



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Product Catalog for Distribution 2014

Microcontrollers

1

Power Semiconductors

2

RF & Protection Devices

3

General Purpose Diodes & Transistors

4

LED Driver & Lighting ICs

5

Sensors & Wireless Control

6

Chip Card & Security ICs

7

Summary of Types

8

Introduction

We are pleased to present the updated Product Catalog for Distribution 2014. This catalog outlines the full range of semiconductors available from Infineon Technologies through our distribution channel.

Reflecting the depth and range of our offering, this overview extends from communication devices and microcontrollers through power semiconductors and discretes to sensors and security solutions. For fast and easy reference, we have kept technical details to a minimum and added an overview of all device names and order codes at the back. Please refer to our data sheets, data books and user's manuals if you require in-depth technical data on a given product.

We work closely with our distributors to ensure that these products are available for rapid delivery. However, please be aware that individual distributors may not necessarily be authorized to offer the entire range of products outlined in this catalog. The choice of products held in stock and available for delivery is entirely at the discretion of the individual distributor. Please note that most products listed in this overview are RoHS-compliant. However, please check the actual status and availability with your distributor. Similarly, Infineon does not assume responsibility for the accuracy or completeness of the information contained in this overview.

For general information, please visit www.infineon.com.

For a complete list of our distribution partners, please go to www.infineon.com/distribution.

Explanation of Symbols

- ▼ Newly included components
- Components not suitable for new design
- ◆ Products available through dedicated distributors
- SMD (Surface Mounted Devices)
gray lines indicate SMDs
- ® Registered trademark
- TM Trademark

CanPAK™, EiceDRIVER™, HITFET™, ISOFACE™, my-d™, NovalithIC™, OPTIGA™, PROFET™, SatRIC™, SmartLEWIS™, TEMPFET™, TRENCHSTOP™, TriCore™ are trademarks of Infineon Technologies.

Infineon® is a registered trademark of Infineon Technologies AG.

ARM®Cortex™-4 are registered trademark of ARM Limited.

CanPAK™ uses DirectFET® technology licensed from International Rectifier Corporation.

DirectFET® is a registered trademark of International Rectifier Corporation.

FlexRay™ is a trademark of the FlexRay Consortium and used under license.

MIFARE™ is a trademark of NXP B.V.

Contents

Microcontrollers		
Microcontrollers, 8-bit	11	1
Microcontrollers, 16-bit	23	
Microcontrollers, 32-bit	64	
<hr/>		
Power Semiconductors		
Automotive N-Channel MOSFETs	79	
Automotive P-Channel MOSFETs	88	
N-Channel MOSFETs	90	
P-Channel MOSFETs	116	
Complementary MOSFETs	118	
Depletion MOSFETs	119	2
IGBT Power Transistors	120	
Power Diodes	127	
Smart Power Switches	130	
Power Management ICs	141	
Industrial Stand-alone CAN and LIN Transceivers	162	
Automotive Transceivers and SBCs	163	
Specific Automotive ICs	167	
<hr/>		
RF & Protection Devices		
RF Bipolar Transistors & Active Bias Controller	171	
RF Switches	174	
RF MMICs	175	3
RF Diodes	177	
RF MOSFETs	182	
RF Schottky Diodes	183	
ESD and EMI Protection Devices and Filters	184	
<hr/>		
General Purpose Diodes & Transistors		
Schottky Diodes	189	4
Digital Transistors	191	
General Purpose Transistors	194	
General Purpose Diodes	200	
<hr/>		
LED Driver & Lighting ICs		
LED Drivers for Outdoor & Indoor Lighting	205	5
Off-Line LED Driver ICs	206	
Smart Ballast Control ICs for Fluorescent Lamp Ballasts	206	
Switch-Mode and Linear LED Drivers for Automotive Lighting Applications	207	
<hr/>		
Sensors & Wireless Control		
Integrated Pressure Sensor ICs	211	6
Tire Pressure Sensors (TPMS)	211	
Magnetic Sensors	212	
Wireless Control	217	
<hr/>		
Chip Card & Security ICs		
Smart Card Memories	223	7
Contactless Products	224	
Embedded Security	227	
<hr/>		
Summary of Types	231	8

Microcontrollers

Microcontrollers, 8-bit	11
Microcontrollers, 16-bit	23
Microcontrollers, 32-bit	64

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC822 & XC824 Series				
SAF-XC822-1FRA AA-Step	SP000873390	XC8221FRAAFXUMA1	PG-TSSOP-16-1	High performance XC800 core, based on industry standard 8051 architecture, 8-Kbyte boot ROM, 4-Kbyte program flash, 0.128-Kbyte data flash, automotive quality level, 256-byte RAM, 256-byte XRAM, capture/compare unit, three 16-bit timers/counters, four 10-bit ADC channels, embedded voltage regulator (EVR), programmable 16-bit watchdog timer, no multiplication/division unit (MDU), no LED and touch sense controller (LEDTSCU), 24-MHz clock frequency, -40°C to 85°C, tape & reel
SAF-XC822-1FRI AA-Step	SP000795354	XC8221FRIAFXUMA1	PG-TSSOP-16-1	as SAF-XC822-1FRA, industry quality level, tape & reel
SAK-XC822-1FRA AA-Step	SP000873388	XC8221FRAAKXUMA1	PG-TSSOP-16-1	as SAF-XC822-1FRA, -40°C to 125°C, tape & reel
SAF-XC822M-1FRI AA-Step	SP000771768	XC822M1FRIAFXUMA1	PG-TSSOP-16-1	as SAF-XC822-1FRA, industry quality level, multiplication/division unit (MDU), no LED and touch sense controller (LEDTSCU), tape & reel
SAK-XC822MT-0FRA AA-Step	SP000898396	XC822MT0FRAAKXUMA1	PG-TSSOP-16-1	as SAF-XC822-1FRA, 2-Kbyte program flash, multiplication/division unit (MDU), LED and touch sense controller (LEDTSCU), -40°C to 125°C, tape & reel
SAF-XC822MT-1FRA AA-Step	SP000873396	XC822MT1FRAAFXUMA1	PG-TSSOP-16-1	as SAK-XC822MT-0FRA, 4-Kbyte program flash, -40°C to 85°C, tape & reel
SAK-XC822MT-1FRA AA-Step	SP000847976	XC822MT1FRAAKXUMA1	PG-TSSOP-16-1	as SAF-XC822MT-1FRA, -40°C to 125°C, tape & reel
SAF-XC822MT-1FRI AA-Step	SP000795358	XC822MT1FRIAFXUMA1	PG-TSSOP-16-1	as SAF-XC822MT-1FRA, industry quality level, tape & reel
SAF-XC822T-0FRI AA-Step	SP000795350	XC822T0FRIAFXUMA1	PG-TSSOP-16-1	as SAF-XC822MT-1FRI, 2-Kbyte program flash, no multiplication/division unit (MDU), LED and touch sense controller (LEDTSCU), tape & reel
SAF-XC822T-1FRI AA-Step	SP000797572	XC822T1FRIAFXUMA1	PG-TSSOP-16-1	as SAF-XC822-1FRI, no multiplication/division unit (MDU), LED and touch sense controller (LEDTSCU), tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family XC835 & XC836 Series				
SAF-XC836-2FRI AB-Step	SP000843562	XC8362FRIABFXUMA1	PG-TSSOP-28-1	High performance XC800 core, based on industry standard 8051 architecture, 8-Kbyte boot ROM, 8-Kbyte program flash, 0.128-Kbyte data flash, industry quality level, 256-byte RAM, 256-byte XRAM, capture/compare unit, three 16-bit timers/counters, eight 10-bit ADC channels, 16-bit vector computer for Field-Oriented Control (FOC), programmable 16-bit watchdog timer, multiplication/division unit (MDU) and CORDIC module, LED and touch sense controller (LEDTSCU), no multiplication/division unit (MDU), no LED and touch sense controller (LEDTSCU), 24-MHz clock frequency, -40°C to 85°C, tape & reel
SAF-XC836M-1FRI AB-Step	SP000843556	XC836M1FRIABFXUMA1	PG-TSSOP-28-1	as SAF-XC836-2FRI, 4-Kbyte program flash, multiplication/division unit (MDU) and CORDIC module, no LED and touch sense controller (LEDTSCU), tape & reel
SAF-XC836M-2FRI AB-Step	SP000843558	XC836M2FRIABFXUMA1	PG-TSSOP-28-1	as SAF-XC836-2FRI, multiplication/division unit (MDU) and CORDIC module, no LED and touch sense controller (LEDTSCU), tape & reel
SAK-XC836MT-1FRA AB-Step	SP000848856	XC836MT1FRAABKXUMA1	PG-TSSOP-28-1	as SAF-XC836M-1FRI, automotive quality level, multiplication/division unit (MDU) and CORDIC module, LED and touch sense controller (LEDTSCU), -40°C to 125°C, tape & reel
SAK-XC836MT-2FRA AB-Step	SP000847972	XC836MT2FRAABKXUMA1	PG-TSSOP-28-1	as SAK-XC836MT-1FRA, 8-Kbyte program flash, tape & reel
SAF-XC836MT-2FRI AB-Step	SP000843560	XC836MT2FRIABFXUMA1	PG-TSSOP-28-1	as SAF-XC836M-2FRI, multiplication/division unit (MDU) and CORDIC module, LED and touch sense controller (LEDTSCU), tape & reel
SAF-XC836T-2FRI AB-Step	SP000843554	XC836T2FRIABFXUMA1	PG-TSSOP-28-1	as SAF-XC836MT-2FRI, no multiplication/division unit (MDU) and CORDIC module, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC866 Series				
SAK-XC866-1FRA AB-Step	SP000235420	XC8661FRAABKXUMA1	PG-TSSOP-38-1	High performance XC800 core, based on industry standard 8051 architecture, 8-Kbyte boot ROM, 4-Kbyte program flash, up to 8-Kbyte data flash, automotive quality level, 256-byte RAM, 512-byte XRAM, capture/compare unit, three 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, -40°C to 125°C, tape & reel
SAF-XC866-1FRI AB-Step	SP000244527	XC8661FRIABFXUMA1	PG-TSSOP-38-1	as SAK-XC866-1FRA, industry quality level, -40°C to 85°C, tape & reel
SAA-XC866-2FRA BE-Step	SP000281789	XC8662FRA5VBEAXUMA1	PG-TSSOP-38-1	as SAF-XC866-1FRA, 8-Kbyte program flash, -40°C to 140°C, tape & reel
SAF-XC866-2FRA BE-Step	SP000281796	XC8662FRABEFXUMA1	PG-TSSOP-38-1	as SAA-XC866-1FRA, -40°C to 85°C, tape & reel
SAK-XC866-2FRA BE-Step	SP000272971	XC8662FRABEKXUMA1	PG-TSSOP-38-1	as SAF-XC866-2FRA, -40°C to 125°C, tape & reel
SAF-XC866-2FRI BE-Step	SP000245777	XC8662FRIBEFXUMA1	PG-TSSOP-38-1	as SAF-XC866-2FRA, industry quality level, tape & reel
SAK-XC866-2FRI BE-Step	SP000245783	XC8662FRIBEKXUMA1	PG-TSSOP-38-1	as SAF-XC866-2FRI, -40°C to 125°C, tape & reel
SAA-XC866-4FRA BE-Step	SP000281792	XC8664FRA5VBEAXUMA1	PG-TSSOP-38-1	as SAA-XC866-2FRA, 16-Kbyte program flash, tape & reel
SAF-XC866-4FRA BE-Step	SP000281799	XC8664FRABEFXUMA1	PG-TSSOP-38-1	as SAA-XC866-2FRA, -40°C to 85°C, tape & reel
SAK-XC866-4FRA BE-Step	SP000245770	XC8664FRABEKXUMA1	PG-TSSOP-38-1	as SAF-XC866-4FRA, -40°C to 125°C, tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC866 Series				
(cont'd)				
SAL-XC866-4FRA 3V BE-Step	SP000908370	XC8664FRA3VBELXUMA1	PG-TSSOP-38-1	as SAF-XC866-4FRA, 3-V power supply, -40°C to 150°C, tape & reel
SAL-XC866-4FRA 5V BE-Step	SP000876776	XC8664FRA5VBELXUMA1	PG-TSSOP-38-1	as SAL-XC866-4FRA, 5-V power supply, tape & reel
SAF-XC866-4FRI BE-Step	SP000245780	XC8664FRIBEFXUMA1	PG-TSSOP-38-1	as SAF-XC866-4FRA, industry quality level, tape & reel
SAK-XC866-4FRI BE-Step	SP000245786	XC8664FRIBEKXUMA1	PG-TSSOP-38-1	as SAF-XC866-4FRI, -40°C to 125°C, tape & reel
SAF-XC866-2RRA AB-Step	SP000232712	XC8662RRAABFZZA1	PG-TSSOP-38-1	High performance XC800 core, based on industry standard 8051 architecture, 8-Kbyte ROM, 8-Kbyte boot ROM, 8-Kbyte program flash, up to 8-Kbyte data flash, automotive quality level, 256-byte RAM, 512-byte XRAM, capture/compare unit, three 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, -40°C to 85°C, tape & reel
SAK-XC866-2RRA AB-Step	SP000232708	XC8662RRAABKZZA1	PG-TSSOP-38-1	as SAF-XC866-2RRA, -40°C to 125°C, tape & reel
SAA-XC866-4RRA AB-Step	SP000266176	XC8664RRAABAZZA1	PG-TSSOP-38-1	as SAF-XC866-2RRA, 16-Kbyte ROM, -40°C to 140°C, tape & reel
SAF-XC866-4RRA AB-Step	SP000232710	XC8664RRAABFZZA1	PG-TSSOP-38-1	as SAA-XC866-4RRA, -40°C to 85°C, tape & reel
SAK-XC866-4RRA AB-Step	SP000232706	XC8664RRAABKZZA1	PG-TSSOP-38-1	as SAF-XC866-4RRA, -40°C to 125°C, tape & reel

XC866L Series

SAK-XC866L-1FRA AB-Step	SP000235421	XC866L1FRAABKXUMA1	PG-TSSOP-38-1	High performance XC800 core, based on industry standard 8051 architecture, 8-Kbyte boot ROM, 4-Kbyte program flash, up to 8-Kbyte data flash, automotive quality level, 256-byte RAM, 512-byte XRAM, capture/compare unit, three 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, with LIN BSL support, -40°C to 125°C, tape & reel
SAL-XC866L-2FRA 3V BE-Step	SP000915406	XC866L2FRA3VBELXUMA1	PG-TSSOP-38-1	as SAK-XC866L-1FRA, 8-Kbyte program flash , 3-V power supply, -40°C to 150°C, tape & reel
SAL-XC866L-2FRA 5V BE-Step	SP000914682	XC866L2FRA5VBELXUMA1	PG-TSSOP-38-1	as SAL-XC866L-2FRA, 5-V power supply, tape & reel
SAK-XC866L-4FRA BE-Step	SP000245771	XC866L4FRABEKXUMA1	PG-TSSOP-38-1	as SAF-XC866L-1FRA, 16-Kbyte flash (12-Kbyte program flash, 4-Kbyte data flash), tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC866L Series				
(cont'd)				
SAK-XC866L-4FRA 3V BE-Step	SP000442054	XC866L4FRA3VBEKXUMA1	PG-TSSOP-38-1	as SAK-XC866L-4FRA, 3-V power supply, tape & reel
SAL-XC866L-4FRA 3V BE-Step	SP000908378	XC866L4FRA3VBELXUMA1	PG-TSSOP-38-1	as SAK-XC866L-4FRA 3V, -40°C to 150°C, tape & reel
SAL-XC866L-4FRA 5V BE-Step	SP000876778	XC866L4FRA5VBELXUMA1	PG-TSSOP-38-1	as SAL-XC866L-4FRA, 5-V power supply, tape & reel
SAK-XC866L-4FRI BE-Step	SP000245787	XC866L4FRIBEKXUMA1	PG-TSSOP-38-1	as SAK-XC866L-4FRA, industry quality level, tape & reel

XC874 Series

SAK-XC874-13FVA 5V AC-Step	SP000858084	XC87413FVA5VACKXUMA1	PG-VQFN-48-1	High performance XC800 core, based on industry standard 8051 architecture, 52-Kbyte flash memory, automotive quality level, 256-byte RAM, 3-Kbyte XRAM, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), 5-V power supply, 26.7-MHz clock frequency, -40°C to 125°C, tape & reel
SAK-XC874-16FVA 5V AC-Step	SP000858096	XC87416FVA5VACKXUMA1	PG-VQFN-48-1	as SAK-XC874CM-13FVA 5V, 64-Kbyte flash memory, tape & reel
SAK-XC874CLM-16FVA5V AC-Step	SP000858092	XC874CLM16FVA5VACKXUMA1	PG-VQFN-48-1	as SAK-XC874-13FVA 5V, 64-Kbyte flash memory, with LIN BSL support , with CAN- and MDU module, tape & reel
SAK-XC874CM-13FVA 5V AC-Step	SP000793736	XC874CM13FVA5VACKXUMA1	PG-VQFN-48-1	as SAK-XC874CLM-16FVA 5V, 52-Kbyte flash memory, no LIN BSL support, tape & reel
SAK-XC874CM-16FVA 5V AC-Step	SP000858090	XC874CM16FVA5VACKXUMA1	PG-VQFN-48-1	as SAK-XC874CM-13FVA 5V, 64-Kbyte flash memory, tape & reel
SAK-XC874LM-13FVA 5V AC-Step	SP000858082	XC874LM13FVA5VACKXUMA1	PG-VQFN-48-1	as SAK-XC874CLM-16FVA 5V, 52-Kbyte flash memory, no CAN module, tape & reel
SAK-XC874LM-16FVA 5V AC-Step	SP000858086	XC874LM16FVA5VACKXUMA1	PG-VQFN-48-1	as SAK-XC874LM-13FVA 5V, 64-Kbyte flash memory, tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC878 Series				
SAF-XC878-13FFA 5V AC-Step	SP000756808	XC87813FFA5VACFXUMA1	PG-LQFP-64-1	High performance XC800 core, based on industry standard 8051 architecture, 52-Kbyte flash memory, automotive quality level, 256-byte RAM, 3-Kbyte XRAM, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), 26.7-MHz clock frequency, 5-V power supply, -40°C to 85°C, tape & reel
SAK-XC878-13FFA 5V AC-Step	SP000847062	XC87813FFA5VACKXUMA1	PG-LQFP-64-1	as SAF-XC878-13FFA 5V , -40°C to 125°C, tape & reel
SAF-XC878-16FFI 5V AC-Step	SP000696772	XC87816FFI5VACFXUMA1	PG-LQFP-64-1	as SAF-XC878-13FFI 5V, 64-Kbyte flash memory, industry quality level, tape & reel
SAK-XC878-16FFA 5V AC-Step	SP000847066	XC87816FFA5VACKXUMA1	PG-LQFP-64-1	as SAF-XC878-16FFA 5V, -40°C to 125°C, tape & reel
SAK-XC878CLM-16FFA 5V AC-Step	SP000761974	XC878CLM16FFA5VACKXUMA1	PG-LQFP-64-1	as SAF-XC878-13FFA 5V, 64-Kbyte flash memory, with LIN BSL support, with CAN- and MDU module, -40°C to 125°C, tape & reel
SAX-XC878CLM-16FFA5V AC-Step	SP000608972	XC878CLM16FFA5VACXXUMA1	PG-LQFP-64-1	as SAK-XC878CLM-16FFA 5V, -40°C to 105°C, tape & reel
SAF-XC878CM-16FFA 5V AC-Step	SP000772210	XC878CM16FFA5VACFXUMA1	PG-LQFP-64-1	as SAK-XC878CLM-16FFA 5V, no LIN BSL support, -40°C to 85°C, tape & reel
SAK-XC878CM-16FFA 5V AC-Step	SP000847064	XC878CM16FFA5VACKXUMA1	PG-LQFP-64-1	as SAF-XC878CM-16FFA 5V, -40°C to 125°C, tape & reel
SAX-XC878CM-16FFA 5V AC-Step	SP000409562	XC878CM16FFA5VACXXUMA1	PG-LQFP-64-1	as SAK-XC878CM-16FFA 5V, -40°C to 105°C, tape & reel
SAF-XC878CM-16FFI 3V3 AC-Step	SP000696786	XC878CM16FFI3V3ACFXUMA1	PG-LQFP-64-1	as SAF-XC878CM-16FFA 5V, industry quality level, 3.3-V power supply, tape & reel
SAF-XC878CM-16FFI 5V AC-Step	SP000679860	XC878CM16FFI5VACFXUMA1	PG-LQFP-64-1	as SAF-XC878CM-16FFI 3V3, 5-V power supply, tape & reel
SAF-XC878M-13FFI 3V3 AC-Step	SP000696774	XC878M13FFI3V3ACFXUMA1	PG-LQFP-64-1	as SAF-XC878CM-16FFI 3V3, 52-Kbyte flash memory, with MDU module, no CAN module, tape & reel
SAF-XC878M-16FFI 3V3 AC-Step	SP000696778	XC878M16FFI3V3ACFXUMA1	PG-LQFP-64-1	as SAF-XC878M-13FFI 3V3, 64-Kbyte flash memory, tape & reel
SAF-XC878M-16FFI 5V AC-Step	SP000696780	XC878M16FFI5VACFXUMA1	PG-LQFP-64-1	as SAF-XC878M-16FFI 3V3, 5-V power supply, tape & reel
SAX-XC878LM-13FFA 5V AC-Step	SP000447320	XC878LM13FFA5VACXXUMA1	PG-LQFP-64-1	as SAF-XC878M-13FFI 3V3, automotive quality level, with LIN BSL support and MDU module, 5-V power supply, -40°C to 105°C, tape & reel
SAK-XC878LM-16FFA 5V AC-Step	SP000844190	XC878LM16FFA5VACKXUMA1	PG-LQFP-64-1	as SAX-XC878LM-13FFA 5V, 64-Kbyte flash memory, -40°C to 125°C, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC886 Series				
SAK-XC886-6FFA 5V AC-Step	SP000210978	XC8866FFA5VACKXUMA1	PG-TQFP-48	High performance XC800 core, based on industry standard 8051 architecture, 24-Kbyte flash memory, automotive quality level, 256-byte RAM, 1536-byte XRAM, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), -40°C to 125°C, tape & reel
SAF-XC886-6FFI 5V AC-Step	SP000607048	XC8866FFI5VACFXUMA1	PG-TQFP-48	as SAK-XC886-6FFA 5V, industry quality level, -40°C to 85°C, tape & reel
SAF-XC886-8FFI 5V AC-Step	SP000607054	XC8868FFI5VACFXUMA1	PG-TQFP-48	as SAK-XC886-6FFA 5V, 32-Kbyte flash memory, industry quality level, -40°C to 85°C, tape & reel
SAK-XC886-8FFI 5V AC-Step	SP000607058	XC8868FFI5VACKXUMA1	PG-TQFP-48	as SAF-XC886-8FFI, -40°C to 125°C, tape & reel
SAF-XC886C-6FFA 5V AC-Step	SP000607068	XC886C6FFA5VACFXUMA1	PG-TQFP-48	as SAK-XC886-6FFA 5V, MultiCAN with 2 nodes, -40°C to 85°C, tape & reel
SAK-XC886C-6FFA 5V AC-Step	SP000607004	XC886C6FFA5VACKXUMA1	PG-TQFP-48	as SAF-XC886C-6FFA, -40°C to 125°C, tape & reel
SAF-XC886C-6FFI 3V3 AC-Step	SP000655548	XC886C6FFI3V3ACFXUMA1	PG-TQFP-48	as SAF-XC886C-6FFA, industry quality level, 3.3-V power supply, tape & reel
SAF-XC886C-6FFI 5V AC-Step	SP000607056	XC886C6FFI5VACFXUMA1	PG-TQFP-48	as SAF-XC886C-6FFA, industry quality level, 5-V power supply, tape & reel
SAK-XC886C-8FFA 5V AC-Step	SP000606668	XC886C8FFA5VACKXUMA1	PG-TQFP-48	as SAF-XC886C-6FFA 5V, 32-Kbyte flash memory, -40°C to 125°C, tape & reel
SAF-XC886C-8FFI 5V AC-Step	SP000607010	XC886C8FFI5VACFXUMA1	PG-TQFP-48	as SAK-XC886C-8FFA, industry quality level, -40°C to 85°C, tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC886CLM Series				
SAA-XC886CLM-8FFA AC-Step	SP000618282	XC886CLM8FFAACAXUMA1	PG-TQFP-48	High performance XC800 core, based on industry standard 8051 architecture, 32-Kbyte flash memory, automotive quality level, 256-byte RAM, 1536-byte XRAM, MultiCAN with 2 nodes, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), with LIN BSL support, with CAN- and MDU module, -40°C to 140°C, tape & reel
SAK-XC886CLM-8FFA 5V AC-Step	SP000606750	XC886CLM8FFA5VACKXUMA1	PG-TQFP-48	as SAA-XC886CLM-8FFA, -40°C to 125°C, 5-V power supply, tape & reel
SAL-XC886CLM-8FFA 5V AC-Step	SP000829526	XC886CLM8FFA5VACLXUMA1	PG-TQFP-48	as SAK-XC886CLM-8FFA, -40°C to 150°C, tape & reel

XC886CM Series

SAF-XC886CM-6RFA	SP000254732	XC886CM6RFAFZZA1	PG-TQFP-48	High performance XC800 core, based on industry standard 8051 architecture, 24-Kbyte ROM, automotive quality level, 256-byte RAM, 1536-byte XRAM, MultiCAN with 2 nodes, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), with CAN- and MDU module, -40°C to 85°C, tape & reel
SAK-XC886CM-6RFA 5V AA-Step	SP000245804	XC886CM6RFA5VAAKZZA1	PG-TQFP-48	as SAF-XC886CM-6RFA, 5-V power supply, -40°C to 125°C, tape & reel
SAA-XC886CM-8FFA AC-Step	SP000639468	XC886CM8FFA5VACAXUMA1	PG-TQFP-48	High performance XC800 core, based on industry standard 8051 architecture, 32-Kbyte flash memory, automotive quality level, 256-byte RAM, 1536-byte XRAM, MultiCAN with 2 nodes, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), with CAN- and MDU module, -40°C to 140°C, tape & reel
SAK-XC886CM-8FFA 3V3 AC-Step	SP000607082	XC886CM8FFA3V3ACKXUMA1	PG-TQFP-48	as SAA-XC886CM-8FFA, -40°C to 125°C, 3.3-V power supply, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC886CM Series				
(cont'd)				
SAL-XC886CM-8FFA AC-Step	SP000844270	XC886CM8FFA5VACLXUMA1	PG-TQFP-48	as SAA-XC886CM-8FFA, -40°C to 150°C, tape & reel
SAK-XC886CM-8FFA 5V AC-Step	SP000606964	XC886CM8FFA5VACKXUMA1	PG-TQFP-48	as SAF-XC886CM-8FFA, 40°C to 125°C, tape & reel
SAF-XC886CM-8FFI 5V AC-Step	SP000607014	XC886CM8FFI5VACFXUMA1	PG-TQFP-48	as SAF-XC886CM-8FFA, industry quality level, tape & reel
SAF-XC886CM-8RFA AA-Step	SP000235443	XC886CM8RFAAAFZZA1	PG-TQFP-48	as SAF-XC886CM-6RFA, 32-Kbyte ROM, tape & reel
SAK-XC886CM-8RFA 5V AA-Step	SP000245801	XC886CM8RFA5VAAKZZA1	PG-TQFP-48	as SAF-XC886CM-8RFA, 5-V power supply, -40°C to 125°C, tape & reel

XC886LM Series

SAF-XC886LM-6FFA 5V AC-Step	SP000657428	XC886LM6FFA5VACFXUMA1	PG-TQFP-48	High performance XC800 core, based on industry standard 8051 architecture, 24-Kbyte flash memory, automotive quality level, 256-byte RAM, 1536-byte XRAM, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), with LIN BSL support and MDU module, 5-V power supply, -40°C to 85°C, tape & reel
SAK-XC886LM-6FFA 5V AC-Step	SP000606754	XC886LM6FFA5VACKXUMA1	PG-TQFP-48	as SAF-XC886LM-6FFA, -40°C to 125°C, tape & reel
SAF-XC886LM-6FFI 5V AC-Step	SP000607050	XC886LM6FFI5VACFXUMA1	PG-TQFP-48	as SAK-XC886LM-6FFA, industry quality level, -40°C to 85°C, tape & reel
SAA-XC886LM-8FFA AC-Step	SP000368485	XC886LM8FFA5VACAXUMA1	PG-TQFP-48	as SAK-XC886LM-6FFA, 32-Kbyte flash memory, -40°C to 140°C, tape & reel
SAK-XC886LM-8FFA 5V AC-Step	SP000606752	XC886LM8FFA5VACKXUMA1	PG-TQFP-48	as SAA-XC886LM-8FFA, 5-V power supply, -40°C to 125°C, tape & reel
SAL-XC886LM-8FFA 5V AC-Step	SP000844272	XC886LM8FFA5VACLXUMA1	PG-TQFP-48	as SAK-XC886LM-8FFA, -40°C to 150°C, tape & reel
SAF-XC886LM-8FFI 5V AC-Step	SP000607052	XC886LM8FFI5VACFXUMA1	PG-TQFP-48	as SAF-XC886LM-8FFI, industry quality level, tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family XC888 Series				
SAF-XC888-6FFI 5V AC-Step	SP000607062	XC8886FFI5VACFXUMA1	PG-LQFP-64	High performance XC800 core, based on industry standard 8051 architecture, 24-Kbyte flash memory, industry quality level, 256-byte RAM, 1536-byte XRAM, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), 5-V power supply, -40°C to 85°C, tape & reel
SAF-XC888-8FFI 5V AC-Step	SP000646588	XC8888FFI5VACFXUMA1	PG-LQFP-64	as SAF-XC888-6FFI, 32-Kbyte flash memory, tape & reel
SAK-XC888C-8FFA 5V AC-Step	SP000606958	XC888C8FFA5VACKXUMA1	PG-LQFP-64	High performance XC800 core, based on industry standard 8051 architecture, 32-Kbyte flash memory, automotive quality level, 256-byte RAM, 1536-byte XRAM, MultiCAN with 2 nodes, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), 5-V power supply, -40°C to 125°C, tape & reel
XC888CLM Series				
SAK-XC888CLM-8FFA 5V AC-Step	SP000606756	XC888CLM8FFA5VACKXUMA1	PG-LQFP-64	High performance XC800 core, based on industry standard 8051 architecture, 32-Kbyte flash memory, automotive quality level, 256-byte RAM, 1536-byte XRAM, MultiCAN with 2 nodes, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), 5-V power supply, with LIN BSL support and MDU module, -40°C to 125°C, tape & reel
■ SAF-XC888CLM-8FFI 5V AC-Step	SP000253397	XC888CLM8FFI5VACFXUMA1	PG-LQFP-64	as SAK-XC888CLM-8FFA, industry quality level, -40°C to 85°C, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
XC800 Family				
XC888CM Series				
SAF-XC888CM-6RFA	SP000257476	XC888CM6RFAFZZA1	PG-LQFP-64	High performance XC800 core, based on industry standard 8051 architecture, 24-Kbyte ROM, automotive quality level, 256-byte RAM, 1536-byte XRAM, MultiCAN with 2 nodes, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), with MDU module, -40°C to 85°C, tape & reel
SAK-XC888CM-6RFA 5V AA-Step	SP000257472	XC888CM6RFA5VAAKZZA1	PG-LQFP-64	as SAF-XC888CM-6RFA, 5-V power supply, -40°C to 125°C, tape & reel
SAF-XC888CM-8RFA AA-Step	SP000245812	XC888CM8RFAAFZZA1	PG-LQFP-64	as SAF-XC888CM-6RFA 32-Kbyte ROM, -40°C to 85°C, tape & reel
SAK-XC888CM-8FFA 5V AC-Step	SP000607006	XC888CM8FFA5VACKXUMA1	PG-LQFP-64	as SAF-XC888CM-6RFA 32-Kbyte flash memory, 5-V power supply, with MDU module, -40°C to 125°C, tape & reel
SAF-XC888CM-8FFI 3V3 AC-Step	SP000607084	XC888CM8FFI3V3ACFXUMA1	PG-LQFP-64	as SAK-XC888CM-8FFA, industry quality level, 3.3-V power supply, -40°C to 85°C, tape & reel
SAF-XC888CM-8FFI 5V AC-Step	SP000655550	XC888CM8FFI5VACFXUMA1	PG-LQFP-64	as SAF-XC888CM-8FFA 5V, industry quality level, tape & reel
▼ SAK-XC888CM-8FFA 3V3 AC-Step	SP000715010	XC888CM8FFA3V3ACKXUMA1	PG-LQFP-64	as SAF-XC888CM-8FFI 3V3, -40°C to 125°C, tape & reel

XC888LM Series

SAK-XC888LM-6FFA 5V AC-Step	SP000210994	XC888LM6FFA5VACKXUMA1	PG-LQFP-64	High performance XC800 core, based on industry standard 8051 architecture, 24-Kbyte flash memory, automotive quality level, 256-byte RAM, 1536-byte XRAM, capture/compare unit (CCU6), 16-bit timers/counters, 10-bit ADC, port- and core voltage watchdog circuit with RESET generation, watchdog timer, on-chip debug support (JTAG), 5-V power supply, with LIN BSL support and MDU module, -40°C to 125°C, tape & reel
SAF-XC888LM-6FFI 3V3 AC-Step	SP000307472	XC888LM6FFI3V3ACFXUMA1	PG-LQFP-64	as SAF-XC888LM-6FFA, industry quality level, 3.3V power supply, -40°C to 85°C, tape & reel
SAF-XC888LM-8FFI 5V AC-Step	SP000607064	XC888LM8FFI5VACFXUMA1	PG-LQFP-64	as SAK-XC888LM-6FFA 5V 24-Kbyte flash memory, industry quality level, -40°C to 85°C, tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 8-bit				
C500 Family				
C505 Series				
SAF-C505CA-LM CA-Step	SP000106669	C505CALMCAFXQMA1	PG-MQFP-44-2	ROMless, 256-byte on-chip RAM, 1-Kbyte XRAM, oscillator watchdog, watchdog timer, full CAN-controller (V 2.0 B active), 10-bit ADC, three 16-bit timers/counters, 20-MHz clock frequency, tray
SAF-C505CA-LM CA-Step	SP000106390	C505CALMCAFXUMA1	PG-MQFP-44-2	as SAF-C505CA-LM, tape & reel
SAB-C505CA-4EM CA-Step	SP000106391	C505CA4EMCABXQMA1	PG-MQFP-44-2	as SAF-C505CA-LM, 32-Kbyte OTP memory, 0°C to 70°C, tray
SAB-C505CA-4EM CA-Step	SP000106392	C505CA4EMCABXUMA1	PG-MQFP-44-2	as SAB-C505CA-4EM, tape & reel
SAF-C505CA-4EM CA-Step	SP000106394	C505CA4EMCAFXQMA1	PG-MQFP-44-2	as SAB-C505CA-4 EM, -40°C to 85°C, tray
SAF-C505CA-4EM CA-Step	SP000106395	C505CA4EMCAFXUMA1	PG-MQFP-44-2	as SAF-C505CA-4EM, tape & reel
SAK-C505CA-4EM CA-Step	SP000106396	C505CA4EMCAKXQMA1	PG-MQFP-44-2	as SAF-C505CA-4EM, -40°C to 125°C, tray
SAK-C505CA-4EM CA-Step	SP000106397	C505CA4EMCAKXUMA1	PG-MQFP-44-2	as SAK-C505CA-4EM, tape & reel
C515 Series				
SAF-C515C-8EM CA-Step	SP000106398	C515C8EMCAFXQMA1	PG-MQFP-80-1	64-Kbyte OTP memory, 256 x 8-bit RAM, additional 2K x 8-bit on-chip RAM, three 16-bit timer/counters, power saving modes, 10-bit A/D converter, programmable watchdog timer, oscillator watchdog, 10-MHz CPU clock frequency, for external memory, full CAN-controller (V 2.0 B active), -40°C to 85°C, tray
SAF-C515C-8EM CA-Step	SP000106399	C515C8EMCAFXUMA1	PG-MQFP-80-1	as SAF-C515C-8EM, tape & reel
▼ SAF-C515C-8EM CA-Step	SP000106400	C515C8EMCAFXUMA2	PG-MQFP-80-1	as SAF-C515C-8EM, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XC166 Family				
XC161CJ/CS Series				
SAF-XC161CJ-16F40F BB-Step	SP000280516	XC161CJ16F40FBBFXQMA1	PG-TQFP-144-19	128-Kbyte on-chip program memory (flash memory), 8-Kbyte RAM, programmable watchdog timer, oscillator watchdog, two 16-channel general purpose capture/compare units, TwinCAN module, two Full-CAN nodes, serial data link module (J1850), 12-channel 10-bit A/D converter, 40-MHz clock frequency, -40°C to 85°C, tray
SAF-XC161CJ-16F40F BB-Step	SP000224537	XC161CJ16F40FBBFXUMA1	PG-TQFP-144-19	as SAF-XC161CJ-16F20F, 40-MHz clock frequency, tape & reel
SAK-XC161CJ-16F40F BB-Step	SP000224540	XC161CJ16F40FBBKXUMA1	PG-TQFP-144-19	as SAF-XC161CJ-16F40F, -40°C to 125°C, tape & reel
SAF-XC161CS-32F40F BB-A-Step	SP000224542	XC161CS32F40FBBAFXUMA1	PG-TQFP-144-19	256-Kbyte on-chip program memory (flash memory), 12-Kbyte RAM, programmable watchdog timer, oscillator watchdog, two 16-channel general purpose capture/compare units, TwinCAN module, two Full-CAN nodes, serial data link module (J1850), 40-MHz clock frequency, -40°C to 85°C, tape & reel
SAK-XC161CS-32F40F BB-A-Step	SP000224544	XC161CS32F40FBBAXUMA1	PG-TQFP-144-19	as SAF-XC161CS-32F40F, -40°C to 125°C, tape & reel

XC164CM Series

SAK-XC164CM-8F20F AA-Step	SP000065643	XC164CM8F20FAAKXUMA1	PG-LQFP-64-4	64-Kbyte on-chip program memory (flash memory), 2-Kbyte embedded static RAM, programmable watchdog timer, oscillator watchdog, one 16-channel purpose capture/compare units, TwinCAN module, one Full-CAN nodes, 14-channel 10-Bit A/D converter, 20-MHz clock frequency, -40°C to 125°C, tape & reel
SAF-XC164CM-8F40F AA-Step	SP000203865	XC164CM8F40FAAFXQMA1	PG-LQFP-64-4	as SAK-XC164CM-8F20F, 40-MHz clock frequency, -40°C to 85°C, tray
SAF-XC164CM-8F40F AA-Step	SP000065635	XC164CM8F40FAAFXUMA1	PG-LQFP-64-4	as SAF-XC164CM-8F40F, tape & reel
SAK-XC164CM-8F40F AA-Step	SP000203869	XC164CM8F40FAAKXQMA1	PG-LQFP-64-4	as SAF-XC164CM-8F40F, -40°C to 125°C, tray
SAK-XC164CM-8F40F AA-Step	SP000065644	XC164CM8F40FAAKXUMA1	PG-LQFP-64-4	as SAK-XC164CM-8F40F, tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XC166 Family				
XC164CM Series				
(cont'd)				
SAK-XC164CM-16F20F BA-Step	SP000245661	XC164CM16F20FBAKXUMA1	PG-LQFP-64-4	as SAK-XC164CM-8F20F, 128-Kbyte on-chip program memory (flash memory), tape & reel
SAF-XC164CM-16F40F BA-Step	SP000258386	XC164CM16F40FBAFXQMA1	PG-LQFP-64-4	as SAK-XC164CM-16F20F, 40-MHz clock frequency, -40°C to 85°C, tray
SAK-XC164CM-16F40F BA-Step	SP000258408	XC164CM16F40FBAKXQMA1	PG-LQFP-64-4	as SAF-XC164CM-16F40F, -40°C to 125°C, tray
SAK-XC164CM-16F40F BA-Step	SP000258407	XC164CM16F40FBAKXUMA1	PG-LQFP-64-4	as SAK-XC164CM-16F40F, tape & reel
XC164CS Series				
SAF-XC164CS-16F40F BB-Step	SP000224553	XC164CS16F40FBBFXQMA1	PG-TQFP-100-16	128-Kbyte on-chip program memory (flash memory), 6-Kbyte embedded static RAM, programmable watchdog timer, oscillator watchdog, two 16-channel purpose capture/compare units, TwinCAN module, two Full-CAN nodes, 14-channel 10-bit A/D converter, 40-MHz clock frequency, -40°C to 85°C, tray
SAF-XC164CS-16F40F BB-Step	SP000224552	XC164CS16F40FBBFXUMA1	PG-TQFP-100-16	as SAF-XC164CS-16F40F, tape & reel
SAK-XC164CS-16F40F BB-Step	SP000224561	XC164CS16F40FBBKXQMA1	PG-TQFP-100-16	as SAF-XC164CS-16F40F, -40°C to 125°C, tray
SAK-XC164CS-16F40F BB-Step	SP000224560	XC164CS16F40FBBKXUMA1	PG-TQFP-100-16	as SAK-XC164CS-16F40F, tape & reel
SAK-XC164CS-32F20F BB-A-Step	SP000224594	XC164CS32F20FBBKXUMA1	PG-TQFP-100-16	as SAF-XC164CS-16F40F, 256-Kbyte on-chip program memory (flash memory), 20-MHz clock frequency, -40°C to 125°C, tape & reel
SAF-XC164CS-32F40F BB-A-Step	SP000224593	XC164CS32F40FBBAFXQMA1	PG-TQFP-100-16	as SAK-XC164CS-32F20F, 40-MHz clock frequency, -40°C to 85°C, tray
SAF-XC164CS-32F40F BB-A-Step	SP000224592	XC164CS32F40FBBAFXUMA1	PG-TQFP-100-16	as SAF-XC164CS-32F40F, tape & reel
SAK-XC164CS-32F40F BB-A-Step	SP000224597	XC164CS32F40FBBKXQMA1	PG-TQFP-100-16	as SAF-XC164CS-32F40F, -40°C to 125°C, tray
SAK-XC164CS-32F40F BB-A-Step	SP000224596	XC164CS32F40FBBKXUMA1	PG-TQFP-100-16	as SAK-XC164CS-32F40F, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XC166 Family				
XC167CI Series				
SAF-XC167CI-16F40F BB-Step	SP000224690	XC167CI16F40FBBFXQMA1	PG-TQFP-144-19	128-Kbyte on-chip program memory (flash memory), 8-Kbyte on-chip RAM, programmable watchdog timer, oscillator watchdog, two 16-channel purpose capture/compare units, 16-channel 10-bit A/D converter, TwinCAN module, two Full-CAN nodes, 40-MHz clock frequency, -40°C to 85°C, tray
SAF-XC167CI-16F40F BB-Step	SP000224689	XC167CI16F40FBBFXUMA1	PG-TQFP-144-19	as SAF-XC167CI-16F40F, tape & reel
SAK-XC167CI-16F40F BB-Step	SP000224695	XC167CI16F40FBBKXQMA1	PG-TQFP-144-19	as SAF-XC167CI-16F40F, -40°C to 125°C, tray
SAK-XC167CI-16F40F BB-Step	SP000224694	XC167CI16F40FBBKXUMA1	PG-TQFP-144-19	as SAK-XC167CI-16F40F, tape & reel
SAF-XC167CI-32F40F BB-A-Step	SP000224703	XC167CI32F40FBBAFXQMA1	PG-TQFP-144-19	as SAF-XC167CI-16F20F, 256-Kbytes on-chip program memory (flash memory), 12-Kbyte RAM, 40-MHz clock frequency, tray
SAF-XC167CI-32F40F BB-A-Step	SP000224702	XC167CI32F40FBBAFXUMA1	PG-TQFP-144-19	as SAF-XC167CI-32F40F, tape & reel
SAK-XC167CI-32F40F BB-A-Step	SP000224707	XC167CI32F40FBBAXQMA1	PG-TQFP-144-19	as SAF-XC167CI-32F40F, -40°C to 125°C, tray
SAK-XC167CI-32F40F BB-A-Step	SP000224706	XC167CI32F40FBBAXUMA1	PG-TQFP-144-19	as SAK-XC167CI-32F40F, tape & reel

SMD = Surface Mounted Device