

# High-Performance SOI Product Family

For Broadband Communication Systems



**QORVO**  
all around you

# High-Performance SOI Product Family

Qorvo's family of broadband SOI (silicon-on-insulator) based RF switches and DSAs (digital step attenuators) offers industry-leading linearity, power handling and reliability. Qorvo's patented, unique SOI technology enables integration of RF, analog and mixed signal functionality into single monolithic devices with best-in-class ESD rating, higher isolation, lower insertion loss and stable performance across PVT conditions.

The best-in-class RF performance coupled with higher integration and reliability enables significant reduction in overall BOM cost and PCB space and makes Qorvo® the trusted choice for market leaders in smartphones, cellular infrastructure, broadband communication, industrial & automotive, defense communication and test & measurement markets.

Qorvo's SOI reflective switch family of 5-6000 MHz, 2-to-8 throw switches featuring an industry-leading combination of insertion loss, linearity and isolation and housed in a tiny 2x2 QFN package and an absorptive, high isolation family of 5-6000 MHz 1-to-6 throw, switches, both of which require no external blocking capacitors.

Description	Switch Type	Frequency (MHz)	*Insertion Loss (dB)	*Isolation (dB)	*Switching Speed (ns)	P <sub>IN</sub> Max (dBm)	IIP3 (dBm)	Package (mm)	Part Number
Reflective SPDT	SP2T	5 to 6000	0.3	37	2000	37	75	2x2 QFN	RFSW1012
Low Distortion SPDT	SP2T	5 to 6000	0.25	39	2000	37	76	1.1x1.5 LGA	QPC1022
High Power SPDT	SPDT	30 to 4200	0.35	40	8500	44.5	74	5x5 QFN	QPC3025
Reflective SP4T	SP4T	5 to 6000	0.45	34	2000	35	71	1.8x1.8 QFN	RFSW6042
Reflective SP6T	SP6T	5 to 6000	0.55	29	2000	32	71	2x2 QFN	RFSW6062
Dual Reflective SP2T	DSP2T	5 to 6000	0.3	30	2000	35	70	2x2 QFN	RFSW6222
Absorptive SPST	SP1T	5 to 6000	0.85	53	165	37	58	2x2 DFN	QPC6014
Absorptive SP2T	SP2T	5 to 6000	0.75	60	250	36	65	4x4 QFN	RFSW6024
Absorptive SP3T	SP3T	5 to 6000	0.95	60	150	36	59	4x4 QFN	QPC6034
Absorptive SP4T	SP4T	5 to 6000	0.95	56	150	36	61	4x4 QFN	QPC6044
Absorptive SP5T	SP5T	5 to 6000	1.1	56	150	36	59	4x4 QFN	QPC6054
Absorptive SP6T	SP6T	5 to 6000	1.1	56	150	36	59	4x4 QFN	QPC6064
Absorptive SP2T	SP2T	5 to 6000	1.0	63	180	34	60	4x4 QFN	QPC6324

\* Measured at 2 GHz

Qorvo's SOI DSA portfolio features a patented overshoot-free transient performance as standard. In addition, these 2-to-7 bit DSAs come in the industry's smallest footprint, possess the industry's highest power handling capability and require no external blocking caps.

Description	Frequency (MHz)	# of Bits	Step Size (dB)	Attenuation Range (B)	*Insertion Loss (dB)	Switching Speed (ns)	IIP3	Package (mm)	Addressing	Part Number
7-bit, 128 State DSA	50 to 6000	7	0.25	31.75	1.7	50	57	3x3 QFN	Serial, Addressable	RFSA6713
7-bit, 128 State DSA	50 to 6000	7	0.25	31.75	1.5	120	57	4x4 QFN	Parallel, Serial	RFSA3714
7-bit, 128 State DSA	5 to 6000	7	0.25	31.75	1.5	120	57	5x5 QFN	Parallel, Serial, Addressable	RFSA3715
6-bit, 64 State DSA	5 to 6000	6	0.5	31.5	1.4	120	57	3x3 QFN	Serial, Addressable	RFSA3613
6-bit, 64 State DSA	5 to 6000	6	0.5	31.5	1.4	120	55	4x4 QFN	Serial	QPC6614
5-bit, 32 State DSA	5 to 6000	5	1	31	1.4	120	57	3x3 QFN	Serial, Addressable	RFSA3513
4-bit, 16 State DSA	5 to 6000	4	1	15	1.4	120	57	3x3 QFN	Parallel	RFSA3413
2-bit, 4 State DSA	50 to 6000	2	6	18	0.8	50	57	3x3 QFN	Parallel	QPC3223

\* Measured at 2 GHz