

# ADVANCED SYSTEM DESIGN PRODUCT SPECIFICATIONS

## SSP-\*N Starline System Passives



### FEATURES

- 1 GHz BANDWIDTH
- SUPERIOR HUM MODULATION PERFORMANCE
- MINIMAL INSERTION LOSS
- 15 AMPERES
- BACKWARD COMPATIBLE
- ROTATABLE FACEPLATE
- SWIVEL CENTER SEIZURE MECHANISM

### PRODUCTS

- SSP-3N
- SSP-7N
- SSP-9N
- SSP-12N
- SSP-16N
- SSP-3-636N
- SSP-PIN
- SSP-PIN/SP

### INTRODUCTION

There are six models in the Motorola SSP-N series of splitters and directional couplers: SSP-3N, SSP-7N, SSP-9N, SSP-12N, SSP-16N, and SSP-3-636N. These AC power-passing, two-way devices operate within an RF passband of 1 GHz and are enclosed in die cast 360 aluminum alloy housings that are equipped for strand and pedestal mounting. The SSP-N series employs a swivel center conductor seizure mechanism and a rotatable faceplate to ensure that the units can be configured in a variety of input/output and RF/AC combinations. This allows for flexible installation and reduces the need for cable loops. The SSP-N series is equipped with shorting bars to reduce nuisance fuse blowing. These

shorting bars can be removed for power blocking or replaced with fuses at the user's option.

### SSP-N SERIES POWER INSERTER

Model SSP-PIN is a network for combining RF with AC power from the system power supplies to coaxial cable. The unit can be used for 60 and 90 volt powered systems. It installs on coaxial cable and passes up to 15 amperes in each direction - a total of 20 amperes common. The SSP-PIN/SP has the same performance as the standard SSP-PIN product, but adds additional surge protection capability. This product has been designed to improve overall system reliability.

### 15 AMPERE CAPABILITY

Today's advanced HFC networks require additional current handling for centralized powering and network powering of telephony devices. To meet this demand all Motorola SSP-N passives pass 15 amperes. The SSP-N models are capable of handling 15 amperes continuous on each leg. The SSP-PIN power inserter can also handle 15 amperes on each leg, 20 amperes common. These N-Series passives can also withstand 25 amperes for two hours at 65 degrees Celsius. All Motorola passives offer superior hum modulation performance, even at high currents.

### BACKWARD COMPATIBILITY

All Motorola SSP-K and SSP-N models are backward compatible to all existing Jerrold/General Instrument SSP housings. Upgrades can be accomplished by replacing the faceplate.

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## SSP-\*N Starline System Passives

### SSP-\*N Series System Passives 5-1000 MHz

TYPICAL PERFORMANCE								
Insertion Loss (dB)	5 MHz	10 MHz	50 MHz	450 MHz	550 MHz	750 MHz	860 MHz	1000 MHz
SSP-PIN / SSP-PIN/SP	0.3	0.2	0.2	0.2	0.3	0.4	0.5	0.7
SSP-3N	3.9	3.7	3.6	3.9	4.0	4.3	4.6	5.1
	3.9	3.7	3.6	3.9	4.0	4.3	4.6	5.1
SSP-7N	2.0	1.8	1.7	2.2	2.4	2.8	3.2	3.9
	7.3	7.3	7.3	7.3	7.6	7.9	8.1	8.3
SSP-9N	1.5	1.3	1.2	1.6	1.7	2.1	2.4	2.8
	9.2	9.1	9.2	9.0	9.1	9.3	9.7	10.0
SSP-12N	1.1	1.0	1.0	1.3	1.4	1.6	1.8	2.0
	11.7	11.4	11.4	11.5	11.6	12.0	12.5	13.2
SSP-16N	1.0	0.9	0.8	1.1	1.3	1.5	1.7	2.1
	15.9	15.5	15.5	15.4	15.6	16.0	16.6	16.9
SSP-3-636N	7.1	7.0	7.0	7.6	7.7	8.1	8.7	9.7
	7.1	7.0	7.0	7.3	7.4	7.8	8.4	9.5
	3.8	3.6	3.6	4.0	4.1	4.5	4.7	5.4

MAXIMUM SPECIFICATION								
Insertion Loss (dB)	5 MHz	10 MHz	50 MHz	450 MHz	550 MHz	750 MHz	860 MHz	1000 MHz
SSP-PIN / SSP-PIN/SP	0.5	0.4	0.4	0.4	0.5	0.6	0.7	1.1
SSP-3N	4.2	3.9	3.8	4.3	4.4	4.6	4.9	5.5
	4.2	3.9	3.8	4.3	4.4	4.6	4.9	5.5
SSP-7N	2.3	2.0	1.9	2.4	2.6	3.0	3.4	4.2
	7.5	7.5	7.5	7.5	7.8	8.1	8.4	8.6
SSP-9N	1.8	1.5	1.4	1.8	2.0	2.2	2.5	3.0
	9.5	9.3	9.4	9.2	9.3	9.5	9.9	10.3
SSP-12N	1.4	1.2	1.2	1.5	1.6	1.8	2.0	2.4
	12.0	11.6	11.6	11.7	11.8	12.2	12.7	13.5
SSP-16N	1.2	1.1	1.1	1.2	1.5	1.7	1.9	2.4
	16.2	15.7	15.7	15.6	15.8	16.2	16.8	17.2
SSP-3-636N	7.5	7.2	7.2	7.8	7.9	8.3	8.9	10.0
	7.5	7.2	7.2	7.5	7.6	8.0	8.6	10.0
	4.2	3.8	3.8	4.2	4.3	4.7	5.1	5.8

Isolation (dB)	5-10 MHz	10-860 MHz	860-1000 MHz
SSP-PIN / SSP-PIN/SP	60	55	50
SSP-3N	18	20	18
SSP-7N	18	20	18
SSP-9N	20	20	18
SSP-12N	20	20	18
SSP-16N	24	22	20
SSP-3-636N	18	20	18

Return Loss (dB)	5-30 MHz	30-750 MHz	750-1000 MHz
SSP-PIN / SSP-PIN/SP	16	18	16
SSP-3N	16	18	16
SSP-7N	16	18	16
SSP-9N	16	18	16
SSP-12N	16	18	16
SSP-16N	16	18	16
SSP-3-636N	16	18	16

Specifications are subject to change without notice.



# ADVANCED SYSTEM DESIGN PRODUCT SPECIFICATIONS

## SSP-\*N Starline System Passives

### SSP-N 15 Ampere System Passives:

Current Handling (Splitters and Directional Couplers):

15 amperes maximum all ports

Current Handling (Power Inserter):

Input: 20 amperes maximum

Output: 15 amperes maximum

SSP-PIN/SP Surge Protection:

Surge Current Rating: 3000 A,

8x20  $\mu$ S

Minimum Firing Voltage: 180 V

Hum Modulation (15 amperes):

5-10 MHz: 60 dB minimum

10-860 MHz: 70 dB minimum

860-1000 MHz: 60 dB minimum

**RFI:** 90 dB minimum

**Flatness:**  $\pm 0.35$  dB maximum (versus cable)

**Dimensions:** 5.53 x 5.53 x 2.50 inches  
(14.0 x 14.0 x 6.35 cm)

**Weight:** 1.67 lbs.  
(0.76 kg)

### Passive Color Codes:

Model	Background	Lettering
SSP-PIN	Purple	White
SSP-3N	White	Black
SSP-7N	Red	Black
SSP-9N	Light Blue	Black
SSP-12N	Black	White
SSP-16N	Yellow	White
SSP-3-636N	Green	White

