

By Category PDF

Category SiC MOSFETs

Power Devices

# SiC MOSFETs

SiC MOSFETs ————— 131

SiC MOSFETs

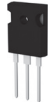

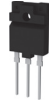


SiC MOSFETs 

P.131

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# SiC MOSFETs

## ● Quick Reference for SiC MOSFETs

V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Leaded type			Surface Mounted type				
		 TO-247 (TO-247N)	 TO-247-4L	 TO-3PFM	 TO-263-7L	 TO-263-7LA			
650	17	SCT3017AL SCT3017ALHR	10 36						
	22	SCT3022AL SCT3022ALHR	11 37						
	30	SCT3030AL SCT3030ALHR	12 38	SCT3030AR SCT3030ARHR	22 48	SCT3030AW7	28		
	60	SCT3060AL SCT3060ALHR	13 39	SCT3060AR SCT3060ARHR	23 49	SCT3060AW7	29		
	80	SCT3080AL SCT3080ALHR	14 40	SCT3080AR SCT3080ARHR	24 50	SCT3080AW7	30		
	120	<b>New</b> SCT3120AL SCT3120ALHR	15 41			SCT3120AW7	31		
750	13	SCT4013DE	55	SCT4013DR	61	SCT4013DW7	67		
	26	SCT4026DE SCT4026DEHR	56 76	SCT4026DR SCT4026DRHR	62 80	SCT4026DW7 SCT4026DW7HR	68 84	<b>New</b> SCT4026DWA <b>New</b> SCT4026DWAHR	73 87
	45	SCT4045DE SCT4045DEHR	57 77	SCT4045DR SCT4045DRHR	63 81	SCT4045DW7 SCT4045DW7HR	69 85	<b>New</b> SCT4045DWA <b>New</b> SCT4045DWAHR	74 88
1,200	18	SCT4018KE	58	SCT4018KR	64	SCT4018KW7	70		
	22	SCT3022KL SCT3022KLHR	16 42						
	30	SCT3030KL SCT3030KLHR	17 43						
	36	SCT4036KE SCT4036KEHR	59 78	SCT4036KR SCT4036KRHR	65 82	SCT4036KW7	71		
	40	SCT3040KL SCT3040KLHR	18 44	SCT3040KR SCT3040KRHR	25 51	SCT3040KW7	32		
	62	SCT4062KE SCT4062KEHR	60 79	SCT4062KR SCT4062KRHR	66 83	SCT4062KW7 SCT4062KW7HR	72 86	<b>New</b> SCT4062KWA <b>New</b> SCT4062KWAHR	75 89
	80	SCT2080KE SCT2080KEHR SCT3080KL SCT3080KLHR	1 6 19 45	SCT3080KR SCT3080KRHR	26 52	SCT3080KW7	33		
	105	SCT3105KL SCT3105KLHR	20 46	SCT3105KR SCT3105KRHR	27 53	SCT3105KW7	34		
	160	SCT2160KE SCT2160KEHR SCT3160KL <b>New</b> SCT3160KLHR	2 7 21 47			SCT3160KW7 <b>New</b> SCT3160KW7HR	35 54		
	280	SCT2280KE SCT2280KEHR	3 8						
450	SCT2450KE SCT2450KEHR	4 9							
1,700	1,150			SCT2H12NZ	5				

Note: Package is JEDEC code. ( ) : ROHM Package.

SiC MOSFETs

## SiC MOSFETs

2nd Generation (Planar type)										
No.	Part No.	Polarity (ch)	V <sub>DSS</sub> (V)	I <sub>D</sub> (A)	P <sub>D</sub> (W) (T <sub>C</sub> =25°C)	R <sub>DS(on)</sub> Typ (mΩ)	Q <sub>g</sub> Typ (nC)		Package	Automotive Grade AEC-Q101
						V <sub>GS</sub> =18V	V <sub>GS</sub> =18V	Drive Voltage (V)		
1	SCT2080KE	N	1,200	40	262	80	106	18	TO-247 (TO-247N)	—
2	SCT2160KE	N		22	165	160	62	18		—
3	SCT2280KE	N		14	108	280	36	18		—
4	SCT2450KE	N		10	85	450	27	18		—
5	SCT2H12NZ	N	1,700	3.7	35	1,150	14	18	TO-3PFM	—
6	SCT2080KEHR	N	1,200	40	262	80	106	18	TO-247 (TO-247N)	YES
7	SCT2160KEHR	N		22	165	160	62	18		YES
8	SCT2280KEHR	N		14	108	280	36	18		YES
9	SCT2450KEHR	N		10	85	450	27	18		YES
3rd Generation (Trench type)										
10	SCT3017AL	N	650	118	427	17	172	18	TO-247 (TO-247N)	—
11	SCT3022AL	N		93	339	22	133	18		—
12	SCT3030AL	N		70	262	30	104	18		—
13	SCT3060AL	N		39	165	60	58	18		—
14	SCT3080AL	N		30	134	80	48	18		—
15	SCT3120AL	N		21	103	120	38	18		—
16	SCT3022KL	N	1,200	95	427	22	178	18	TO-247 (TO-247N)	—
17	SCT3030KL	N		72	339	30	131	18		—
18	SCT3040KL	N		55	262	40	107	18		—
19	SCT3080KL	N		31	165	80	60	18		—
20	SCT3105KL	N		24	134	105	51	18		—
21	SCT3160KL	N		17	103	160	42	18		—
22	SCT3030AR	N	650	70	262	30	104	18	TO-247-4L	—
23	SCT3060AR	N		39	165	60	58	18		—
24	SCT3080AR	N		30	134	80	48	18		—
25	SCT3040KR	N	1,200	55	262	40	107	18		—
26	SCT3080KR	N		31	165	80	60	18		—
27	SCT3105KR	N		24	134	105	51	18		—
28	SCT3030AW7	N	650	70	267	30	104	18	TO-263-7L	—
29	SCT3060AW7	N		38	159	60	58	18		—
30	SCT3080AW7	N		29	125	80	48	18		—
31	SCT3120AW7	N		21	100	120	38	18		—
32	SCT3040KW7	N	1,200	56	267	40	107	18		—
33	SCT3080KW7	N		30	159	80	60	18		—
34	SCT3105KW7	N		23	125	105	51	18	—	
35	SCT3160KW7	N		17	100	160	42	18	—	
36	SCT3017ALHR	N	650	118	427	17	172	18	TO-247 (TO-247N)	YES
37	SCT3022ALHR	N		93	339	22	133	18		YES
38	SCT3030ALHR	N		70	262	30	104	18		YES
39	SCT3060ALHR	N		39	165	60	58	18		YES
40	SCT3080ALHR	N		30	134	80	48	18		YES
41	<i>New</i> SCT3120ALHR	N		21	103	120	38	18		YES
42	SCT3022KLHR	N	1,200	95	427	22	178	18	TO-247 (TO-247N)	YES
43	SCT3030KLHR	N		72	339	30	131	18		YES
44	SCT3040KLHR	N		55	262	40	107	18		YES
45	SCT3080KLHR	N		31	165	80	60	18		YES
46	SCT3105KLHR	N		24	134	105	51	18		YES
47	<i>New</i> SCT3160KLHR	N		17	103	160	42	18		YES
48	SCT3030ARHR	N	650	70	262	30	104	18	TO-247-4L	YES
49	SCT3060ARHR	N		39	165	60	58	18		YES
50	SCT3080ARHR	N		30	134	80	48	18		YES
51	SCT3040KRHR	N	1,200	55	262	40	107	18		YES
52	SCT3080KRHR	N		31	165	80	60	18		YES
53	SCT3105KRHR	N		24	134	105	51	18		YES
54	<i>New</i> SCT3160KW7HR	N		17	100	160	42	18	TO-263-7L	YES

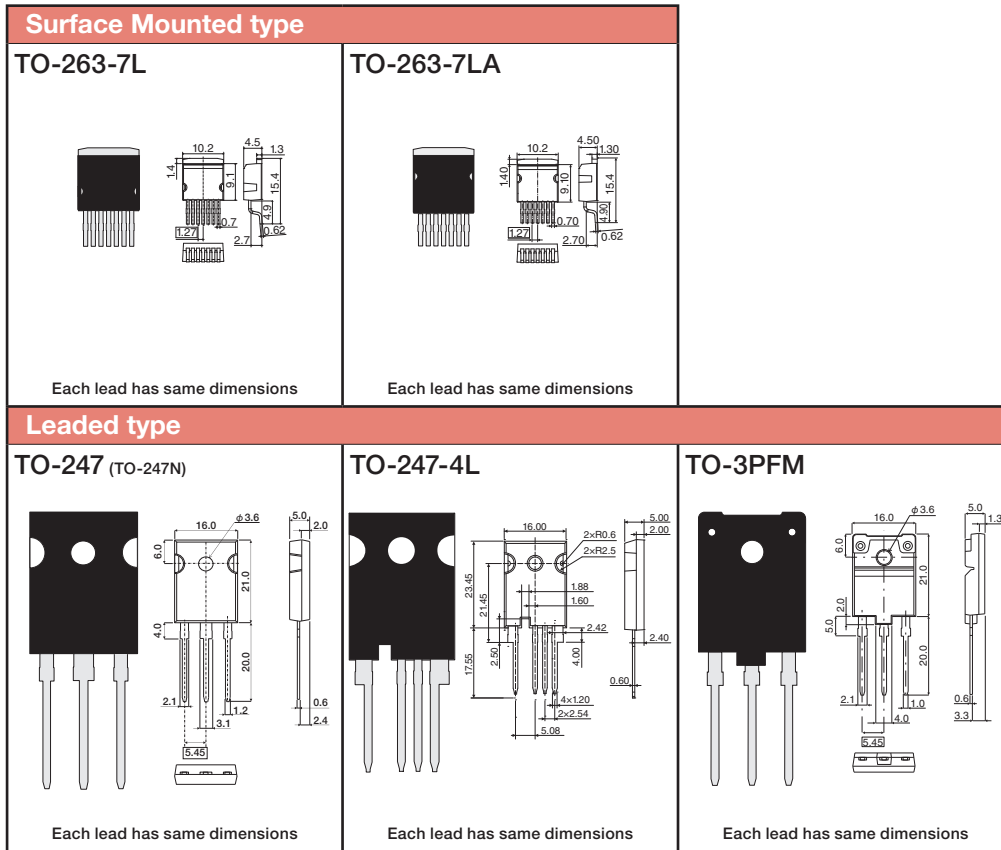
Note: Package is JEDEC code. ( ): ROHM Package.

4th Generation (Trench type)										
No.	Part No.	Polarity (ch)	V <sub>DSS</sub> (V)	I <sub>D</sub> (A)	P <sub>D</sub> (W) (T <sub>C</sub> =25°C)	R <sub>DS(on)</sub> Typ (mΩ)	Q <sub>g</sub> Typ (nC)		Package	Automotive Grade AEC-Q101
						V <sub>GS</sub> =18V	V <sub>GS</sub> =18V	Drive Voltage (V)		
55	SCT4013DE	N	750	105	312	13	170	15 to 18	TO-247 (TO-247N)	—
56	SCT4026DE	N		56	176	26	94	15 to 18		—
57	SCT4045DE	N		34	115	45	63	15 to 18		—
58	SCT4018KE	N	1,200	81	312	18	170	15 to 18		—
59	SCT4036KE	N		43	176	36	91	15 to 18		—
60	SCT4062KE	N		26	115	62	64	15 to 18		—
61	SCT4013DR	N	750	105	312	13	170	15 to 18	TO-247-4L	—
62	SCT4026DR	N		56	176	26	94	15 to 18		—
63	SCT4045DR	N		34	115	45	63	15 to 18		—
64	SCT4018KR	N	1,200	81	312	18	170	15 to 18		—
65	SCT4036KR	N		43	176	36	91	15 to 18		—
66	SCT4062KR	N		26	115	62	64	15 to 18		—
67	SCT4013DW7	N	750	98	267	13	170	15 to 18	TO-263-7L	—
68	SCT4026DW7	N		51	150	26	94	15 to 18		—
69	SCT4045DW7	N		31	93	45	63	15 to 18		—
70	SCT4018KW7	N	1,200	75	267	18	170	15 to 18		—
71	SCT4036KW7	N		40	150	36	91	15 to 18		—
72	SCT4062KW7	N		24	93	62	64	15 to 18		—
73	<b>New</b> SCT4026DWA	N	750	51	150	26	94	15 to 18	TO-263-7LA	—
74	<b>New</b> SCT4045DWA	N		31	93	45	63	15 to 18		—
75	<b>New</b> SCT4062KWA	N		1,200	24	93	62	64		15 to 18
76	SCT4026DEHR	N	750	56	176	26	94	15 to 18	TO-247 (TO-247N)	YES
77	SCT4045DEHR	N		34	115	45	63	15 to 18		YES
78	SCT4036KEHR	N		1,200	43	176	36	91		15 to 18
79	SCT4062KEHR	N	26		115	62	64	15 to 18		YES
80	SCT4026DRHR	N	750	56	176	26	94	15 to 18	TO-247-4L	YES
81	SCT4045DRHR	N		34	115	45	63	15 to 18		YES
82	SCT4036KRHR	N		1,200	43	176	36	91		15 to 18
83	SCT4062KRHR	N	26		115	62	64	15 to 18		YES
84	SCT4026DW7HR	N	750	51	150	26	94	15 to 18	TO-263-7L	YES
85	SCT4045DW7HR	N		31	93	45	63	15 to 18		YES
86	SCT4062KW7HR	N		1,200	24	93	62	64		15 to 18
87	<b>New</b> SCT4026DWAHR	N	750	51	150	26	94	15 to 18	TO-263-7LA	YES
88	<b>New</b> SCT4045DWAHR	N		31	93	45	63	15 to 18		YES
89	<b>New</b> SCT4062KWAHR	N		1,200	24	93	62	64		15 to 18

Note: Package is JEDEC code. ( ): ROHM Package.

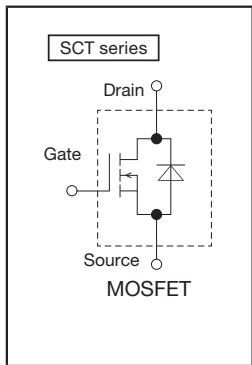
## SiC MOSFETs

### ●Dimensions (Unit: mm)



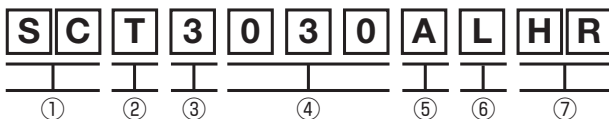
Note: Package is JEDEC code. ( ): ROHM Package. < > is Packing code.

### ●Internal Circuit



### ●Part No. Explanation

#### ●MOSFET Part No. Explanation



- ① SiC Discrete Device
- ② T → MOSFET
- ③ Generation
- ④ ON-resistance[mΩ]  
080=80mΩ  
H12=1.2Ω
- ⑤ Rated Voltage  
A → 650V  
D → 750V  
K → 1,200V  
N → 1,700V
- ⑥ Package  
E, L → TO-247 (TO-247N)  
Z → TO-3PFM  
R → TO-247-4L  
W7 → TO-263-7L  
WA → TO-263-7LA
- ⑦ Automotive Grade

### ●Packing Specifications

Package	Code	Packaging Style	Basic Ordering Unit (pcs)
TO-263-7L TO-263-7LA	TL	Embossed Tape	1,000
TO-247 (TO-247N)	C11	Tube	30
TO-247-4L	C15	Tube	30
TO-3PFM	C11	Tube	30

Note: Package is JEDEC code. ( ): ROHM Package.