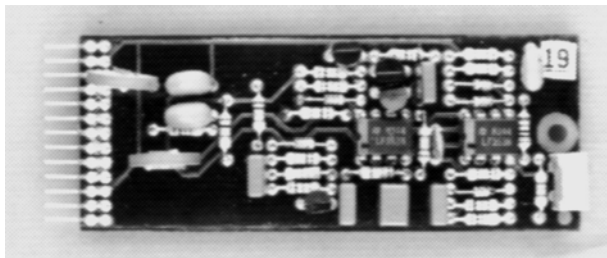


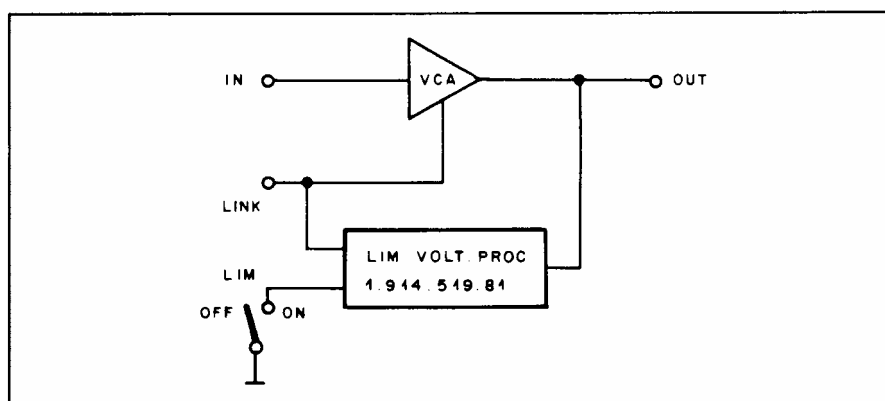
## Limiter Voltage Processor

1.914.519

Together with this voltage processor, the VCAs 1.914.518/528 can perform as signal level limiters.



The processor's threshold can be set within a wide range of levels, so that limiting action becomes effective at a desired level within a range of  $-15$  to  $+15$  dBu. Limiting action attacks within 1 ms, whereas release can vary from 50 ms to 5 s, depending on the program's energy content. This means that no audible "pumping" action – which is often associated with such a device – will occur. After the cessation of loud passages, amplification will recover only slowly. For stereo applications, a two-channel set-up (VCAs and voltage processor) can be linked, so that identical amounts of gain reduction will take place simultaneously in both channels.



The input of the voltage processor has to be wired to the output of the VCA. The processor's output, when connected to the VCA's control terminal, will effect the necessary gain reduction so that a limiting characteristic is obtained. The limiting threshold is adjustable in a wide range. Remote on/off switching of the limiter function is possible.

Technical Specifications

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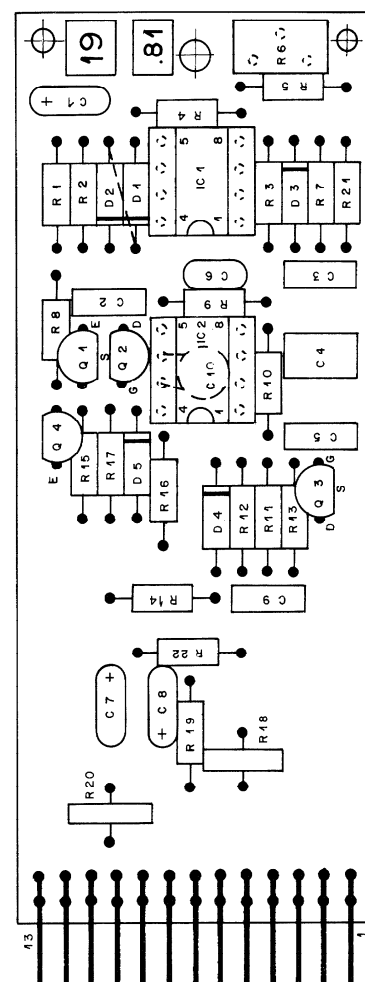
<b>Limiter:</b>	Input impedance	<b><math>\geq 10 \text{ k}\Omega</math></b>
	Max. input level	<b>+20 dBu</b>
	Frequency range	<b>30 Hz...16 kHz</b>
	Output voltage	<b>0...-13 V<sub>DC</sub></b>
	Threshold level	<b>-15 dBu...+15 dBu</b>
	Attack time	<b>1 ms</b>
	Release time	<b>50 ms...5 s, program-dependent</b>
	Compression ratio	<b>20:1, in conjunction with a VCA</b>



**Supply:**  **$\pm 15 \text{ V}$  (10 mA)**

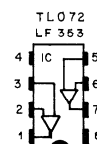
**Dimensions:** **MS-card, 34 × 85 mm**

**Ordering Information:** Limiter voltage processor

1.914.519.xx



BC 560	MPF 4392
BC 550	J 112
C B E	S D G
	



- BOTTOM VIEW

CIS	PIN	EURO 32 PIN			
		(a)	(b)	(c)	(d)
INPUT	13	1	7	21	27
1 (INP./OUTP.)	12	2	8	22	28
OUTPUT	11	3	9	23	29
LINK	10	17	17	18	18
	9				
- 15 V	8				
OV	7				
+ 15 V	6				
	5				
	4				
1 (LIM ON)	3	4	10	24	30
	2	5	11	25	31
LIM ON	1	6	13	26	32

## MSC LIMITER

Ad ..POS.. ...REF.No... DESCRIPTION.....MANUFACTURER

C.....1	59.26.1220	22 uF	SAL	
C.....2	59.06.0683	68 nF	PE	
C.....3	59.06.5104	100 nF	PE	
C.....4	59.06.5474	470 nF	PE	
C.....5	59.06.5104	100 nF	PE	
C.....6	59.34.4121	120 pF	CER	
C.....7	59.26.9109	1 uF	SAL	
C.....8	59.26.9109	1 uF	SAL	
C.....9	59.06.5104	100 nF	PE	
C.....10	59.34.4121	120 pF	CER	
D.....1	50.04.0125	1N4448		any
D.....2	50.04.0125	1N4448		any
D.....3	50.04.0125	1N4448		any
D.....4	50.04.0125	1N4448		any
D.....5	50.04.0125	1N4448		any
IC....1	50.09.0101	TL 072	dual op. amp. low noise	NS,TI
IC....2	50.09.0101	TL 072	dual op. amp. low noise	NS,TI
P.....1	54.01.0273	13 PIN	CIS	
Q.....1	50.03.0497	BC 550	NPN IC>100mA, B>100	any
Q.....2	50.03.0350	J 112	N-JFET	NS,Mot,Six
Q.....3	50.03.0350	J 112	N-JFET	NS,Mot,Six
Q.....4	50.03.0496	BC 560	PNP IC>100mA, B>100	any
R.....1	57.11.4223	22 kOhm	2% 0.25W MF	
R.....2	57.11.4223	22 kOhm	2% 0.25W MF	
R.....3	57.11.4103	10 kOhm	2% 0.25W MF	
R.....4	57.11.3203	20 kOhm	2% 0.25W MF	
R.....5	57.11.4473	47 kOhm	5% 0.25W MF	
R.....6	58.01.9104	100 kOhm	10% 0.50W PMG trimming resistor	
R.....7	57.11.4106	1 MOhm	5% 0.25W MF	
R.....8	57.11.3243	24 kOhm	5% 0.25W MF	
R.....9	57.11.4274	270 kOhm	5% 0.25W MF	
R.....10	57.11.4684	680 kOhm	5% 0.25W MF	
R.....11	57.11.4335	3.3 MOhm	5% 0.25W MF	
R.....12	57.11.4103	10 kOhm	5% 0.25W MF	
R.....13	57.11.4105	1 MOhm	5% 0.25W MF	
R.....14	57.11.4103	10 kOhm	5% 0.25W MF	
R.....15	57.11.4103	10 kOhm	5% 0.25W MF	
R.....16	57.11.4104	100 kOhm	5% 0.25W MF	
R.....17	57.11.4103	10 kOhm	5% 0.25W MF	
R.....18	57.92.1271	6.5 Ohm	PTC Philips Nr.2322 662 12711	
R.....19	57.11.4101	100 Ohm	5% 0.25W MF	
R.....20	57.92.1271	6.5 Ohm	PTC Philips Nr.2322 662 12711	
R.....21	57.11.4102	1 kOhm	5% 0.25W MF	
R.....22	57.11.4104	100 kOhm	5% 0.25W MF	

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CER=Ceramic, PE=Polyester, SAL=Solid Aluminium  
MF=Metal Film, PMG=Cermet

MANUFACTURER: Mot=Motorola, NS=National Semiconductors  
Six=Siliconix, TI=Texas Instruments

1.914.519.81 LIM VOLTAGE PROCESSOR WM 86.21.1100