

# Featured Products



New automotive-grade SiC MOSFET lineup

## AEC-Q101 Qualified SiC MOSFETs

SCT3xxxALHR series (650V) / SCT3xxxKLHR series (1,200V)

### Combining SiC with a trench gate structure translates to low ON resistance

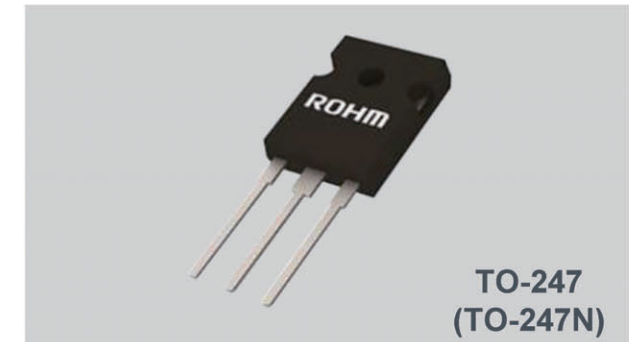
Establishing a trench gate structure in mass produced SiC MOSFETs makes it possible to significantly reduce heat generation

### Broad lineup

The expanded lineup includes 650V and 1,200V models in 6 different ON resistances, allowing users to select the ideal product to suit application needs

### Contributes to greater miniaturization of onboard systems (i.e. vehicle chargers, DC/DC converters)

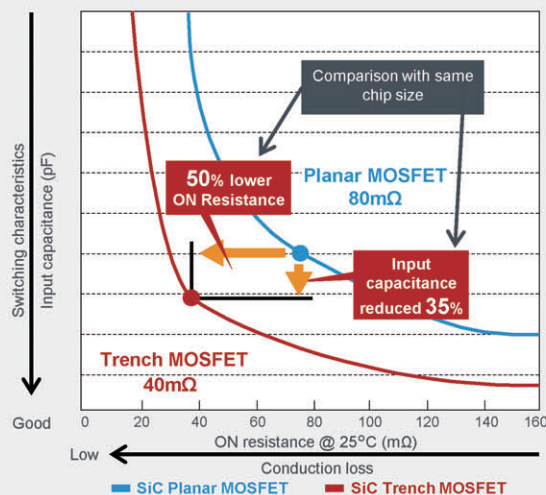
Reducing the size of peripheral components and cooling mechanisms results in smaller systems



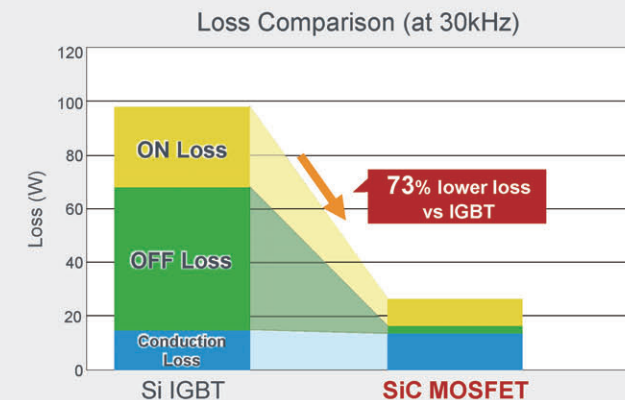
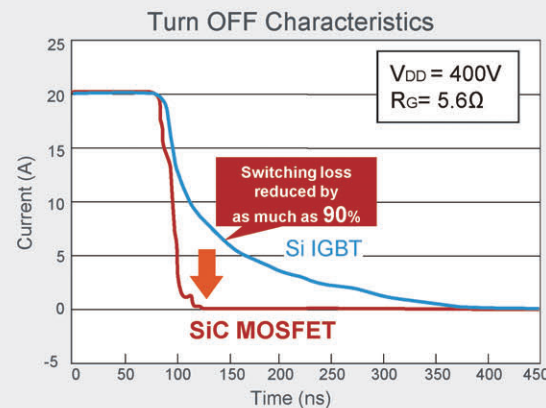
Note: Package indicates JEDEC code. ( ) denotes ROHM package type.

### ■ SiC Trench MOSFET Characteristics

Performance Comparison: Planar vs Trench Structure




### ■ Greater Energy Savings and Miniaturization Based On Switching Loss Characteristics



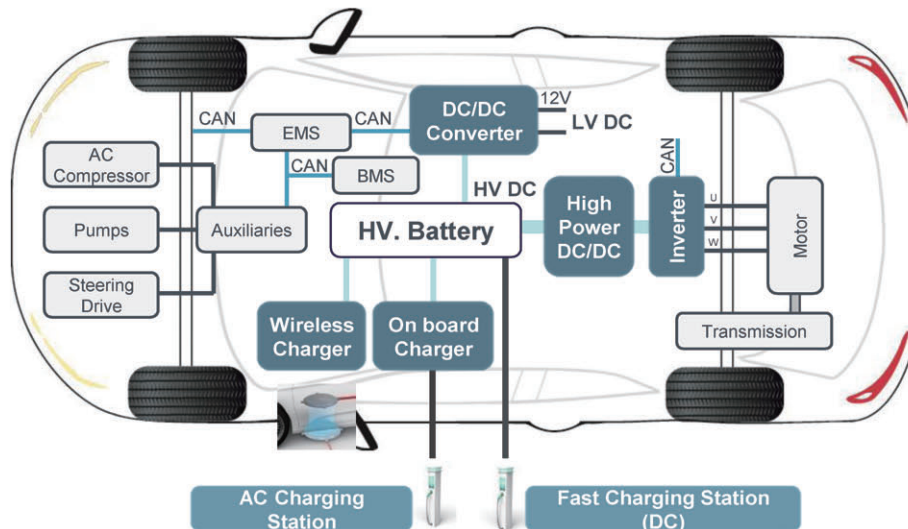
ROHM SiC MOSFETs simultaneously deliver high speed switching with high breakdown voltage impossible to achieve with silicon devices. Turn OFF loss is reduced by up to 90% compared with IGBTs, resulting in 80% lower switching loss. And in addition to greater energy savings and efficiency, high frequency drive supports the use of smaller peripheral components.

## ■ SiC Trench MOSFET Lineup

Part No.	Automotive-Grade (AEC-Q101 Qualified) Part No.	V <sub>DSS</sub> (V)	Polarity (ch)	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
						V <sub>GS</sub> =18V	V <sub>GS</sub> =18V	Drive Voltage(V)	
SCT3017AL	<b>New</b> SCT3017ALHR	650	N	118	427	17	172	18	 TO-247 (TO-247N)
SCT3022AL	<b>New</b> SCT3022ALHR			93	339	22	133	18	
SCT3030AL	SCT3030ALHR			70	262	30	104	18	
SCT3060AL	<b>New</b> SCT3060ALHR			39	165	60	58	18	
SCT3080AL	<b>New</b> SCT3080ALHR			30	134	80	48	18	
SCT3120AL	<b>New</b> SCT3120ALHR			21	103	120	38	18	
SCT3022KL	<b>New</b> SCT3022KLHR	1,200	N	95	427	22	178	18	
SCT3030KL	<b>New</b> SCT3030KLHR			72	339	30	131	18	
SCT3040KL	SCT3040KLHR			55	262	40	107	18	
SCT3080KL	<b>New</b> SCT3080KLHR			31	165	80	60	18	
SCT3105KL	<b>New</b> SCT3105KLHR			24	134	105	51	18	
SCT3160KL	<b>New</b> SCT3160KLHR			17	103	160	42	18	

Note: Package indicates JEDEC code. ( ) denotes ROHM package type.

## ■ Application Diagram



SiC power devices contribute to improved efficiency and miniaturization in xEV applications



**ROHM Co., Ltd.**

21 Sain Mizosaki-cho, Ukuyo-ku,  
Kyoto 615-8585 Japan

[www.rohm.com](http://www.rohm.com)

The content specified herein is for the purpose of introducing ROHM's products (hereinafter "Products"). If you wish to use any such Product, please be sure to refer to the specifications, which can be obtained from ROHM upon request. Great care was taken in ensuring the accuracy of the information specified in this document. However, should you incur any damage arising from any inaccuracy or misprint of such information, ROHM shall bear no responsibility for such damage. The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM and other parties. ROHM shall bear no responsibility whatsoever for any dispute arising from the use of such technical information. If you intend to export or ship overseas any Product or technology specified herein that may be controlled under the Foreign Exchange and the Foreign Trade Law, you will be required to obtain a license or permit under the Law.

The content specified in this document is correct as of November 1st, 2019.