

OVERVIEW

The SM6500AA-2 is an RC network with built-in ESD protection diode. It is ideal for applications such as IEEE1284 parallel port terminator filters where ESD protection and EMI noise elimination are required.

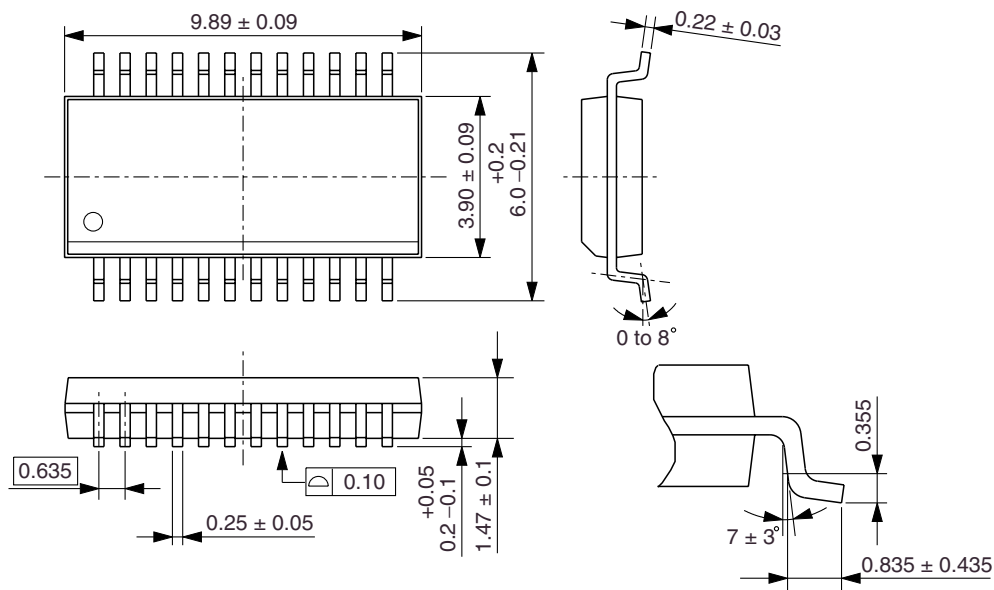
FEATURES

- IEEE1284 parallel port terminator filter and integrated protection devices
- EMI noise elimination filter
- ESD protection: $\pm 8\text{kV}$ (contact discharge)^{*1}
- 28-pin QSOP package

*1: Typical value

PACKAGE DIMENSIONS

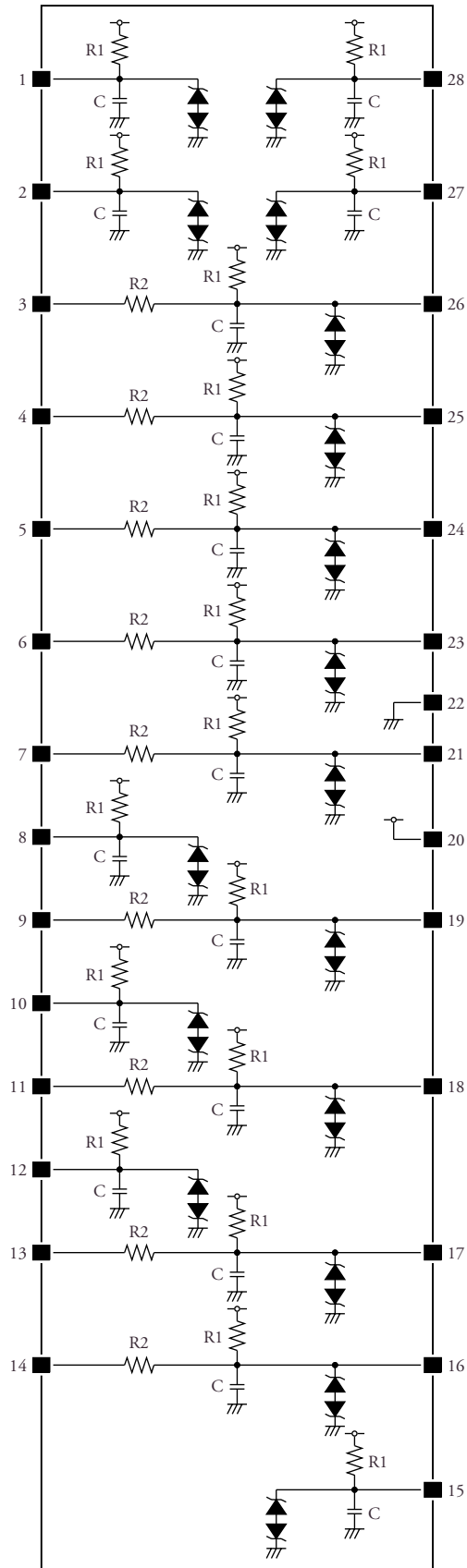
(Unit: mm)



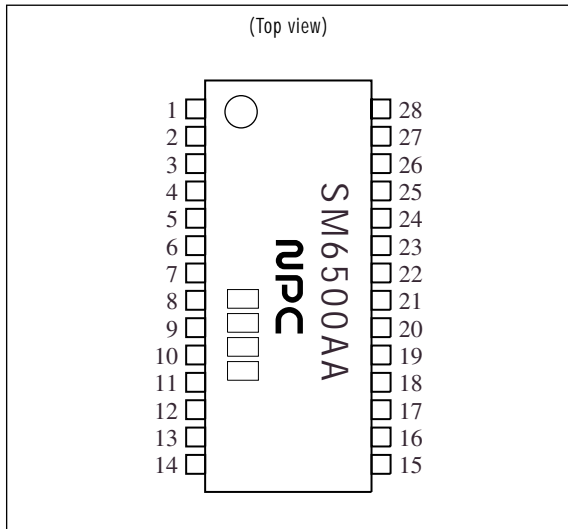
ORDERING INFORMATION

Device	Package
SM6500AA-2	28-pin QSOP

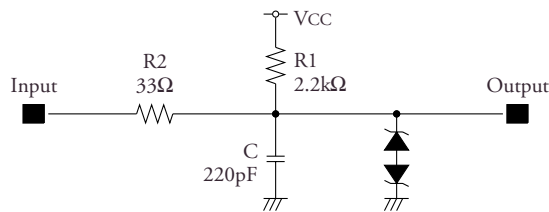
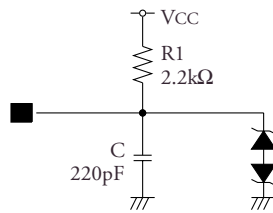
CIRCUIT DIAGRAM



PIN DESCRIPTION



Number		Description
1		ESD protection circuit with pull-up resistor. ■ Circuit diagram
2		
8		
10		
12		
15		
27		
28		Terminator filter circuit ■ Circuit diagram
Input	Output	
3	26	
4	25	
5	24	
6	23	
7	21	
9	19	Supply
11	18	
13	17	
14	16	
20		
22		

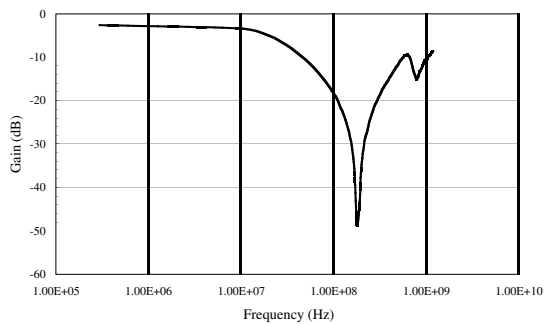


ELECTRICAL CHARACTERISTICS

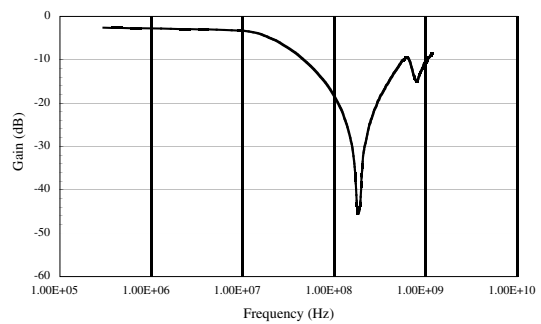
Parameter	Condition	Rating	Unit
DC resistance	R1	2.2	k Ω
	R2	33	Ω
Resistance variation		± 15	%
Resistance temperature coefficient		500 ± 350	ppm
Resistance power rating		100	mW
Electrostatic capacitance		220	pF
Electrostatic capacitance variation		± 15	%
Diode maximum leakage current	25°C, max V_{CC}	1	μA
Forward clamp voltage	-1 μA , 25°C	7.5 ± 1	V
Reverse clamp voltage	+1 μA , 25°C	7.0 ± 1	V
Maximum operating voltage	V_{CC}	6	V
Maximum power dissipation		1	W
Operating temperature range		-20 to 85	°C

FILTER INSERTION LOSS (typical characteristics)

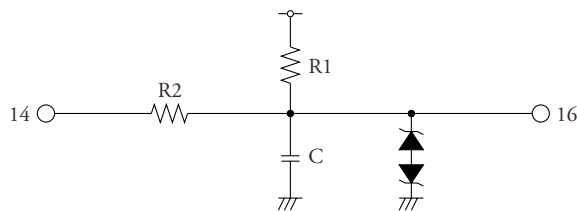
S_{12} ($T_a = 25^\circ C$)



S_{21} ($T_a = 25^\circ C$)



Measurement Circuit (pin 14 to pin 16)



HP8753B Network Analyzer
HP85046A S-parameter Test Set

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