







SiC MOSFETs

● Quick Reference for SiC MOSFETs

V _{DSS} (V)	R _{DS(on)} (mΩ)	Leaded type				Surface Mounted type		
								
		TO-220AB	TO-247 (TO-247N)	TO-247-4L	TO-3PFM	TO-268-2L	TO-263-7L	
650	17		New SCT3017AL SCT3017ALHR	14 15				
	22		New SCT3022AL SCT3022ALHR	16 17				
	30		New SCT3030AL SCT3030ALHR	18 19	New SCT3030AR	38	New SCT3030AW7	44
	60		New SCT3060AL SCT3060ALHR	20 21	New SCT3060AR	39	New SCT3060AW7	45
	80		New SCT3080AL SCT3080ALHR	22 23	New SCT3080AR	40	New SCT3080AW7	46
	120	SCT2120AF	1	New SCT3120AL SCT3120ALHR	24 25			New SCT3120AW7
1,200	22		New SCT3022KL SCT3022KLHR	26 27				
	30		New SCT3030KL SCT3030KLHR	28 29				
	40		New SCT3040KL SCT3040KLHR	30 31	New SCT3040KR	41	New SCT3040KW7	48
	80		New SCT2080KE SCT2080KEHR SCH2080KE*1 SCT3080KL New SCT3080KLHR	2 3 4 32 33	New SCT3080KR	42	New SCT3080KW7	49
	105		New SCT3105KL SCT3105KLHR	34 35	New SCT3105KR	43	New SCT3105KW7	50
	160		New SCT2160KE SCT2160KEHR SCT3160KL New SCT3160KLHR	5 6 36 37			New SCT3160KW7	51
	280		New SCT2280KE SCT2280KEHR	7 8				
	450		New SCT2450KE SCT2450KEHR	9 10				
1,700	1,150 750				SCT2H12NZ	13	SCT2H12NY SCT2750NY	12 11

Note: Package is JEDEC code. () : ROHM Package.
*1 Schottky barrier diode included

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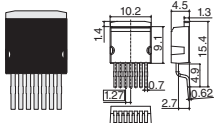
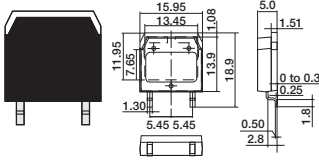
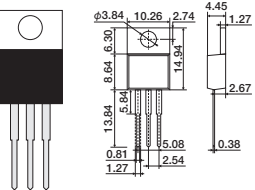
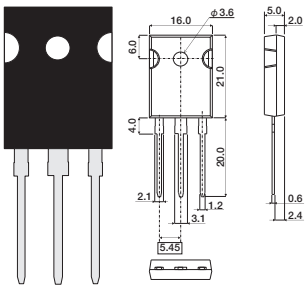
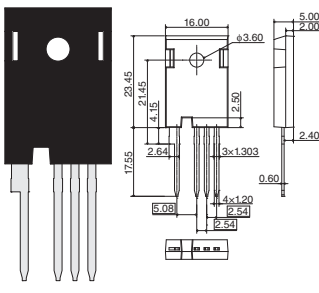
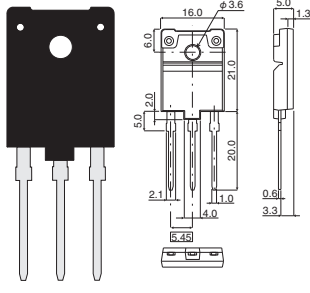
2nd Generation (Planar type)											
No.	Part No.	Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS(on)} Typ (mΩ)	Q _g Typ (nC)		Package	Automotive Grade AEC-Q101	
						V _{GS} =18V	V _{GS} =18V	Drive Voltage (V)			
1	SCT2120AF	N	650	29	165	120	61	18	TO-220AB	—	
2	SCT2080KE	N	1,200	40	262	80	106	18	TO-247 (TO-247N)	—	
3	New SCT2080KEHR	N	1,200	40	262	80	106	18		YES	
4	SCH2080KE*1	N	1,200	40	262	80	106	18		—	
5	SCT2160KE	N	1,200	22	165	160	62	18		—	
6	New SCT2160KEHR	N	1,200	22	165	160	62	18		YES	
7	SCT2280KE	N	1,200	14	108	280	36	18		—	
8	New SCT2280KEHR	N	1,200	14	108	280	36	18		YES	
9	SCT2450KE	N	1,200	10	85	450	27	18		—	
10	New SCT2450KEHR	N	1,200	10	85	450	27	18		YES	
11	SCT2750NY	N	1,700	5.9	57	750	17	18		TO-268-2L	—
12	SCT2H12NY	N	1,700	4	44	1,150	14	18	—	—	
13	SCT2H12NZ	N	1,700	3.7	35	1,150	14	18	TO-3PFM	—	
3rd Generation (Trench type)											
14	SCT3017AL	N	650	118	427	17	172	18	TO-247 (TO-247N)	—	
15	New SCT3017ALHR	N	650	118	427	17	172	18		YES	
16	SCT3022AL	N	650	93	339	22	133	18		—	
17	New SCT3022ALHR	N	650	93	339	22	133	18		YES	
18	SCT3030AL	N	650	70	262	30	104	18		—	
19	New SCT3030ALHR	N	650	70	262	30	104	18		YES	
20	SCT3060AL	N	650	39	165	60	58	18		—	
21	New SCT3060ALHR	N	650	39	165	60	58	18		YES	
22	SCT3080AL	N	650	30	134	80	48	18		—	
23	New SCT3080ALHR	N	650	30	134	80	48	18		YES	
24	SCT3120AL	N	650	21	103	120	38	18		—	
25	New SCT3120ALHR	N	650	21	103	120	38	18		YES	
26	SCT3022KL	N	1,200	95	427	22	178	18		—	
27	New SCT3022KLHR	N	1,200	95	427	22	178	18		YES	
28	SCT3030KL	N	1,200	72	339	30	131	18		—	
29	New SCT3030KLHR	N	1,200	72	339	30	131	18		YES	
30	SCT3040KL	N	1,200	55	262	40	107	18		—	
31	New SCT3040KLHR	N	1,200	55	262	40	107	18		YES	
32	SCT3080KL	N	1,200	31	165	80	60	18		—	
33	New SCT3080KLHR	N	1,200	31	165	80	60	18		YES	
34	SCT3105KL	N	1,200	24	134	105	51	18		—	
35	New SCT3105KLHR	N	1,200	24	134	105	51	18		YES	
36	SCT3160KL	N	1,200	17	103	160	42	18		—	
37	New SCT3160KLHR	N	1,200	17	103	160	42	18		YES	
38	New SCT3030AR	N	650	70	262	30	104	18		—	
39	New SCT3060AR	N	650	39	165	60	58	18		—	
40	New SCT3080AR	N	650	30	134	80	48	18		—	
41	New SCT3040KR	N	1,200	55	262	40	107	18		TO-247-4L	—
42	New SCT3080KR	N	1,200	31	165	80	60	18		—	
43	New SCT3105KR	N	1,200	24	134	105	51	18		—	
44	New SCT3030AW7	N	650	70	267	30	104	18		TO-263-7L	—
45	New SCT3060AW7	N	650	38	159	60	58	18			—
46	New SCT3080AW7	N	650	29	125	80	48	18			—
47	New SCT3120AW7	N	650	21	100	120	38	18			—
48	New SCT3040KW7	N	1,200	56	267	40	107	18			—
49	New SCT3080KW7	N	1,200	30	159	80	60	18	—		
50	New SCT3105KW7	N	1,200	23	125	105	51	18	—		
51	New SCT3160KW7	N	1,200	17	100	160	42	18	—		

Note: Package is JEDEC code. (): ROHM Package.
*1 Schottky barrier diode included

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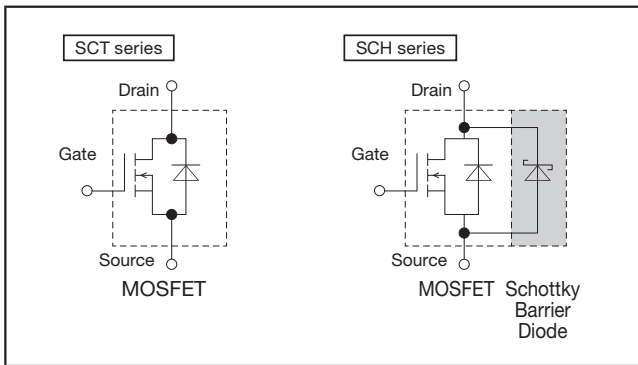
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●Dimensions (Unit: mm)

Surface Mounted type		Leaded type
TO-263-7L  Each lead has same dimensions	TO-268-2L  Each lead has same dimensions	TO-220AB  Each lead has same dimensions
Leaded type		
TO-247 (TO-247N)  Each lead has same dimensions	TO-247-4L  Each lead has same dimensions	TO-3PFM  Each lead has same dimensions

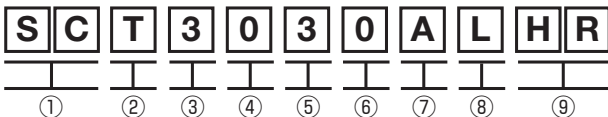
Note: Package is JEDEC code. () : ROHM Package.

●Internal Circuit



●Part No. Explanation

●MOSFET Part No. Explanation



- ① SiC Discrete Device
- ② H → MOSFET+Schottky Barrier Diode
T → MOSFET
- ③ Generation
- ④ ON-resistance[mΩ]
- ⑤ 080=80mΩ
H12=1.2 Ω
- ⑥
- ⑦ Rated Voltage A → 650V
K → 1,200V
N → 1,700V
- ⑧ Package F → TO-220AB
E → TO-247 (TO-247N)
L → TO-247 (TO-247N)
Y → TO-268-2L
Z → TO-3PFM
R → TO-247-4L
W7 → TO-263-7L
- ⑨ 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-220AB	C	Tube	50
TO-247 (TO-247N)	C11	Tube	30
TO-247-4L	C14	Tube	30
TO-3PFM	C11	Tube	30

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