

# Semiconductor Databook

## Section E

### Small Outline (Surface Mount) Package Devices

## Small Outline (Surface Mount) Package Devices

### N-Channel Silicon Junction Field-Effect Transistors

Device Type	BV <sub>GSS</sub>		I <sub>GSS</sub>		V <sub>GS</sub> (OFF)				I <sub>DSS</sub>		
	Min (V)	@I <sub>G</sub> (μA)	Max (nA)	@V <sub>GS</sub> (V)	Limits		Conditions		Min (mA)	Max (mA)	@V <sub>DS</sub> (V)
					Min (V)	Max (V)	V <sub>DS</sub> (V)	I <sub>D</sub> (nA)			
SMP3369	-40	-1.0	-1.0	-30	—	-6.5	20	1.0	0.5	2.5	30
SMP3370	-40	-1.0	-1.0	-30	—	-3.2	20	1.0	0.1	0.6	30
SMP3458	-50	-1.0	-1.0	-30	—	-7.8	20	1.0	3.0	15	20
SMP3459	-50	-1.0	-1.0	-30	—	-3.4	20	1.0	0.8	4.0	20
SMP3460	-50	-1.0	-1.0	-30	—	-1.8	20	1.0	0.2	1.0	20
SMP3819	-25	-1.0	-2.0	-15	—	-8.0	15	2.0	2.0	20	15
SMP3821	-50	-1.0	-1.0	-30	—	-4.0	10	1.0	0.5	2.5	15
SMP3822	-50	-1.0	-1.0	-30	—	-6.0	10	1.0	2.0	10	15
SMP3823	-30	-1.0	-1.0	-20	—	-8.0	10	1.0	4.0	20	15
SMP3824	-50	-1.0	-1.0	-30	—	-8.0	15	0.5	4.0	20	15
SMP3966	-30	-1.0	-1.0	-20	-4.0	-6.0	10	10	2.0	—	20
SMP3967	-30	-1.0	-1.0	-20	-2.0	-5.0	20	1.0	2.5	10	20
SMP3967A	-30	-1.0	-1.0	-20	-2.0	-5.0	20	1.0	2.5	10	20
SMP3968	-30	-1.0	-1.0	-20	—	-3.0	20	1.0	1.0	5.0	20
SMP3968A	-30	-1.0	-1.0	-20	—	-3.0	20	1.0	1.0	5.0	20
SMP3969	-30	-1.0	-1.0	-20	—	-1.7	20	1.0	0.4	2.0	20
SMP3969A	-30	-1.0	-1.0	-20	—	-1.7	20	1.0	0.4	2.0	20
SMP3970	-40	-1.0	-1.0	-20	-4.0	-10	20	1.0	50.0	150	20
SMP3971	-40	-1.0	-1.0	-20	-2.0	-5.0	20	1.0	25.0	75	20
SMP3972	-40	-1.0	-1.0	-20	-0.5	-3.0	20	1.0	5.0	30	20
SMP4091	-40	-1.0	-1.0	-20	-5.0	-10	20	1.0	30.0	—	20
SMP4092	-40	-1.0	-1.0	-20	-2.0	-7.0	20	1.0	15.0	—	20
SMP4093	-40	-1.0	-1.0	-20	-1.0	-5.0	20	1.0	8.0	—	20
SMP4117	-40	-1.0	-0.01	-20	-0.6	-1.8	10	1.0	0.03	0.09	10
SMP4118	-40	-1.0	-0.01	-20	-1.0	-3.0	10	1.0	0.08	0.24	10
SMP4119	-40	-1.0	-0.01	-20	-2.0	-6.0	10	1.0	0.2	0.6	10
SMP4220	-30	-10	-1.0	-15	—	-4.0	15	1.0	0.5	3.0	15
SMP4221	-30	-10	-1.0	-15	—	-6.3	15	1.0	2.0	6.0	15
SMP4222	-30	-10	-1.0	-15	—	-8.0	15	1.0	5.0	15	15
SMP4223	-30	-10	-1.0	-20	—	-8.0	15	1.0	3.0	18	15
SMP4224	-30	-10	-1.0	-20	—	-8.0	15	1.0	2.0	20	15
SMP4302	-30	-1.0	-1.0	-15	—	-4.0	20	10	0.5	5.0	20
SMP4303	-30	-1.0	-1.0	-15	—	-6.0	20	10	4.0	10	20
SMP4304	-30	-1.0	-1.0	-15	—	-10	20	10	0.5	15	20
SMP4338	-50	-1.0	-1.0	-30	-0.3	-1.0	15	100	0.2	0.6	15
SMP4339	-50	-1.0	-1.0	-30	-0.6	-1.8	15	100	0.5	1.5	15

	$g_{fs}$			$C_{iss}$		$C_{rss}$		$r_{ds}$	Process
	Min (mS)	Max (mS)	@ $V_{DS}$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max ( $\Omega$ )	
SMP3369	0.6	2.5	30	20	8.0	3.0	30	—	NJ16
SMP3370	0.3	2.5	30	20	8.0	3.0	30	—	NJ16
SMP3458	2.5	10	20	18	[-10]	5.0	30	—	NJ32
SMP3459	1.5	6.0	20	18	[- 8.0]	5.0	30	—	NJ16
SMP3460	0.8	4.5	20	18	[- 4.0]	5.0	30	—	NJ16
SMP3819	2.0	6.5	15	8.0	15	4.0	15	—	NJ32
SMP3821	1.5	4.5	15	6.0	15	2.0	15	—	NJ32
SMP3822	3.0	6.5	15	6.0	15	2.0	15	—	NJ32
SMP3823	3.5	6.5	15	6.0	15	2.0	15	—	NJ32
SMP3824	3.5	6.5	15	6.0	15	2.0	15	250	NJ32
SMP3966	—	—	—	6.0	20	1.5	[- 7.0]	220	NJ32
SMP3967	2.5	—	20	5.0	20	1.3	20	—	NJ26
SMP3967A	2.5	—	20	5.0	20	1.3	20	—	NJ26
SMP3968	2.0	—	20	5.0	20	1.3	20	—	NJ26
SMP3968A	2.0	—	20	5.0	20	1.3	20	—	NJ26
SMP3969	1.3	—	20	5.0	20	1.3	20	—	NJ16
SMP3969A	1.3	—	20	5.0	20	1.3	20	—	NJ16
SMP3970	—	—	—	25	20	6.0	[-12]	30	NJ132
SMP3971	—	—	—	25	20	6.0	[-12]	60	NJ132
SMP3972	—	—	—	25	20	6.0	[-12]	100	NJ132
SMP4091	—	—	—	16	20	5.0	[- 20]	30	NJ132
SMP4092	—	—	—	16	20	5.0	[- 20]	50	NJ132
SMP4093	—	—	—	16	20	5.0	[- 20]	80	NJ132
SMP4117	0.07	0.21	10	3.0	10	1.5	10	—	NJ01
SMP4118	0.08	0.25	10	3.0	10	1.5	10	—	NJ01
SMP4119	0.1	0.33	10	3.0	10	1.5	10	—	NJ01
SMP4220	1.0	4.0	15	6.0	15	2.0	15	—	NJ16
SMP4221	2.0	5.0	15	6.0	15	2.0	15	—	NJ16
SMP4222	2.5	6.0	15	3.0	15	2.0	15	—	NJ32
SMP4223	3.0	7.0	15	6.0	15	2.0	15	—	NJ32
SMP4224	2.0	7.5	15	6.0	15	2.0	15	—	NJ32
SMP4302	1.0	—	20	6.0	15	2.0	15	—	NJ26
SMP4303	2.0	—	20	6.0	20	2.0	20	—	NJ26
SMP4304	1.0	—	20	6.0	20	3.0	20	—	NJ26
SMP4338	0.6	1.8	15	6.0	20	3.0	20	2500	NJ16
SMP4339	0.8	2.4	15	7.0	15	3.0	15	1700	NJ16

Electrical Characteristics at  $T_A = 25^\circ\text{C}$

## Small Outline (Surface Mount) Package Devices

### N-Channel Silicon Junction Field-Effect Transistors

Device Type	BV <sub>GSS</sub>		I <sub>GSS</sub>		V <sub>GS</sub> (OFF)				I <sub>DSS</sub>		
	Min (V)	@I <sub>G</sub> (μA)	Max (nA)	@V <sub>GS</sub> (V)	Limits		Conditions		Min (mA)	Max (mA)	@V <sub>DS</sub> (V)
					Min (V)	Max (V)	V <sub>DS</sub> (V)	I <sub>D</sub> (nA)			
SMP4340	-50	-1.0	-1.0	-30	-1.0	-3.0	15	100	1.2	3.6	15
SMP4341	-50	-1.0	-1.0	-30	-2.0	-6.0	15	100	3.0	9.0	15
SMP4391	-40	-1.0	-1.0	-20	-4.0	-10	20	1.0	50	150	20
SMP4392	-40	-1.0	-1.0	-20	-2.0	-5.0	20	1.0	25	100	20
SMP4393	-40	-1.0	-1.0	-20	-0.5	-3.0	20	1.0	5.0	30	20
SMP4416	-30	-1.0	-1.0	-20	—	-6.0	15	1.0	5.0	15	15
SMP4416A	-35	-1.0	-1.0	-20	-2.5	-6.0	15	1.0	5.0	15	15
SMP4856	-40	-1.0	-1.0	-20	-4.0	-10	15	1.0	50	—	15
SMP4856A	-40	-1.0	-1.0	-20	-4.0	-10	15	1.0	50	—	15
SMP4857	-40	-1.0	-1.0	-20	-2.0	-6.0	15	1.0	20	100	15
SMP4857A	-40	-1.0	-1.0	-20	-2.0	-6.0	15	1.0	20	100	15
SMP4858	-40	-1.0	-1.0	-20	-0.8	-4.0	15	1.0	8.0	80	15
SMP4858A	-40	-1.0	-1.0	-20	-0.8	-4.0	15	1.0	8.0	80	15
SMP4859	-30	-1.0	-1.0	-15	-4.0	-10	15	1.0	50	—	15
SMP4859A	-30	-1.0	-1.0	-15	-4.0	-10	15	1.0	50	—	15
SMP4860	-30	-1.0	-1.0	-15	-2.0	-6.0	15	1.0	20	100	15
SMP4860A	-30	-1.0	-1.0	-15	-2.0	-6.0	15	1.0	20	100	15
SMP4861	-30	-1.0	-1.0	-15	-0.8	-4.0	15	1.0	8.0	80	15
SMP4861A	-30	-1.0	-1.0	-15	-0.8	-4.0	15	1.0	8.0	80	15
SMP4867	-40	-1.0	-1.0	-30	-0.7	-2.0	20	1.0	0.4	1.2	20
SMP4868	-40	-1.0	-1.0	-30	-1.0	-3.0	20	1.0	1.0	3.0	20
SMP4869	-40	-1.0	-1.0	-30	-1.8	-5.0	20	1.0	2.5	7.5	20
SMP5078	-30	-1.0	-1.0	-20	-0.5	-8.0	15	1.0	4.0	25	15
SMP5103	-25	-1.0	-1.0	-15	-0.5	-4.0	15	1.0	1.0	8.0	15
SMP5104	-25	-1.0	-1.0	-15	-0.5	-4.0	15	1.0	2.0	6.0	15
SMP5105	-25	-1.0	-1.0	-15	-0.5	-4.0	15	1.0	5.0	15	15
SMP5163	-25	-1.0	-1.0	-15	-0.4	-8.0	15	1.0	1.0	40	15
SMP5245	-30	-1.0	-1.0	-20	-1.0	-6.0	15	10	5.0	15	15
SMP5246	-30	-1.0	-1.0	-20	-0.5	-4.0	15	10	1.5	7.0	15
SMP5247	-30	-1.0	-1.0	-20	-1.5	-8.0	15	10	8.0	24	15
SMP5248	-30	-1.0	-5.0	-20	-1.0	-8.0	15	10	4.0	20	15
SMP5358	-40	-1.0	-1.0	-20	-0.5	-3.0	15	100	0.5	1.0	15
SMP5359	-40	-1.0	-1.0	-20	-0.8	-4.0	15	100	0.6	1.6	15
SMP5360	-40	-1.0	-1.0	-20	-0.8	-4.0	15	100	1.5	3.0	15
SMP5361	-40	-1.0	-1.0	-20	-1.0	-6.0	15	100	2.5	5.0	15
SMP5362	-40	-1.0	-1.0	-20	-2.0	-7.0	15	100	4.0	8.0	15

	$g_{fs}$			$C_{iss}$		$C_{rss}$		$r_{ds}$	Process
	Min (mS)	Max (mS)	@ $V_{DS}$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max ( $\Omega$ )	
SMP4340	1.3	3.0	15	7.0	15	3.0	15	1500	NJ16
SMP4341	2.0	4.0	15	7.0	15	3.0	15	800	NJ16
SMP4391	—	—	—	7.0	15	3.5	- 5	30	NJ132
SMP4392	—	—	—	14	20	3.5	[- 12]	60	NJ132
SMP4393	—	—	—	14	20	3.5	[- 7.0]	100	NJ132
SMP4416	4.5	7.5	15	4.5	15	1.2	15	—	NJ26
SMP4416A	4.5	7.5	15	4.5	15	1.2	15	—	NJ26
SMP4856	—	—	—	18	[-10]	8.0	[-10]	25	NJ132
SMP4856A	—	—	—	10	[-10]	4.0	[-10]	25	NJ132
SMP4857	—	—	—	18	[-10]	8.0	[-10]	40	NJ132
SMP4857A	—	—	—	10	[-10]	3.5	[-10]	40	NJ132
SMP4858	—	—	—	18	[-10]	8.0	[-10]	60	NJ132
SMP4858A	—	—	—	10	[-10]	3.5	[-10]	60	NJ132
SMP4859	—	—	—	18	[-10]	8.0	[-10]	25	NJ132
SMP4859A	—	—	—	10	[-10]	4.0	[-10]	25	NJ132
SMP4860	—	—	—	18	[-10]	8.0	[-10]	40	NJ132
SMP4860A	—	—	—	10	[-10]	3.5	[-10]	40	NJ132
SMP4861	—	—	—	18	[-10]	8.0	[-10]	60	NJ132
SMP4861A	—	—	—	10	10	3.5	10	60	NJ132
SMP4867	0.7	2.0	20	25	20	5.0	20	—	NJ16
SMP4868	1.0	3.0	20	25	20	5.0	20	—	NJ16
SMP4869	1.3	4.0	20	25	20	5.0	20	—	NJ16
SMP5078	4.0	—	15	6.0	15	2.0	15	—	NJ26
SMP5103	2.0	8.0	15	5.0	15	1.2	15	—	NJ26
SMP5104	3.5	7.5	15	5.0	15	1.2	15	—	NJ26
SMP5105	5.0	10	15	5.0	15	1.2	15	—	NJ26
SMP5163	2.0	9.0	15	12	15	3.0	15	—	NJ26
SMP5245	4.0	—	15	4.5	15	1.5	15	—	NJ26
SMP5246	2.5	—	15	4.5	15	1.5	15	—	NJ26
SMP5247	4.0	—	15	4.5	15	1.5	15	—	NJ26
SMP5248	3.0	—	15	6.0	15	2.0	15	—	NJ26
SMP5358	1.0	3.0	15	6.0	15	2.0	15	—	NJ16
SMP5359	1.2	3.6	15	6.0	15	2.0	15	—	NJ16
SMP5360	1.4	4.2	15	6.0	15	2.0	15	—	NJ16
SMP5361	1.5	4.5	15	6.0	15	2.0	15	—	NJ16
SMP5362	2.0	5.5	15	6.0	15	2.0	15	—	NJ32

Electrical Characteristics at  $T_A = 25^\circ\text{C}$

## Small Outline (Surface Mount) Package Devices

### N-Channel Silicon Junction Field-Effect Transistors

Device Type	BV <sub>GSS</sub>		I <sub>GSS</sub>		V <sub>GS</sub> (OFF)				I <sub>DSS</sub>		
	Min (V)	@I <sub>G</sub> (μA)	Max (nA)	@V <sub>GS</sub> (V)	Limits		Conditions		Min (mA)	Max (mA)	@V <sub>DS</sub> (V)
					Min (V)	Max (V)	V <sub>DS</sub> (V)	I <sub>D</sub> (nA)			
SMP5363	-40	-1.0	-1.0	-20	-2.5	-8.0	15	100	7.0	14	15
SMP5364	-40	-1.0	-1.0	-20	-2.5	-8.0	15	100	9.0	18	15
SMP5397	-25	-1.0	-1.0	-15	-1.0	-6.0	10	1.0	10	30	10
SMP5398	-25	-1.0	-1.0	-15	-1.0	-6.0	10	1.0	5.0	40	10
SMP5457	-25	-10	-1.0	-15	-0.5	-6.0	15	10	1.0	5.0	15
SMP5458	-25	-10	-1.0	-15	-1.0	-7.0	15	10	2.0	9.0	15
SMP5459	-25	-10	-1.0	-15	-2.0	-8.0	15	10	4.0	16	15
SMP5484	-25	-1.0	-1.0	-20	-0.3	-3.0	15	10	1.0	5.0	15
SMP5485	-25	-1.0	-1.0	-20	-0.5	-4.0	15	10	4.0	10	15
SMP5486	-25	-1.0	-1.0	-20	-2.0	-6.0	15	10	8.0	20	15
SMP5555	-25	-1.0	-1.0	-15	—	-12	12	10	15	—	15
SMP5556	-30	-1.0	-1.0	-15	-0.2	-4.0	15	1.0	0.5	2.5	15
SMP5557	-30	-1.0	-1.0	-15	-0.8	-5.0	15	1.0	2.0	5.0	15
SMP5558	-30	-1.0	-1.0	-15	-1.5	-6.0	15	1.0	4.0	10	15
SMP5638	-30	-10	-1.0	-15	—	-12	15	1.0	50	—	20
SMP5639	-30	-10	-1.0	-15	—	-8.0	15	1.0	25	—	20
SMP5640	-30	-10	-1.0	-15	—	-6.0	15	1.0	5.0	—	20
SMP5653	-30	-10	-1.0	-15	—	-12	15	1.0	40	—	20
SMP5654	-25	-10	-10	-15	—	-8.0	15	1.0	15	—	20
SMP5668	-25	-10	-1.0	-15	-0.2	-4.0	15	10	1.0	5.0	15
SMP5669	-25	-10	-1.0	-15	-1.0	-6.0	15	10	4.0	10	15
SMP5670	-25	-10	-1.0	-15	-3.0	-8.0	15	10	8.0	20	15
SMP5949	-30	-10	-1.0	-15	-3.0	-7.0	15	100	12	18	15
SMP5950	-30	-1.0	-1.0	-15	-2.5	-6.0	15	100	10	15	15
SMP5951	-30	-1.0	-1.0	-15	-2.0	-5.0	15	100	7.0	13	15
SMP5952	-30	-1.0	-1.0	-15	-1.3	-3.5	15	100	4.0	8.0	15
SMP5953	-30	-1.0	-1.0	-15	-0.8	-3.0	15	100	2.5	5.0	15
SMP6451	-20	-1.0	-1.0	-15	-0.5	-3.5	10	1.0	5.0	20	10
SMP6452	-25	-1.0	-1.0	-15	-0.5	-3.5	10	1.0	5.0	20	10
SMP6453	-20	-1.0	-1.0	-10	-0.75	-5.0	10	1.0	15	50	10
SMP6454	-25	-1.0	-1.0	15	-0.75	-5.0	10	1.0	15	50	10
SMPBC264A	-30	-1.0	-10	-20	-0.5	—	15	10	2.0	4.5	15
SMPBC264B	-30	-1.0	-10	-20	-0.5	—	15	10	3.5	6.5	15
SMPBC264C	-30	-1.0	-10	-20	-0.5	—	15	10	5.0	8.0	15
SMPBC264D	-30	-0.1	-10	-20	-0.5	—	15	10	7.0	12	15
SMPBF244A	-30	-1.0	-10	-20	-0.5	—	15	10	2.0	6.5	15
SMPBF244B	-30	-1.0	-10	-20	-0.5	—	15	10	6.0	15	15

	$g_{fs}$			$C_{iss}$		$C_{rss}$		$r_{ds}$	Process
	Min (mS)	Max (mS)	@ $V_{DS}$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max ( $\Omega$ )	
SMP5363	2.5	6.0	15	6.0	15	2.0	15	—	NJ32
SMP5364	2.7	6.5	15	6.0	15	2.0	15	—	NJ32
SMP5397	6.0	10	10	5.0	10	1.2	10	—	NJ26L
SMP5398	5.5	10	10	5.5	10	1.3	10	—	NJ26L
SMP5457	1.0	5.0	15	7.0	15	3.0	15	—	NJ32
SMP5458	1.5	5.5	15	7.0	15	3.0	15	—	NJ32
SMP5459	2.0	6.0	15	7.0	15	3.0	15	—	NJ32
SMP5484	3.0	6.0	15	5.0	15	1.0	15	—	NJ26
SMP5485	3.5	7.0	15	5.0	15	1.0	15	—	NJ26
SMP5486	4.0	8.0	15	5.0	15	1.2	15	—	NJ26
SMP5555	—	—	—	5.0	15	1.2	[-10]	—	NJ26
SMP5556	1.5	6.5	15	6.0	15	3.0	15	—	NJ16
SMP5557	1.5	6.5	15	6.0	15	3.0	15	—	NJ16
SMP5558	1.5	6.5	15	6.0	15	3.0	15	—	NJ16
SMP5638	—	—	—	10	[-12]	4.0	[-12]	30	NJ132
SMP5639	—	—	—	10	[-12]	4.0	[-12]	60	NJ72
SMP5640	—	—	—	10	[-12]	4.0	[-12]	100	NJ72
SMP5653	—	—	—	10	[-12]	3.5	[-12]	50	NJ72
SMP5654	—	—	—	10	[-8.0]	3.5	[-8.0]	100	NJ72
SMP5668	1.0	—	15	7.0	15	3.0	15	—	NJ32
SMP5669	1.6	—	15	7.0	15	3.0	15	—	NJ32
SMP5670	2.0	—	15	7.0	15	3.0	15	—	NJ32
SMP5949	3.0	—	15	6.0	15	2.0	15	—	NJ32
SMP5950	3.0	—	15	6.0	15	2.0	15	—	NJ32
SMP5951	3.0	—	15	6.0	15	2.0	15	—	NJ32
SMP5952	1.0	—	15	6.0	15	2.0	15	—	NJ32
SMP5953	1.0	—	15	6.0	15	2.0	15	—	NJ32
SMP6451	—	—	—	25	10	5.0	10	—	NJ132L
SMP6452	—	—	—	25	10	5.0	10	—	NJ132L
SMP6453	—	—	—	25	10	5.0	10	—	NJ132L
SMP6454	—	—	—	25	10	5.0	10	—	NJ132L
SMPBC264A	2.5	—	15	4.0	15	1.2	15	—	NJ26
SMPBC264B	3.0	—	15	4.0	15	1.2	15	—	NJ26
SMPBC264C	3.5	—	15	4.0	15	1.2	15	—	NJ26
SMPBC264D	4.0	—	15	4.0	15	1.2	15	—	NJ26
SMPBF244A	3.0	6.5	15	—	—	—	—	—	NJ26
SMPBF244B	3.0	6.5	15	—	—	—	—	—	NJ26

Electrical Characteristics at  $T_A = 25^\circ\text{C}$

## Small Outline (Surface Mount) Package Devices

### N-Channel Silicon Junction Field-Effect Transistors

Device Type	BV <sub>GSS</sub>		I <sub>GSS</sub>		V <sub>GS</sub> (OFF)				I <sub>DSS</sub>		
	Min (V)	@I <sub>G</sub> (μA)	Max (nA)	@V <sub>GS</sub> (V)	Limits		Conditions		Min (mA)	Max (mA)	@V <sub>DS</sub> (V)
					Min (V)	Max (V)	V <sub>DS</sub> (V)	I <sub>D</sub> (nA) [I <sub>D</sub> ] (μA)			
SMPBF244C	-30	-1.0	-5.0	-20	-0.5	-8.0	15	10	12	25	15
SMPBF246A	-25	-1.0	-5.0	-15	-0.6	-14.5	15	10	30	80	15
SMPBF246B	-25	-1.0	-5.0	-15	-0.6	-14.5	15	10	60	140	15
SMPBF246C	-25	-1.0	-5.0	-15	-0.6	-14.5	15	10	110	250	15
SMPBF256A	-30	-1.0	-5.0	-20	-0.5	-7.5	15	10	3.0	7.0	15
SMPBF256B	-30	-1.0	-5.0	-20	-0.5	-7.5	15	10	6.0	13	15
SMPBF256C	-30	-1.0	-5.0	-20	-0.5	-7.5	15	10	11	18	15
SMPJ108	-25	-1.0	-3.0	-15	-3.0	-10.0	5.0	[1.0]	80	—	15
SMPJ109	-25	-1.0	-3.0	-15	-2.0	-6.0	5.0	[1.0]	40	—	15
SMPJ110	-25	-1.0	-3.0	-15	-0.5	-4.0	5.0	[1.0]	10	—	15
SMPJ110A	-25	-1.0	-3.0	-15	-0.5	-4.0	5.0	[1.0]	10	—	15
SMPJ111	-35	-1.0	-1.0	-15	-3.0	-10	5.0	1.0	20	—	15
SMPJ111A	-40	-1.0	-2.0	-1.0	-5.0	-10	5.0	1.0	30	—	15
SMPJ112	-35	-1.0	-1.0	-15	-1.0	-5.0	5.0	1.0	5.0	—	15
SMPJ112A	-40	-1.0	-2.0	-1.0	-2.0	-7.0	5.0	1.0	15	—	15
SMPJ113	-35	-1.0	-1.0	-15	—	-3.0	5.0	1.0	2.0	—	15
SMPJ113A	-40	-1.0	-2.0	-1.0	-1.0	-5.0	5.0	1.0	8.0	—	15
SMPJ201	-40	-1.0	-1.0	-20	-0.3	-1.5	20	10	0.2	1.0	20
SMPJ202	-40	-1.0	-1.0	-20	-0.8	-4.0	20	10	0.9	4.5	20
SMPJ203	-40	-1.0	-1.0	-20	-2.0	-10	20	10	4.0	20	20
SMPJ210	-25	-1.0	-1.0	-15	-1.0	-3.0	15	1.0	2.0	15	15
SMPJ211	-25	-1.0	-1.0	-15	-25	-4.5	15	1.0	7.0	20	15
SMPJ212	-25	-1.0	-1.0	-15	-4.0	-6.0	15	1.0	15	40	15
SMPJ230	-40	-1.0	-1.0	-30	-0.5	-3.0	20	1.0	0.7	3.0	20
SMPJ231	-40	-1.0	-1.0	-30	-1.5	-5.0	20	1.0	2.0	6.0	20
SMPJ232	-40	-1.0	-1.0	-30	-3.0	-6.0	20	1.0	5.0	10	20
SMPJ300A	-25	-1.0	-1.0	-15	-1.5	-3.0	10	1.0	4.0	9.0	10
SMPJ300B	-25	-1.0	-1.0	-15	-2.0	-4.0	10	1.0	7.0	15	10
SMPJ300C	-25	-1.0	-1.0	-15	-2.5	-5.0	10	1.0	12	25	10
SMPJ304	-30	-1.0	-1.0	-20	-2.0	-6.0	15	1.0	5.0	15	15
SMPJ305	-30	-1.0	-1.0	-20	-0.5	-3.0	15	1.0	1.0	8.0	15
SMPJ308	-25	-1.0	-1.0	-15	-1.0	-6.5	10	1.0	12	60	10
SMPJ309	-25	-1.0	-1.0	-15	-1.0	-4.0	10	1.0	12	30	10
SMPJ310	-25	-1.0	-1.0	-15	-2.0	-6.5	10	1.0	24	60	10
SMPU1897	-40	-1.0	-1.0	-20	-5.0	-10	20	1.0	30	—	20
SMPU1898	-40	-1.0	-1.0	-20	-2.0	-7.0	20	1.0	15	—	20
SMPU1899	-40	-1.0	-1.0	-20	-1.0	-5.0	20	1.0	8.0	—	20



	$g_{fs}$			$C_{iss}$		$C_{rss}$		$r_{ds}$	Process
	Min (mS)	Max (mS)	@ $V_{DS}$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max ( $\Omega$ )	
SMPBF244C	3.5	6.5	15	—	—	—	—	—	NJ26
SMPBF246A	—	—	—	—	—	—	—	—	NJ132
SMPBF246B	—	—	—	—	—	—	—	—	NJ132
SMPBF246C	—	—	—	—	—	—	—	—	NJ132
SMPBF256A	4.5	—	15	4.5	15	1.2	15	—	NJ26
SMPBF256B	4.5	—	15	4.5	15	1.2	15	—	NJ26
SMPBF256C	4.5	—	15	4.5	15	1.2	15	—	NJ26
SMPJ108	—	—	—	85	—	15	[-10]	8	NJ450
SMPJ109	—	—	—	85	—	15	[-10]	12	NJ450
SMPJ110	—	—	—	85	—	15	[-10]	18	NJ450
SMPJ110A	—	—	—	85	—	15	[-10]	25	NJ450
SMPJ111	—	—	—	28	15	5.0	[-10]	30	NJ132
SMPJ111A	—	—	—	28	15	5.0	[-10]	30	NJ132
SMPJ112	—	—	—	28	15	5.0	[-10]	50	NJ132
SMPJ112A	—	—	—	28	15	5.0	[-10]	50	NJ72
SMPJ113	—	—	—	28	15	5.0	[-10]	100	NJ72
SMPJ113A	—	—	—	28	15	5.0	[-10]	80	NJ72
SMPJ201	0.5	—	20	4.0	20	1.0	20	—	NJ16
SMPJ202	1.0	—	20	4.0	20	1.0	20	—	NJ16
SMPJ203	1.5	—	20	6.0	20	1.2	20	—	NJ16
SMPJ210	4.0	12	15	—	—	—	—	—	NJ26L
SMPJ211	6.0	12	15	—	—	—	—	—	NJ26L
SMPJ212	7.0	12	15	—	—	—	—	—	NJ26L
SMPJ230	1.0	3.5	20	—	—	—	—	—	NJ16
SMPJ231	1.5	4.0	20	—	—	—	—	—	NJ16
SMPJ232	2.5	5.0	20	—	—	—	—	—	NJ16
SMPJ300A	4.5	9.0	10	5.5	10	1.7	10	—	NJ26L
SMPJ300B	4.5	9.0	10	5.5	10	1.7	10	—	NJ26L
SMPJ300C	4.5	9.0	10	5.5	10	1.7	10	—	NJ26L
SMPJ304	4.5	7.5	15	—	—	—	—	—	NJ26
SMPJ305	3.0	—	15	—	—	—	—	—	NJ26
SMPJ308	8.0	—	10	7.5	[-10]	3.5	[-10]	—	NJ72
SMPJ309	10	—	10	7.5	[-10]	3.5	[-10]	—	NJ72
SMPJ310	8.0	—	10	7.5	[-10]	3.5	[-10]	—	NJ72L
SMPU1897	—	—	—	16	20	3.5	20	30	NJ132
SMPU1898	—	—	—	16	20	3.5	20	50	NJ132
SMPU1899	—	—	—	16	20	3.5	20	80	NJ132

Electrical Characteristics at  $T_A = 25^\circ\text{C}$

## Small Outline (Surface Mount) Package Devices

### P-Channel Silicon Junction Field-Effect Transistors

Device Type	BV <sub>GSS</sub>		I <sub>GSS</sub>		V <sub>GS</sub> (OFF)				I <sub>DSS</sub>		
	Min (V)	@I <sub>G</sub> (μA)	Max (nA)	@V <sub>GS</sub> (V)	Limits		Conditions		Min (mA)	Max (mA)	@V <sub>DS</sub> (V)
					Min (V)	Max (V)	V <sub>DS</sub> (V)	I <sub>D</sub> (nA)			
SMP2608	30	1.0	10	5	1.0	4.0	-5	-1.0	-0.9	-4.5	-5.0
SMP2609	30	1.0	10	5	1.0	4.0	-5	-1.0	-2.0	-10	-5.0
SMP3329	20	10	10	10	—	6.0	-15	-10	-1.0	-3.0	-10
SMP3330	20	10	10	10	—	6.0	-15	-10	-2.0	-6.0	-10
SMP3331	20	10	10	10	—	8.0	-15	-10	-5.0	-15	-10
SMP3332	20	10	10	10	—	6.0	-15	-10	-1.0	-6.0	-10
SMP3820	20	10	20	10	—	8.0	-10	-10	-0.3	-15	-10
SMP3993	25	1.0	1.0	15	4.0	9.5	-10	-1.0	-10	—	-10
SMP3994	25	1.0	1.0	15	1.0	5.5	-10	-1.0	-2.0	—	-10
SMP4381	25	1.0	1.0	15	1.0	5.0	-15	-1.0	-3.0	-12	-15
SMP5018	30	1.0	2.0	15	—	10	-15	-1.0	-10	—	-20
SMP5019	30	1.0	2.0	15	—	5.0	-15	-1.0	-5.0	—	-20
SMP5020	25	1.0	1.0	15	0.3	1.5	-15	-1.0	-0.3	-1.2	-15
SMP5021	25	1.0	1.0	15	0.5	2.5	-15	-1.0	-1.0	-3.5	-15
SMP5033	20	10	10	15	0.3	2.5	-15	-1.0	-0.3	-3.5	-15
SMP5114	30	1.0	0.5	20	5.0	10	-15	-1.0	-30	-90	-18
SMP5115	30	1.0	0.5	20	3.0	6.0	-15	-1.0	—	-60	-15
SMP5116	30	1.0	0.5	20	1.0	4.0	-15	-1.0	-5.0	-25	-15
SMP5460	40	10	5.0	20	0.75	6.0	-15	-1.0	-1.0	-5.0	-15
SMP5461	40	10	5.0	20	1.0	7.5	-15	-1.0	-2.0	-9.0	-15
SMP5462	40	10	5.0	20	1.8	9.0	-15	-1.0	-4.0	-16	-15
SMPJ174	30	1.0	1.0	20	5.0	10	-15	-10	-20	-135	-15
SMPJ175	30	1.0	1.0	20	3.0	6.0	-15	-10	-7.0	-70	-15
SMPJ176	30	1.0	1.0	20	1.0	4.0	-15	-10	-2.0	-35	-15
SMPJ177	30	1.0	1.0	20	0.8	2.25	-15	-10	-1.5	-20	-15
SMPJ270	30	1.0	1.0	20	0.5	2.0	-15	-1.0	-2.0	-15	-15
SMPJ271	30	1.0	1.0	20	1.5	4.5	-15	-1.0	-6.0	-50	-15
SMPP1086	30	1.0	2.0	15	—	10	-15	-1.0	-10	—	-20
SMPP1087	30	1.0	2.0	15	—	5.0	-15	-1.0	-5.0	—	-20

	$g_{fs}$			$C_{iss}$		$C_{rss}$		$r_{ds}$	Process
	Min (mS)	Max (mS)	@ $V_{DS}$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max (pF)	@ $V_{DS}$ (V) @ $[V_{GS}]$ (V)	Max ( $\Omega$ )	
SMP2608	1.0	—	- 5.0	17	- 5.4	—	—	—	PJ32
SMP2609	2.5	—	- 5.0	30	- 5.4	—	—	—	PJ32
SMP3329	—	—	—	20	- 10	—	—	—	PJ32
SMP3330	—	—	—	20	- 10	—	—	—	PJ32
SMP3331	—	—	—	20	- 10	—	—	—	PJ32
SMP3332	—	—	—	20	- 10	—	—	—	PJ32
SMP3820	0.8	5.0	10	32	- 10	16	- 10	—	PJ32
SMP3993	6.0	12	10	16	- 10	4.5	[10]	150	PJ99
SMP3994	4.0	10	10	16	- 10	4.5	[10]	300	PJ99
SMP4381	2.0	6.0	15	20	- 15	5.0	- 15	—	PJ32
SMP5018	—	—	—	45	- 15	10	[12]	75	PJ99
SMP5019	—	—	—	45	- 15	10	[7]	150	PJ99
SMP5020	1.0	3.5	15	25	- 15	7.0	15	—	PJ32
SMP5021	1.5	6.0	15	25	- 15	7.0	15	—	PJ32
SMP5033	1.0	5.0	10	25	- 15	7.0	15	—	PJ32
SMP5114	—	—	—	25	- 15	7.0	[12]	75	PJ99
SMP5115	—	—	—	25	- 15	7.0	[7.0]	100	PJ99
SMP5116	—	—	—	25	- 15	7.0	[5.0]	150	PJ99
SMP5460	1.0	5.0	15	7.0	- 15	3.0	15	—	PJ32
SMP5461	1.5	5.5	15	7.0	- 15	3.0	15	—	PJ32
SMP5462	2.0	6.0	15	7.0	- 15	3.0	15	—	PJ32
SMPJ174	—	—	—	—	—	—	—	85	PJ99
SMPJ175	—	—	—	—	—	—	—	125	PJ99
SMPJ176	—	—	—	—	—	—	—	250	PJ99
SMPJ177	—	—	—	—	—	—	—	300	PJ99
SMPJ270	6.0	15	-15	—	—	—	—	—	PJ99
SMPJ271	8.0	18	-15	—	—	—	—	—	PJ99
SMPP1086	—	—	—	45	- 15	10	[12]	75	PJ99
SMPP1087	—	—	—	45	- 15	10	[7.0]	150	PJ99

### Electrical Characteristics at $T_A = 25^\circ\text{C}$