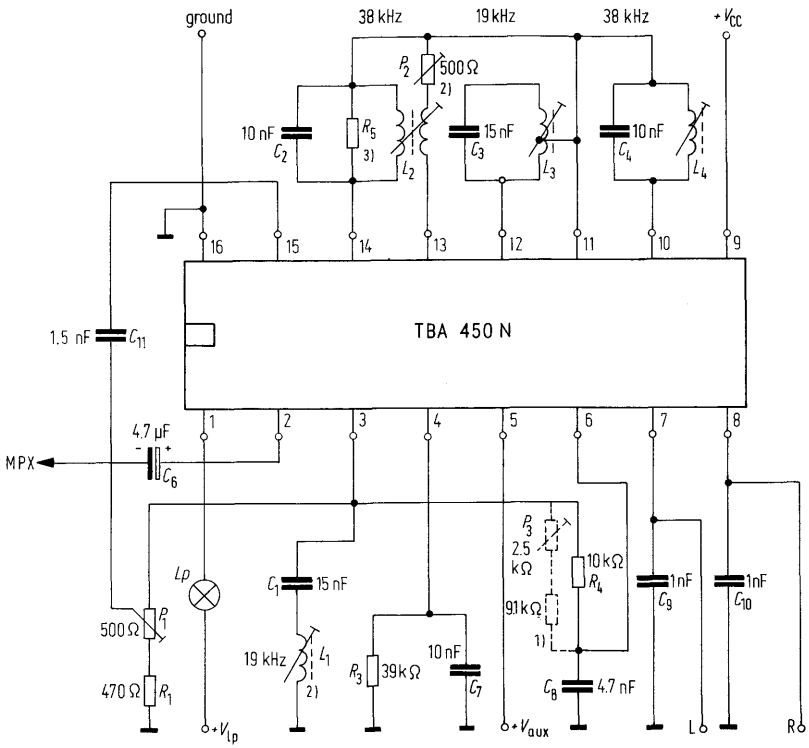
Electrical characteristics ($T_{amb} = 25°C$, $V_{cc} = 15V$)

Total current consumption ($I_1 = 80$ mA)		I_{cc}	20	mA
Input resistance		R_i	>25	kΩ
Output resistance per channel		R_q	4.5	kΩ
MPX input voltage		V_{ipp}	<2	V
Output voltage per channel		V_{qpp}	2	V
Saturation voltage of lamp driver ($I_1 = 80$ mA)		V_{CEsat}	<1.5	V
Harmonic distortion ($f_{AF} = 1$ kHz; $V_{qpp} = 350$ mV)		k	<0.5	%
Auxiliary voltage for switching from mono to stereo		V_5	>0.71	V
from stereo to mono		V_5	<0.47	V
Attenuation at 19 kHz		a_{PT}	>40	dB
at 38 kHz		a_{PT}	>40	dB
at 67 kHz (SCA signal)		a_{SCA}	>35	dB
(without additional circuit)				
Cross-talk attenuation	$f_{AF} = 6.3$ kHz	a_{ct}	>36	dB
	$f_{AF} = 10$ kHz	a_{ct}	>30	dB
Balance		a_{bal}	<0.2	dB

Block diagram



Recommended application



[1]) For an easier total tuning with improved cross-talk attenuation (regarding the entire frequency range) it is recommended to use a combination of a 9.1 kΩ resistor and a 2.5 kΩ potentiometer (P_3) in series instead of the fixed resistor R_4.

[2]) In case of reduced requirements, the 19 kHz trap consisting of L_1 and C_2 may be omitted and potentiometer P_2 be replaced by a fixed resistor of 220 Ω.

[3]) The value of damping resistor R_5 depends on the DC resistance of coil L_2. For an overall $Q \approx 30$ of the tank circuit R_5 will be approximately 3 kΩ.