

Product Description

This surface mount series is comprised of 2-way 0° and 90° power splitters, and a 4-way 0° power splitter. These power splitters all use our stress relieved surface mount package, FLEX-RAP, and all RFST/RFQT use our patented BLUE CELL™* Planar Technology. All RFST/RFQT power splitter/combiners are PCMCIA compatible.

Section 4: Blue Cell™ and Surface Mount Power Splitters

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What is BLUE CELL™ Technology?

BLUE CELL™ technology is a patented process developed by RF Prime Corporation for producing low cost, high performance microwave signal components. At the heart of BLUE CELL™ is a multilayered thick-film structure that is printed and fired onto an alumina ceramic substrate. This structure incorporates all the balun transformer and capacitive/resistive requirements eliminating the need for core and wire assemblies. The result is a very small component with the reliability characteristics of an IC, and performance approaching that of a thin-film military product. Add to that a stress relieved, leaded package to prevent component attachment failure, as well as pricing 20-50% below competitive vendors, and there is no better solution to your microwave design.

RF Prime also offers a complete line of standard technology surface mount power splitters for lower frequency applications. These components are designed in our exclusive FLEX RAP package that eliminates solder reflow problems while providing a stress relieving attachment that allows for thermal expansion. All our components are backed by our 5 year MAXI-REL guarantee. We also have the in-house experience to evaluate and design for your custom applications. Contact our factory for details.

*BLUE CELL is a Patented Process of RF Prime and a registered trademark: U.S. Patent Number 5,534,830



Product Characteristics

Model	Frequency Range, MHz	Phase Offset	Number of Channels	Maximum RF Power, dBm	Nom Imp	Pinout	Package Outline
▶ LRFPS-1-75-SM6	5-50	0°	2	+30	75Ω	N	SM6
LRFPS-2-1-SM6	1-500	0°	2	+33	50Ω	N	SM6
LRFPS-2-1-75-SM6	1-250	0°	2	+33	75Ω	N	SM6
LRFPS-2-2-SM6	1-650	0°	2	+33	50Ω	N	SM6
▶ LRFPS-2-3-75-SM6	50-750	0°	2	+33	75Ω	N	SM6
▶ LRFPS-2-4-75-SM6	5-1000	0°	2	+33	75Ω	N	SM6
LRFPS-2-90-SM6	800-980	0°	2	+33	50Ω	O	SM6
LRFPX-1-SM6	5-1000	0°	2	+33	50Ω	O	SM6
LRFPPQ-175-SM6	170-180	90°	2	+33	50Ω	P	SM6
RFQT-9-SM10	800-1100	90°	2	+33	50Ω	Q	SM10
RFQT-14-SM10	1200-1600	90°	2	+33	50Ω	Q	SM10
RFQT-18-SM10	1500-2200	90°	2	+33	50Ω	Q	SM10
RFQT-22-SM10	1800-2400	90°	2	+33	50Ω	Q	SM10
RFQT-25-SM10	2200-2800	90°	2	+33	50Ω	Q	SM10
RFST-9-SM10	800-1000	0°	2	+33	50Ω	R	SM10
RFST-14-SM25	1200-1600	0°	2	+33	50Ω	S	SM25
RFST-18-SM10	1600-2000	0°	2	+33	50Ω	R	SM10
RFST-20-SM10	1800-2200	0°	2	+33	50Ω	R	SM10
RFST-22-SM10	2000-2600	0°	2	+33	50Ω	R	SM10
RFST-25-SM10	2400-2800	0°	2	+33	50Ω	R	SM10
RFST-4-8-SM12	800-1000	0°	4	+33	50Ω	T	SM12

All specifications subject to change rev. 11/96

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BLUE CELL™ and Surface Mount Power Splitters



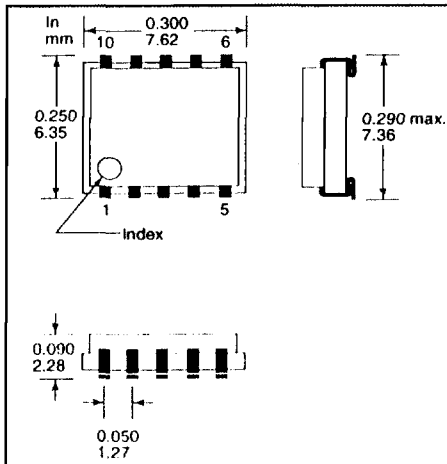
Product Specifications @ 25°C

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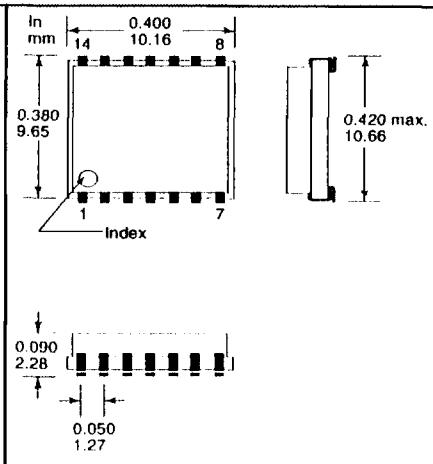
Model	Frequency	Insertion Loss, dB		Isolation, dB		Phase Unbalance		Ampl. Unb., dB	
	Range, MHz	Typ.	Max	Typ.	Min.	Typ.	Max	Typ.	Max
LRFPS-1-75-SM6	5-50	0.25	0.35	31	26	±0.3°	±1.0°	0.1	0.3
LRFPS-2-1-SM6	1-500	0.4	1.0	35	20	-	±4.0°	0.2	0.3
LRFPS-2-1-75-SM6	1-250	0.8	1.0	24	20	±1.0°	±1.5°	0.4	0.6
LRFPS-2-2-SM6	1-650	0.4	1.0	35	20	-	±4.0°	0.2	0.3
LRFPS-2-3-75-SM6	50-750	0.8	1.0	23	18	±1.0°	±2.0°	0.2	0.5
LRFPS-2-4-75-SM6	5-50	0.8	1.0	20	13	±1.0°	±2.0°	0.2	0.5
	50-1000	0.8	1.0	23	18	±1.0°	±2.0°	0.2	0.5
LRFPS-2-90-SM6	800-980	0.5	1.0	20	18	±1.0°	±2.0°	0.2	0.5
LRFPX-1-SM6	5-1000	0.6	1.0	30	15	±0.5°	±2.0°	0.2	0.3
LRFPQ-175-SM6	170-180	0.3	0.5	24	20	±1.0°	±1.5°	0.4	0.6
RFQT-9-SM10	800-1100	0.5	1.0	25	18	±0.8°	±2.0°	0.5	1.0
RFQT-14-SM10	1200-1600	0.5	1.0	25	18	±0.8°	±2.0°	0.5	1.0
RFQT-18-SM10	1500-2200	0.6	1.0	25	18	±0.5°	±2.0°	0.5	1.0
RFQT-22-SM10	1800-2400	0.6	1.0	25	18	±0.5°	±2.0°	0.5	1.0
RFQT-25-SM10	2200-2800	0.4	1.0	30	18	±0.8°	±3.0°	0.5	1.0
RFST-9-SM10	800-1000	0.4	0.8	30	18	±0.8°	±1.5°	0.4	0.8
RFST-14-SM25	1200-1600	0.5	1.0	18	15	-	±3.0°	0.25	0.5
RFST-18-SM10	1600-2000	0.4	0.8	25	18	-	±3.0°	0.4	0.8
RFST-20-SM10	1800-2200	0.4	0.8	25	20	±1.0°	±3.0°	0.4	0.8
RFST-22-SM10	2000-2600	0.4	0.8	30	18	±1.0°	±3.0°	0.4	0.8
RFST-25-SM10	2400-2800	0.5	1.0	25	18	-	±3.0°	0.4	0.8
RFST-4-8-SM12	800-1000	1.0	1.5	25	18	±0.5°	±1.5°	0.2	0.5

PACKAGE OUTLINES

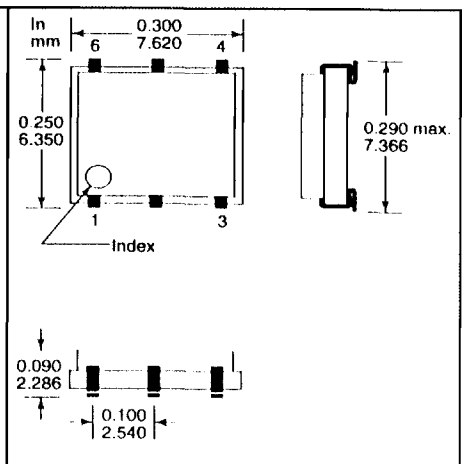
SM10



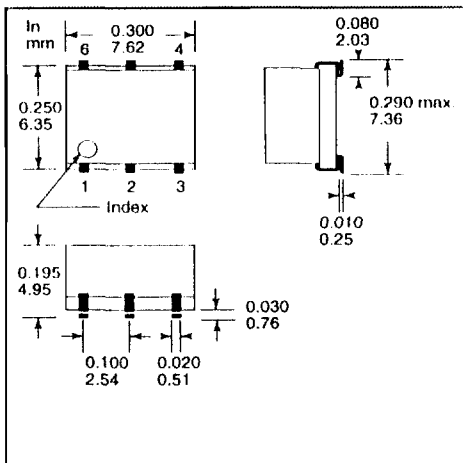
SM12



SM25



SM6



Contact Factory for Footprints, Installation Drawings, and Application Notes.

PIN OUT TABLE

Pin Out	In/Sum	Port 1	Port 2	Port 3	Port 4	0°	90°	Isolation	Ground	No Connect
N	1	3	4						2,5,6	
O	1	3	4						6	2,5
P	6					4	1	3	2,5	
Q	1					10	6	5	2,3,4,7,8,9	
R	3	10	6						1,2,4,5,7,8,9	
S	2	4	6						1,3,5	
T	4	8	10	12	14				2,3,5,6,9,13	1,7,11

ABSOLUTE MAXIMUM RATINGS

Operating Temperature	-55° to 100°C
Storage Temperature	-55° to 100°C
Maximum Temperature, 10 sec.	250°C ¹

¹As per specifications provided in RF Prime's Installation Drawings

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