



# SiC Devices Solutions



## SiC 650V MOSFET

Part No.	Package	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Drain Current(A) T <sub>C</sub> =25 C	V <sub>GS(th)</sub> (V) (Typ.)	Gate Charge Total Q <sub>g</sub> (nc)	Total Power Dissipation P <sub>TOT</sub> (W)	Junction Temperature T <sub>J(MAX)</sub> ( C )
NDS010001	TO-247-3	650	20	72	2.6	187	312	175
NDS010002		650	30	55	2.6	110	187	175
NDS010003		650	40	45	2.6	80	168	175
NDS010004		650	60	30	2.6	50	150	175
NDS010005	TO-247-4	650	20	72	2.6	187	312	175
NDS010006		650	20	72	2.6	187	312	175
NDS010007		650	30	55	2.6	110	187	175
NDS010008		650	40	45	2.6	80	168	175
NDS010009		650	60	30	2.6	50	150	175
NDS010010		650	70	25	2.6	50	150	175
NDS010011	TO-263-7	650	20	72	2.6	187	312	175
NDS010012		650	20	72	2.6	187	312	175
NDS010013		650	30	55	2.6	110	187	175
NDS010014		650	40	45	2.6	80	168	175
NDS010015	TOLL	650	60	30	2.6	50	150	175
NDS010016		650	20	72	2.6	187	312	175
NDS010017		650	30	55	2.6	110	187	175
NDS010018		650	60	30	2.6	50	150	175

## SiC 750V MOSFET

Part No.	Package	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Drain Current(A) T <sub>C</sub> =25 C	V <sub>GS(th)</sub> (V) (Typ.)	Gate Charge Total Q <sub>g</sub> (nc)	Total Power Dissipation P <sub>TOT</sub> (W)	Junction Temperature T <sub>J(MAX)</sub> ( C )
NDS010019	TO-247-3	750	11	150	2.6	298	576	175
NDS010020	TO-247-4	750	11	150	2.6	298	576	175

## SiC 900V MOSFET

Part No.	Package	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Drain Current(A) T <sub>C</sub> =25 C	V <sub>GS(th)</sub> (V) (Typ.)	Gate Charge Total Q <sub>g</sub> (nc)	Total Power Dissipation P <sub>TOT</sub> (W)	Junction Temperature T <sub>J(MAX)</sub> ( C )
NDS010021	TO-247-3	900	60	39	2.6	61	153	175
NDS010022	TO-247-4	900	60	39	2.6	61	153	175
NDS010023	TO-263-7	900	60	39	2.6	61	153	175

## SiC 1200V MOSFET

Part No.	Package	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Drain Current(A) T <sub>C</sub> =25 C	V <sub>GS(th)</sub> (V) (Typ.)	Gate Charge Total Q <sub>g</sub> (nc)	Total Power Dissipation P <sub>TOT</sub> (W)	Junction Temperature T <sub>J(MAX)</sub> ( C)	
NDS010024	TO-247-3	1200	16	120	2.6	269	576	175	
NDS010025		1200	30	75	2.6	155	334	175	
NDS010026		1200	40	62	2.6	112	269	175	
NDS010027		1200	40	65	2.6	120	375	175	
NDS010028		1200	75	33	2.6	103	136	175	
NDS010029		1200	80	36	2.6	79	192	175	
NDS010030		1200	140	19	2.6	36	98	175	
NDS010031	TO-247-4	1200	16	120	2.6	269	576	175	
NDS010032		1200	30	75	2.6	155	334	175	
NDS010033		1200	40	62	2.6	112	269	175	
NDS010034		1200	40	65	2.6	120	375	175	
NDS010035		1200	75	33	2.6	103	136	175	
NDS010036		1200	80	80	2.6	79	192	175	
NDS010037		1200	140	19	2.6	36	98	175	
NDS010038	TO-263-7	1200	30	75	2.6	155	334	175	
NDS010039		1200	40	62	2.6	112	269	175	
NDS010040		1200	40	65	2.6	120	375	175	
NDS010041		1200	75	33	2.6	103	136	175	
NDS010042		1200	140	19	2.6	36	98	175	
NDS010043		SOT-227	1200	16	120	2.6	269	576	175
NDS010044			1200	40	62	2.6	112	269	175

## SiC 1700V MOSFET

Part No.	Package	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Drain Current(A) T <sub>C</sub> =25 C	V <sub>GS(th)</sub> (V) (Typ.)	Gate Charge Total Q <sub>g</sub> (nc)	Total Power Dissipation P <sub>TOT</sub> (W)	Junction Temperature T <sub>J(MAX)</sub> ( C)
NDS010045	TO-247-3	1700	20	120	2.6	262	535	175
NDS010046		1700	40	72	2.6	193	437	150
NDS010047		1700	650	7	2.6	23	69	150
NDS010048		1700	1000	5	2.6	21.8	69	150
NDS010049	TO-247-4	1700	20	120	2.6	262	535	175
NDS010050		1700	40	72	2.6	193	437	150
NDS010051		1700	1000	5	2.6	21.8	69	150
NDS010052	TO-263-7	1700	1000	5	2.6	21.8	69	150
NDS010053	SOT-227	1700	20	120	2.6	262	535	175

## SiC High Voltage MOSFET

Part No.	Package	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Drain Current(A) T <sub>C</sub> =25 C	V <sub>GS(th)</sub> (V) (Typ.)	Gate Charge Total Q <sub>g</sub> (nc)	Total Power Dissipation P <sub>TOT</sub> (W)	Junction Temperature T <sub>J(MAX)</sub> ( C )
NDS010054	TO-247-3	2000	25	96	2.6	266	535	175
NDS010055	TO-247-4	2000	25	96	2.6	266	535	175
NDS010056	TO-247-4	3300	50	68	2.6	372	560	175

## SiC MOSFET for EV

Part No.	Package	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Drain Current(A) T <sub>C</sub> =25 C	V <sub>GS(th)</sub> (V) (Typ.)	Gate Charge Total Q <sub>g</sub> (nc)	Total Power Dissipation P <sub>TOT</sub> (W)	Junction Temperature T <sub>J(MAX)</sub> ( C )	
NDS010057	TO-247-3	1200	75	33	2.6	103	136	175	
NDS010058	TO-247-4	650	20	75	2.6	187	312	175	
NDS010059		750	11	150	2.6	298	576	175	
NDS010060		900	60	32	2.6	50	150	175	
NDS010061		1200	16	120	2.6	269	576	175	
NDS010062		1200	30	85	2.6	187	312	175	
NDS010063		1200	40	62	2.6	112	269	175	
NDS010064		1200	75	33	2.6	103	136	175	
NDS010065		1200	140	19	2.6	36	98	175	
NDS010066		TO-263-7	650	20	72	2.6	187	312	175
NDS010067			900	60	32	2.6	50	150	175
NDS010068	1200		30	72	2.6	155	334	175	
NDS010069	1200		40	65	2.6	125	316	175	
NDS010070	1200		75	33	2.6	103	136	175	
NDS010071	1200		140	19	2.6	36	98	175	

## SiC 650V SBD

Part No.	V <sub>R</sub> (V)	Package	I <sub>F</sub> (A)	V <sub>F</sub> (V)	I <sub>FSM</sub> (A)	Q <sub>C</sub> (nc)	P <sub>TOT</sub> (W)	T <sub>J(MAX)</sub> ( C )
NDS020001	650	TO-252	4	1.28	32	11.5	60	175
NDS020002	650		6	1.27	52	17	83	175
NDS020003	650		8	1.27	72	21	107	175
NDS020004	650		10	1.27	86	25	150	175
NDS020005	650	TO-263-2	10	1.27	86	25	150	175

## SiC 650V SBD

Part No.	$V_R(V)$	Package	$I_F(A)$	$V_F(V)$	$I_{FSM}(A)$	$Q_C(nc)$	$P_{TOT}(W)$	$T_{J(MAX)}(C)$
NDS020006	650	TO-220C-2L	4	1.28	32	11.5	60	175
NDS020007	650		6	1.27	52	17	83	175
NDS020008	650		8	1.27	70	21	107	175
NDS020009	650		10	1.27	86	25	150	175
NDS020010	650		20	1.3	160	41	214	175
NDS020011	650	TO-220FM	4	1.28	28	11.5	30	175
NDS020012	650		6	1.27	50	17	25	175
NDS020013	650		8	1.27	72	21	27	175
NDS020014	650		10	1.27	80	25	28	175
NDS020015	650	TO-247-2	20	1.3	160	41	214	175
NDS020016	650		30	1.3	180	55	268	175
NDS020017	650	TO-247-3	20	1.27	172	50	300	175
NDS020018	650		40	1.27	320	82	428	175

## SiC 1200V SBD

Part No.	$V_R(V)$	Package	$I_F(A)$	$V_F(V)$	$I_{FSM}(A)$	$Q_C(nc)$	$P_{TOT}(W)$	$T_{J(MAX)}(C)$
NDS020019	1200	TO-252	2	1.55	20	8	58	175
NDS020020	1200		5	1.4	55	25	150	175
NDS020021	1200		10	1.4	90	41	166	175
NDS020022	1200	TO-263-2	10	1.4	90	41	166	175
NDS020023	1200		15	1.4	135	62	200	175
NDS020024	1200		20	1.4	180	80	250	175
NDS020025	1200	TO-220C-2L	2	1.55	20	8	58	175
NDS020026	1200		5	1.4	55	25	150	175
NDS020027	1200		10	1.4	90	41	166	175
NDS020028	1200		15	1.4	135	62	200	175
NDS020029	1200		20	1.4	180	80	250	175
NDS020030	1200	TO-247-2	10	1.4	90	25	140	175
NDS020031	1200		15	1.4	135	40	170	175
NDS020032	1200		20	1.4	180	52	224	175
NDS020033	1200		30	1.4	240	78	227	175
NDS020034	1200		40	1.4	300	109	288	175

## SiC 1200V SBD

Part No.	$V_R(V)$	Package	$I_F(A)$	$V_F(V)$	$I_{FSM}(A)$	$Q_C (nc)$	$P_{TOT}(W)$	$T_{J(MAX)}(C)$
NDS020035	1200	TO-247-3	20	1.4	180	82	332	175
NDS020036	1200		30	1.4	270	124	400	175
NDS020037	1200		40	1.4	360	160	500	175

## SiC high voltage SBD

Part No.	$V_R(V)$	Package	$I_F(A)$	$V_F(V)$	$I_{FSM}(A)$	$Q_C (nc)$	$P_{TOT}(W)$	$T_{J(MAX)}(C)$
NDS020038	1700	TO-247-2	10	1.5	110	110	300	175
NDS020039	1700		26	1.6	120	82	375	175
NDS020040	1700		50	1.6	250	505	390	175
NDS020041	3300	TO-220FM	1	1.7	7	20	83	175
NDS020042	3300	TO-247-2	30	2.3	90	500	300	175
NDS020043	5000	DO-201	1	3.5	40	20	4	175

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Authorized Distributor Information

Note: All the data provided in this selection guide is subject to change without notice. The right is reserved to make changes to specifications and other information at any time.

