

High-Performance SOI Product Family

For Broadband Communication Systems



QORVO
all around you

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Qorvo's family of broadband SOI (silicon-on-insulator) based RF switches, DSAs (digital step attenuators), TCA (temperature compensating attenuator) and PACs (programmable array capacitors) 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 _{in} 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 SP3T	SP3T	5 to 6000	0.45	37	2000	35	70	1.8x1.8 QFN	RFSW6032
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
Reflective SP8T	SP8T	5 to 6000	0.55	28	2000	32	69	2x2 QFN	QPC6082
Dual Reflective SP3T	DSP3T	5 to 6000	0.35	28	2000	35	70	2x2 QFN	RFSW6232
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

* 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

Qorvo's high-linearity, high-Q PAC offers the industry's widest tuning ratio and best power handling, and finds application in tunable filters, phase shifters and matching networks.

Description	Frequency (MHz)	Capacitor Range (pF)	Step Size (pF)	V _r f (V)	IIP3 (dBm)	V _{cc} (V)	I _{cc} (μA)	Package	Part Number
6-bit, 64 State PAC	150 to 3000	0.5 to 13.7	0.2	40	>70	2.4-3.5	<100	2x2.5 QFN	RFAC3612