








# SiC MOSFETs

## Quick Reference for SiC MOSFETs

V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (mΩ)	Leaded type					Surface Mounted type		
									
		TO-220AB	TO-247	TO-247 (TO-247N)	TO-247-4L	TO-3PFM	TO-268-2L	TO-263-7L	
650	17			<b>New</b> SCT3017AL SCT3017ALHR	14 15				
	22			<b>New</b> SCT3022AL SCT3022ALHR	16 17				
	30			<b>New</b> SCT3030AL SCT3030ALHR	18 19	<b>New</b> SCT3030AR	38	<b>New</b> SCT3030AW7 <b>New</b> SCT3030AW7HR	44 45
	60			<b>New</b> SCT3060AL SCT3060ALHR	20 21	<b>New</b> SCT3060AR	39	<b>New</b> SCT3060AW7 <b>New</b> SCT3060AW7HR	46 47
	80			<b>New</b> SCT3080AL SCT3080ALHR	22 23	<b>New</b> SCT3080AR	40	<b>New</b> SCT3080AW7 <b>New</b> SCT3080AW7HR	48 49
	120	SCT2120AF	1	<b>New</b> SCT3120AL SCT3120ALHR	24 25			<b>New</b> SCT3120AW7 <b>New</b> SCT3120AW7HR	50 51
1,200	22			<b>New</b> SCT3022KL SCT3022KLHR	26 27				
	30			<b>New</b> SCT3030KL SCT3030KLHR	28 29				
	40			<b>New</b> SCT3040KL SCT3040KLHR	30 31	<b>New</b> SCT3040KR	41	<b>New</b> SCT3040KW7 <b>New</b> SCT3040KW7HR	52 53
	80	SCT2080KE SCH2080KE	2 4	<b>New</b> SCT2080KEHR SCT3080KL SCT3080KLHR	3 32 33	<b>New</b> SCT3080KR	42	<b>New</b> SCT3080KW7 <b>New</b> SCT3080KW7HR	54 55
	105			<b>New</b> SCT3105KL SCT3105KLHR	34 35	<b>New</b> SCT3105KR	43	<b>New</b> SCT3105KW7 <b>New</b> SCT3105KW7HR	56 57
	160	SCT2160KE	5	<b>New</b> SCT2160KEHR SCT3160KL SCT3160KLHR	6 36 37			<b>New</b> SCT3160KW7 <b>New</b> SCT3160KW7HR	58 59
	280	SCT2280KE	7	<b>New</b> SCT2280KEHR	8				
	450	SCT2450KE	9	<b>New</b> SCT2450KEHR	10				
1,700	1,150					SCT2H12NZ	13	SCT2H12NY	11
	750							SCT2750NY	12

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

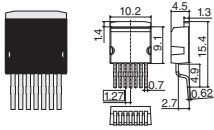
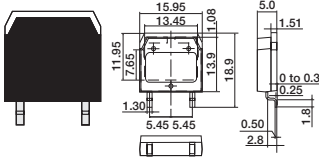
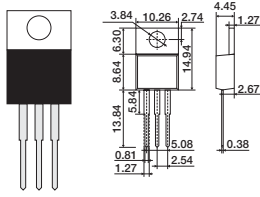
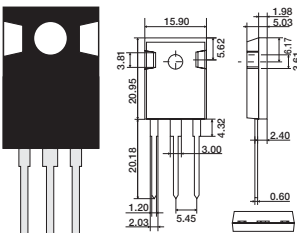
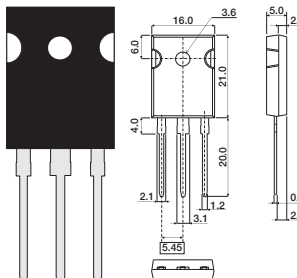
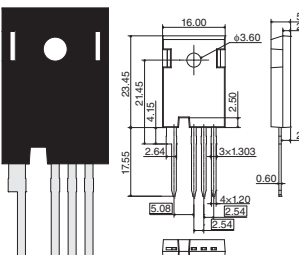
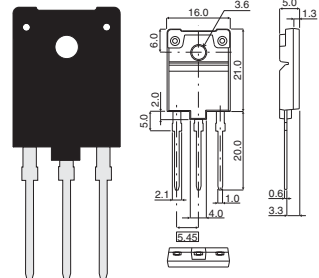
## SiC MOSFETs

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	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	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	35	18		—	
8	New SCT2280KEHR	N	1,200	14	106	280	35	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		TO-247-4L	—
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			—
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			—
45	New SCT3030AW7HR	N	650	70	267	30	104	18			YES
46	New SCT3060AW7	N	650	38	159	60	58	18			—
47	New SCT3060AW7HR	N	650	38	159	60	58	18			YES
48	New SCT3080AW7	N	650	29	125	80	48	18	—		
49	New SCT3080AW7HR	N	650	29	125	80	48	18	YES		
50	New SCT3120AW7	N	650	21	100	120	38	18	—		
51	New SCT3120AW7HR	N	650	21	100	120	38	18	YES		
52	New SCT3040KW7	N	1,200	56	267	40	107	18	TO-263-7L	—	
53	New SCT3040KW7HR	N	1,200	56	267	40	107	18		YES	
54	New SCT3080KW7	N	1,200	30	159	80	60	18		—	
55	New SCT3080KW7HR	N	1,200	30	159	80	60	18		YES	
56	New SCT3105KW7	N	1,200	23	125	105	51	18		—	
57	New SCT3105KW7HR	N	1,200	23	125	105	51	18		YES	
58	New SCT3160KW7	N	1,200	17	100	160	42	18		—	
59	New SCT3160KW7HR	N	1,200	17	100	160	42	18		YES	

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

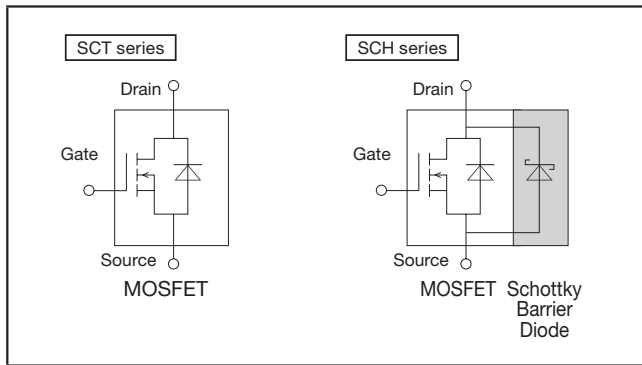
# SiC MOSFETs

Dimensions (Unit: mm)

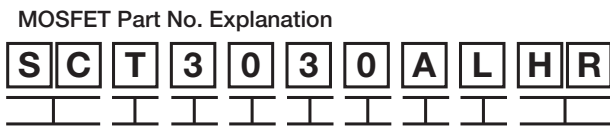
Surface Mounted type		Leaded type	
<b>TO-263-7L</b>  Each lead has same dimensions	<b>TO-268-2L</b>  Each lead has same dimensions	<b>TO-220AB</b>  Each lead has same dimensions	
Leaded type			
<b>TO-247</b>  Each lead has same dimensions	<b>TO-247 (TO-247N)</b>  Each lead has same dimensions	<b>TO-247-4L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

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

## Internal Circuit



## Part No. Explanation



SiC Discrete Device  
 H → MOSFET+Schottky Barrier Diode  
 T → MOSFET  
 Generation  
 ON-resistance[mΩ]  
 080=80mΩ  
 H12=1.2 Ω

Rated Voltage A → 650V  
 K → 1,200V  
 N → 1,700V  
 Package F → TO-220AB  
 E → TO-247 or TO-247 (TO-247N)  
 L → TO-247 (TO-247N)  
 Y → TO-268-2L  
 Z → TO-3PFM  
 R → TO-247-4L  
 W7 → TO-263-7L  
 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	C	Tube	30
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.