

By Category PDF

Category SiC MOSFET

Power Devices

SiC MOSFET






SiC MOSFETs ————— 133

SiC MOSFETs

SiC MOSFETs P.133

SiC MOSFETs

● Quick Reference for SiC MOSFETs

V _{DS} (V)	R _{DS(on)} (mΩ)	Leaded type				Surface Mounted type		
		 TO-247 (TO-247N)	 TO-247-4L <C14>	 TO-247-4L <C15>	 TO-3PFM	 TO-263-7L		
650	17	SCT3017AL SCT3017ALHR	10 11					
	22	SCT3022AL SCT3022ALHR	12 13					
	30	SCT3030AL SCT3030ALHR	14 15	SCT3030AR	32			SCT3030AW7 38
	60	SCT3060AL SCT3060ALHR	16 17	SCT3060AR	33			SCT3060AW7 39
	80	SCT3080AL SCT3080ALHR	18 19	SCT3080AR	34			SCT3080AW7 40
	120	SCT3120AL	20					SCT3120AW7 41
750	13	☆SCT4013DE	46		☆SCT4013DR	52		☆SCT4013DW7 58
	26	☆SCT4026DE ☆SCT4026DEHR	47 64		☆SCT4026DR ☆SCT4026DRHR	53 68		☆SCT4026DW7 59 ☆SCT4026DW7HR 72
	45	☆SCT4045DE ☆SCT4045DEHR	48 65		☆SCT4045DR ☆SCT4045DRHR	54 69		☆SCT4045DW7 60 ☆SCT4045DW7HR 73
1,200	18	☆SCT4018KE	49		☆SCT4018KR	55		☆SCT4018KW7 61
	22	SCT3022KL SCT3022KLHR	21 22					
	30	SCT3030KL SCT3030KLHR	23 24					
	36	☆SCT4036KE ☆SCT4036KEHR	50 66		☆SCT4036KR ☆SCT4036KRHR	56 70		☆SCT4036KW7 62 ☆SCT4036KW7HR 74
	40	SCT3040KL SCT3040KLHR	25 26	SCT3040KR	35			SCT3040KW7 42
	62	☆SCT4062KE ☆SCT4062KEHR	51 67		☆SCT4062KR ☆SCT4062KRHR	57 71		☆SCT4062KW7 63 ☆SCT4062KW7HR 75
	80	SCT2080KE SCT2080KEHR SCT3080KL SCT3080KLHR	1 2 27 28	SCT3080KR	36			SCT3080KW7 43
	105	SCT3105KL SCT3105KLHR	29 30	SCT3105KR	37			SCT3105KW7 44
	160	SCT2160KE SCT2160KEHR SCT3160KL	3 4 31					SCT3160KW7 45
	280	SCT2280KE SCT2280KEHR	5 6					
450	SCT2450KE SCT2450KEHR	7 8						
1,700	1,150					SCT2H12NZ	9	
	750							

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

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SiC MOSFETs

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2nd Generation (Planar type)											
No.	Part No.	Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS(on)} Typ (mΩ)	Q _g Typ (nC)		Package	Automotive Grade AEC-Q101	
						V _{GS} =18V	V _{GS} =18V	Drive Voltage (V)			
1	SCT2080KE	N	1,200	40	262	80	106	18	TO-247 (TO-247N)	—	
2	SCT2080KEHR	N	1,200	40	262	80	106	18		YES	
3	SCT2160KE	N	1,200	22	165	160	62	18		—	
4	SCT2160KEHR	N	1,200	22	165	160	62	18		YES	
5	SCT2280KE	N	1,200	14	108	280	36	18		—	
6	SCT2280KEHR	N	1,200	14	108	280	36	18		YES	
7	SCT2450KE	N	1,200	10	85	450	27	18		—	
8	SCT2450KEHR	N	1,200	10	85	450	27	18		YES	
9	SCT2H12NZ	N	1,700	3.7	35	1,150	14	18	TO-3PFM	—	
3rd Generation (Trench type)											
10	SCT3017AL	N	650	118	427	17	172	18	TO-247 (TO-247N)	—	
11	SCT3017ALHR	N	650	118	427	17	172	18		YES	
12	SCT3022AL	N	650	93	339	22	133	18		—	
13	SCT3022ALHR	N	650	93	339	22	133	18		YES	
14	SCT3030AL	N	650	70	262	30	104	18		—	
15	SCT3030ALHR	N	650	70	262	30	104	18		YES	
16	SCT3060AL	N	650	39	165	60	58	18		—	
17	SCT3060ALHR	N	650	39	165	60	58	18		YES	
18	SCT3080AL	N	650	30	134	80	48	18		—	
19	SCT3080ALHR	N	650	30	134	80	48	18		YES	
20	SCT3120AL	N	650	21	103	120	38	18		—	
21	SCT3022KL	N	1,200	95	427	22	178	18		—	
22	SCT3022KLHR	N	1,200	95	427	22	178	18		YES	
23	SCT3030KL	N	1,200	72	339	30	131	18		—	
24	SCT3030KLHR	N	1,200	72	339	30	131	18		YES	
25	SCT3040KL	N	1,200	55	262	40	107	18		—	
26	SCT3040KLHR	N	1,200	55	262	40	107	18		YES	
27	SCT3080KL	N	1,200	31	165	80	60	18		—	
28	SCT3080KLHR	N	1,200	31	165	80	60	18		YES	
29	SCT3105KL	N	1,200	24	134	105	51	18		—	
30	SCT3105KLHR	N	1,200	24	134	105	51	18		YES	
31	SCT3160KL	N	1,200	17	103	160	42	18		—	
32	SCT3030AR	N	650	70	262	30	104	18		TO-247-4L <C14>	—
33	SCT3060AR	N	650	39	165	60	58	18			—
34	SCT3080AR	N	650	30	134	80	48	18			—
35	SCT3040KR	N	1,200	55	262	40	107	18			—
36	SCT3080KR	N	1,200	31	165	80	60	18			—
37	SCT3105KR	N	1,200	24	134	105	51	18	—		
38	SCT3030AW7	N	650	70	267	30	104	18	TO-263-7L	—	
39	SCT3060AW7	N	650	38	159	60	58	18		—	
40	SCT3080AW7	N	650	29	125	80	48	18		—	
41	SCT3120AW7	N	650	21	100	120	38	18		—	
42	SCT3040KW7	N	1,200	56	267	40	107	18		—	
43	SCT3080KW7	N	1,200	30	159	80	60	18		—	
44	SCT3105KW7	N	1,200	23	125	105	51	18		—	
45	SCT3160KW7	N	1,200	17	100	160	42	18		—	

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

SiC MOSFETs

4th Generation (Trench type)										
No.	Part No.	Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS(on)} Typ (mΩ)	Q _g Typ (nC)		Package	Automotive Grade AEC-Q101
						V _{GS} =18V	V _{GS} =18V	Drive Voltage (V)		
46	☆SCT4013DE	N	750	105	312	13	170	15 to 18	TO-247 (TO-247N)	—
47	☆SCT4026DE	N	750	56	176	26	94	15 to 18		—
48	☆SCT4045DE	N	750	34	115	45	63	15 to 18		—
49	☆SCT4018KE	N	1,200	81	312	18	170	15 to 18		—
50	☆SCT4036KE	N	1,200	43	176	36	91	15 to 18		—
51	☆SCT4062KE	N	1,200	26	115	62	64	15 to 18		—
52	☆SCT4013DR	N	750	105	312	13	170	15 to 18	TO-247-4L <C15>	—
53	☆SCT4026DR	N	750	56	176	26	94	15 to 18		—
54	☆SCT4045DR	N	750	34	115	45	63	15 to 18		—
55	☆SCT4018KR	N	1,200	81	312	18	170	15 to 18		—
56	☆SCT4036KR	N	1,200	43	176	36	91	15 to 18		—
57	☆SCT4062KR	N	1,200	26	115	62	64	15 to 18		—
58	☆SCT4013DW7	N	750	98	267	13	170	15 to 18	TO-263-7L	—
59	☆SCT4026DW7	N	750	51	150	26	94	15 to 18		—
60	☆SCT4045DW7	N	750	31	93	45	63	15 to 18		—
61	☆SCT4018KW7	N	1,200	75	267	18	170	15 to 18		—
62	☆SCT4036KW7	N	1,200	40	150	36	91	15 to 18		—
63	☆SCT4062KW7	N	1,200	24	93	62	64	15 to 18		—
64	☆SCT4026DEHR	N	750	56	176	26	94	15 to 18	TO-247 (TO-247N)	YES
65	☆SCT4045DEHR	N	750	34	115	45	63	15 to 18		YES
66	☆SCT4036KEHR	N	1,200	43	176	36	91	15 to 18		YES
67	☆SCT4062KEHR	N	1,200	26	115	62	64	15 to 18		YES
68	☆SCT4026DRHR	N	750	56	176	26	94	15 to 18	TO-247-4L <C15>	YES
69	☆SCT4045DRHR	N	750	34	115	45	63	15 to 18		YES
70	☆SCT4036KRHR	N	1,200	43	176	36	91	15 to 18		YES
71	☆SCT4062KRHR	N	1,200	26	115	62	64	15 to 18		YES
72	☆SCT4026DW7HR	N	750	51	150	26	94	15 to 18	TO-263-7L	YES
73	☆SCT4045DW7HR	N	750	31	93	45	63	15 to 18		YES
74	☆SCT4036KW7HR	N	1,200	40	150	36	91	15 to 18		YES
75	☆SCT4062KW7HR	N	1,200	24	93	62	64	15 to 18		YES

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

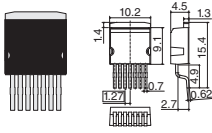
☆: Under Development

SiC MOSFETs

●Dimensions (Unit: mm)

Surface Mounted type

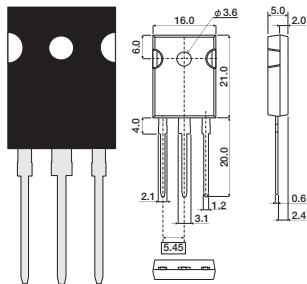
TO-263-7L



Each lead has same dimensions

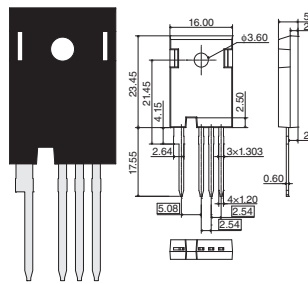
Leaded type

TO-247 (TO-247N)



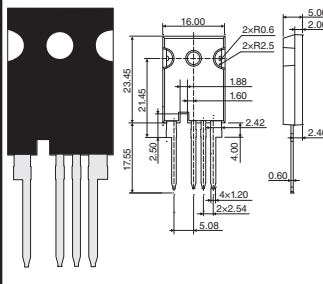
Each lead has same dimensions

TO-247-4L (C14)



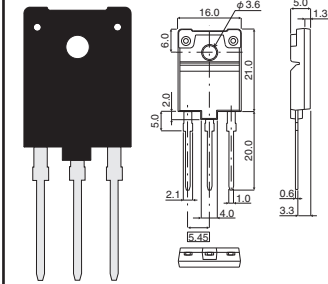
Each lead has same dimensions

TO-247-4L (C15)



Each lead has same dimensions

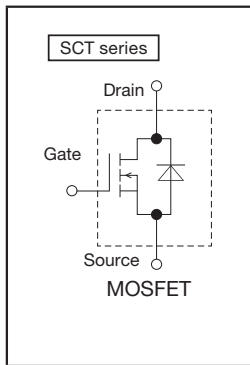
TO-3PFM



Each lead has same dimensions

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

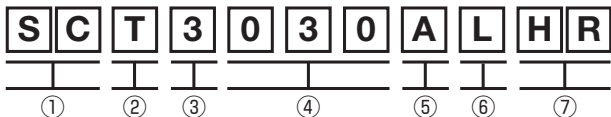
●Internal Circuit



SiC MOSFETs

●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
- ⑦ Automotive Grade

●Packaging type

Package	Code	Packaging Style	Basic Ordering Unit (pcs)
TO-263-7L	TL	Embossed Tape	1,000
TO-268-2L	TB	Embossed Tape	400
TO-247 (TO-247N)	C11	Tube	30
TO-247-4L	C14	Tube	30
TO-247-4L	C15	Tube	30
TO-3PFM	C11	Tube	30

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