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What is "[Embedded - Microcontrollers](#)"?



"[Embedded - Microcontrollers](#)" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "[Embedded - Microcontrollers](#)"

Details

Product Status	Last Time Buy
Core Processor	XC800
Core Size	8-Bit
Speed	24MHz
Connectivity	I ² C, SSC, UART/USART
Peripherals	Brown-out Detect/Reset, LED, POR, PWM, WDT
Number of I/O	13
Program Memory Size	4KB (4K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	512 x 8
Voltage - Supply (Vcc/Vdd)	2.5V ~ 5.5V
Data Converters	A/D 4x10b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	-
Package / Case	-
Supplier Device Package	-
Purchase URL	https://www.e-xfl.com/product-detail/infineon-technologies/xc8221fraaakxuma1

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XE166 Family				
XE161 Series				
(cont'd)				
SAF-XE161FL-20F80V AA-Step	SP000859290	XE161FL20F80VAAFUMA1	PG-VQFN-48-54	as SAF-XE161FL-12F80V 160-Kbyte on-chip program memory (flash memory), tape & reel
SAK-XE161HL-12F66V AA-Step	SP000859300	XE161HL12F66VAAKUMA1	PG-VQFN-48-54	as SAF-XE161FL-12F80V, no Full-CAN node, 66-MHz clock frequency, -40°C to 125°C, tape & reel
SAK-XE161HL-20F66V AA-Step	SP000859292	XE161HL20F66VAAKUMA1	PG-VQFN-48-54	as SAK-XE161FL-12F66V, 160-Kbyte on-chip program memory (flash memory), tape & reel
SAF-XE161HL-12F80V AA-Step	SP000859302	XE161HL12F80VAAFUMA1	PG-VQFN-48-54	as SAF-XE161FL-12F80V no Full-CAN node, tape & reel
SAF-XE161HL-20F80V AA-Step	SP000966484	XE161HL20F80VAAFUMA1	PG-VQFN-48-54	as SAF-XE161FL-20F80V no Full-CAN node, tube
SAF-XE161HL-20F80V AA-Step	SP000859294	XE161HL20F80VAAFUMA1	PG-VQFN-48-54	as SAF-XE161HL-20F80V, tape & reel
■ SAF-XE161FU-4F66V AA-Step	SP000859282	XE161FU4F66VAAFUMA1	PG-VQFN-48-54	Real time signal controller/ Compact Line 32-Kbyte on-chip program memory (flash memory), 4-Kbyte on-chip program/data SRAM (PSRAM), memory protection unit (MPU), programmable watchdog timer, oscillator watchdog, one 16-channel purpose capture/compare unit (CAPCOM2), two capture/compare units (CCU60), 10-channel 12-bit A/D converter, two serial interface channels, 66-MHz clock frequency, -40°C to 85°C, tape & reel
SAF-XE161FU-8F66V AA-Step	SP000859286	XE161FU8F66VAAFUMA1	PG-VQFN-48-54	as SAF-XE161FU-4F66V, 64-Kbyte on-chip program memory (flash memory), tape & reel
■ SAK-XE161FU-4F40V AA-Step	SP000859280	XE161FU4F40VAAKUMA1	PG-VQFN-48-54	as SAF-XE161FU-4F66V, 40-MHz clock frequency, -40°C to 125°C, tape & reel
SAK-XE161FU-8F40V AA-Step	SP000859284	XE161FU8F40VAAKUMA1	PG-VQFN-48-54	as SAK-XE161FU-4F40V, 64-Kbyte on-chip program memory (flash memory), tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XE166 Family XE162 Series				
■ SAK-XE162FL-12F66L AA-Step	SP000859312	XE162FL12F66LAAKXQSA1	PG-LQFP-64-22	Real time signal controller/ Econo Line 96-Kbyte on-chip program memory (flash memory), 4-Kbyte on-chip program/data SRAM (PSRAM), memory protection unit (MPU), programmable watchdog timer, oscillator watchdog, one 16-channel purpose capture/compare unit (CAPCOM2), two capture/compare units (CCU60), 19-channel 12-bit A/D converter, two Full-CAN nodes, four serial interface channels, 66-MHz clock frequency, -40°C to 125°C, tray
■ SAF-XE162FL-12F80L AA-Step	SP000859314	XE162FL12F80LAAFXQSA1	PG-LQFP-64-22	as SAK-XE162FL-12F66L, 80-MHz clock frequency, -40°C to 85°C, tray
SAF-XE162FL-20F80L AA-Step	SP000859306	XE162FL20F80LAAFXQSA1	PG-LQFP-64-22	as SAF-XE162FL-12F80L, 160-Kbyte on-chip program memory (flash memory), tray
SAK-XE162FL-20F66L AA-Step	SP000859304	XE162FL20F66LAAKXUMA1	PG-LQFP-64-22	as SAF-XE162FL-12F80L, 160-Kbyte on-chip program memory (flash memory), 4-Kbyte on-chip program/data SRAM (PSRAM), 66-MHz clock frequency, -40°C to 125°C, tape & reel
■ SAF-XE162FM-24F80L AA-Step	SP000397634	XE162FM24F80LAAFXUMA1	PG-LQFP-64-13	Real time signal controller/Base Line 192-Kbyte on-chip program memory (flash memory), 10-Kbyte on-chip program/data SRAM (PSRAM), memory protection unit (MPU), one 16-channel purpose capture/compare unit (CAPCOM2), programmable watchdog timer, oscillator watchdog, capture/compare unit (CCU60), 7 + 2-channel 10-bit A/D converter, six serial interface, two Full-CAN nodes, 80-MHz clock frequency, -40°C to 85°C, tape & reel
SAF-XE162FM-72F80L AA-Step	SP000397630	XE162FM72F80LAAFXUMA1	PG-LQFP-64-13	as SAFXE162FM-24F80L, 576-Kbyte on-chip program memory (flash memory), 32-Kbyte on-chip program/data SRAM (PSRAM), tape & reel
■ SAF-XE162FN-16F80L AA-Step	SP000518060	XE162FN16F80LAAFXUMA1	PG-LQFP-64-13	as SAF-XE162FM-24F80L, Value Line 128-Kbyte on-chip program memory (flash memory), 16-Kbyte on-chip program/data SRAM (PSRAM), tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XE166 Family				
XE162 Series				
(cont'd)				
■ SAF-XE162HN-24F80L AA-Step	SP000518068	XE162HN24F80LAAFXUMA1	PG-LQFP-64-13	as SAF-XE162HN-16F80L, 192-Kbyte on-chip program memory (flash memory), tape & reel
SAK-XE162HN-24F80L AA-Step	SP000692014	XE162HN24F80LAAKXUMA1	PG-LQFP-64-13	as SAF-XE162HN-24F80L, -40°C to 125°C, tape & reel
■ SAK-XE162HN-40F80L AA-Step	SP000692016	XE162HN40F80LAAKXUMA1	PG-LQFP-64-13	as SAF-XE162FN-24F80L, 320-Kbyte on-chip program memory (flash memory), 16-Kbyte on-chip program/data SRAM (PSRAM), -40°C to 125°C, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XE166 Family				
XE164F Series				
(cont'd)				
■ SAF-XE164FM-72F80L AA-Step	SP000397558	XE164FM72F80LAAFXUMA1	PG-LQFP-100-8	as SAF-XE164FM-24F80L, 576-Kbyte on-chip program memory (flash memory), 32-Kbyte on-chip program/data SRAM (PSRAM), tape & reel
SAK-XE164FM-72F80L AA-Step	SP000628606	XE164FM72F80LAAKXUMA1	PG-LQFP-100-8	as SAF-XE164FM-72F80L, -40°C to 125°C, tape & reel
■ SAF-XE164FN-16F80L AA-Step	SP000518034	XE164FN16F80LAAFXUMA1	PG-LQFP-100-8	as SAF-XE164F-24F66L, Value Line 128-Kbyte on-chip program memory (flash memory), 8-Kbyte on-chip program/data SRAM (PSRAM), 80-MHz clock frequency, -40°C to 85°C, tape & reel
■ SAF-XE164FN-40F80L AA-Step	SP000726688	XE164FN40F80LAAFXQSA1	PG-LQFP-100-8	as SAF-XE164F-24F66L, 320-Kbyte on-chip program memory (flash memory), tray
■ SAF-XE164FN-40F80L AA-Step	SP000518038	XE164FN40F80LAAFXUMA1	PG-LQFP-100-8	as SAF-XE164F-24F66L, tape & reel
SAK-XE164FN-40F80L AA-Step	SP000634792	XE164FN40F80LAAKXUMA1	PG-LQFP-100-8	as SAF-XE164FN-40F80L, -40°C to 125°C, tape & reel

SMD = Surface Mounted Device

Microcontrollers

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 16-bit				
XC2000 Family XC23xx Series (Safety) (cont'd)				
SAK-XC2387A-56F80L AA-Step	SP000526972	XC2387A56F80LAAKFUMA1	PG-LQFP-144-13	16/32-bit single-chip microcontroller with 32-bit performance XC2300 family High performance CPU with 5-stage pipeline, 448-Kbyte on-chip program memory, 32-Kbyte on-chip program/data SRAM (PSRAM), 1024 bytes on-chip special function register area (C166 family compatible), programmable watchdog timer and oscillator watchdog, four capture/compare unit (CCU6), 16+ 8-channel 10-Bit A/D converter, three Full-CAN nodes, six serial interface channels, 80-MHz clock frequency, -40°C to 125°C, tape & reel
SAK-XC2387A-104F80L AA-Step	SP000448780	XC2387A104F80LAAKXUMA1	PG-LQFP-144-13	as SAK-XC2387A-56F80L, 832-Kbyte on-chip program memory, tape & reel
SAK-XC2387C-136F100L AB-Step	SP000722460	XC2387C136F100LABKXUMA1	PG-LQFP-144-13	as SAK-XC2387-72F66L, 1,088-Kbyte on-chip program memory, 80-Kbyte on-chip program/data SRAM (PSRAM), 100-MHz clock frequency, tape & reel
▼ SAK-XC2387C-200F100L AB-Step	SP001060934	XC2387C200F100LABKXUMA1	PG-LQFP-144-13	as SAK-XC2387C-136F100L, 1,600-Kbyte on-chip program memory, tape & reel
SAK-XC2388E-136F128L AA-Step	SP000886984	XC2388E136F128LAAKXUMA1	PG-LQFP-144-13	16/32-bit single-chip microcontroller with 32-bit performance XC2300 family/Premium Line High performance CPU with 5-stage pipeline, 1,088-Kbyte on-chip program memory, 64-Kbyte on-chip program/data SRAM (PSRAM), 1024 bytes on-chip special function register area (C166 family compatible), programmable watchdog timer and oscillator watchdog, four capture/compare unit (CCU6), 16+ 8-channel 10-Bit A/D converter, three Full-CAN nodes, eight serial interface channels, 128-MHz clock frequency, two FlexRay™ nodes, -40°C to 125°C, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Microcontrollers, 32-bit				
XMC1000 Family (Industry)				
XMC130x Series				
XMC1301-T016F0008 AA-Step	SP001077496	XMC1301T016F0008AAXUMA1	PG-TSSOP-16-1	High performance ARM® Cortex™-M0 CPU Control Series 8-Kbyte embedded program flash, 16-Kbyte RAM, 8-channel A/D converter units of 12-bit resolution, two serial channels (UART, SPI, I ² C, I ² S), six A/D input lines (incl. FADC), one capture/compare unit (CCU4), no Full-CAN node, 32-MHz clock frequency, -40°C to 85°C, tape & reel
▼ XMC1301-T016X0008 AA-Step	SP001158308	XMC1301T016X0008AAXUMA1	PG-TSSOP-16-1	as XMC1301-T016F0008, -40°C to 105°C, tape & reel
XMC1301-T016F0016 AA-Step	SP001077498	XMC1301T016F0016AAXUMA1	PG-TSSOP-16-1	as XMC1301-T016F0008, 16-Kbyte embedded program flash, tape & reel
▼ XMC1301-T016X0016 AA-Step	SP001158310	XMC1301T016X0016AAXUMA1	PG-TSSOP-16-1	as XMC1301-T016F0016, -40°C to 105°C, tape & reel
XMC1301-T038F0008 AA-Step	SP001077520	XMC1301T038F0008AAXUMA1	PG-TSSOP-38-1	High performance ARM® Cortex™-M0 CPU Control Series 8-Kbyte embedded program flash, 16-Kbyte RAM, 8-channel A/D converter units of 12-bit resolution, two serial channels (UART, SPI, I ² C, I ² S), one capture/compare unit (CCU8), POSIF, twelve A/D input lines (incl. FADC), one capture/ compare unit (CCU4), no Full-CAN node, 32-MHz clock frequency, -40°C to 85°C, tape & reel
XMC1301-T038F0016 AA-Step	SP001077500	XMC1301T038F0016AAXUMA1	PG-TSSOP-38-1	as XMC1301-T038F0008, 16-Kbyte embedded program flash, tape & reel
XMC1301-T038F0032 AA-Step	SP001077502	XMC1301T038F0032AAXUMA1	PG-TSSOP-38-1	as XMC1301-T038F0008, 32-Kbyte embedded program flash, tape & reel

SMD = Surface Mounted Device

Power Semiconductors

Type	Ordering Code	Orderable Part Number	Package	Data			
				V_{DS}	$R_{DS(on) max}$	$V_{GS(th)}$	I_D
				V	mΩ	V	A

N-Channel MOSFETs

100V

BSB056N10NN3 G	SP000604540	BSB056N10NN3GXUMA1	CanPAK™ M-size	100	5.6	2.0 ... 3.5	83
BSC046N10NS3 G	SP000907922	BSC046N10NS3GATMA1	SuperSO8	100	4.6	2.0 ... 3.5	100
BSC060N10NS3 G	SP000446584	BSC060N10NS3GATMA1	SuperSO8	100	6.0	2.0 ... 3.5	90
BSC070N10NS3 G	SP000778082	BSC070N10NS3GATMA1	SuperSO8	100	7.0	2.0 ... 3.5	90
■ BSC079N10NS G	SP000379590	BSC079N10NSGATMA1	SuperSO8	100	7.9	2.0 ... 4.0	100
BSC082N10LS G	SP000379609	BSC082N10LSGATMA1	SuperSO8	100	8.2	1.2 ... 2.4	100
■ BSC100N10NSF G	SP000379595	BSC100N10NSFGATMA1	SuperSO8	100	10	2.0 ... 4.0	90
BSC105N10LSF G	SP000388502	BSC105N10LSFGATMA1	SuperSO8	100	10.5	1.2 ... 2.4	90
BSC109N10NS3 G	SP000778132	BSC109N10NS3GATMA1	SuperSO8	100	10.9	2.0 ... 3.5	63
BSC118N10NS G	SP000379599	BSC118N10NSGATMA1	SuperSO8	100	11.8	2.0 ... 4.0	71
BSC123N10LS G	SP000379612	BSC123N10LSGATMA1	SuperSO8	100	12.3	1.2 ... 2.4	71
■ BSC159N10LSF G	SP000379614	BSC159N10LSFGATMA1	SuperSO8	100	15.9	1.2 ... 2.4	63
BSC160N10NS3 G	SP000482382	BSC160N10NS3GATMA1	SuperSO8	100	16	2.0 ... 3.5	42
BSC196N10NS G	SP000379604	BSC196N10NSGATMA1	SuperSO8	100	19.6	2.0 ... 4.0	45
BSC205N10LS G	SP000379616	BSC205N10LSGATMA1	SuperSO8	100	20.5	1.2 ... 2.4	45
BSC252N10NSF G	SP000379608	BSC252N10NSFGATMA1	SuperSO8	100	25.2	2.0 ... 4.0	39
BSC265N10LSF G	SP000379618	BSC265N10LSFGATMA1	SuperSO8	100	26.5	1.2 ... 2.4	40
BSC440N10NS3 G	SP000482420	BSC440N10NS3GATMA1	SuperSO8	100	44	2.0 ... 3.5	18
BSC750N10ND G	SP000359610	BSC750N10NDGATMA1	SuperSO8 dual	100	75	2.0 ... 4.0	13
BSF134N10NJ3 G	SP000604536	BSF134N10NJ3GXUMA1	CanPAK™ S-size	100	13.4	2.0 ... 3.5	40
▼ BSZ150N10LS3 G	SP001002916	BSZ150N10LS3GATMA1	S3O8	100	15	1.1 ... 2.1	40
BSZ160N10NS3 G	SP000482390	BSZ160N10NS3GATMA1	S3O8	100	16	2.0 ... 3.5	40
BSZ440N10NS3 G	SP000482442	BSZ440N10NS3GATMA1	S3O8	100	44	2.0 ... 3.5	18
IPA030N10N3 G	SP000464914	IPA030N10N3GXKSA1	TO-220 FullPAK	100	3.0	2.0 ... 3.5	79
IPA045N10N3 G	SP000478912	IPA045N10N3GXKSA1	TO-220 FullPAK	100	4.5	2.0 ... 3.5	64
IPA086N10N3 G	SP000485984	IPA086N10N3GXKSA1	TO-220 FullPAK	100	8.6	2.0 ... 3.5	45
IPA126N10N3 G	SP000485964	IPA126N10N3GXKSA1	TO-220 FullPAK	100	12.6	2.0 ... 3.5	35
IPA180N10N3 G	SP000480108	IPA180N10N3GXKSA1	TO-220 FullPAK	100	18	2.0 ... 3.5	19
IPB025N10N3 G	SP000469888	IPB025N10N3GATMA1	D²PAK 7pin	100	2.5	2.0 ... 3.5	180
IPB025N10N3 G	SP000939338	IPB025N10N3GE8187ATMA1	D²PAK 7pin	100	2.5	2.0 ... 3.5	180
IPB027N10N3 G	SP000506508	IPB027N10N3GATMA1	D²PAK	100	2.7	2.0 ... 3.5	120
IPB039N10N3 G	SP000482428	IPB039N10N3GATMA1	D²PAK 7pin	100	3.9	2.0 ... 3.5	160
IPB039N10N3 G	SP000939340	IPB039N10N3GE8187ATMA1	D²PAK 7pin	100	3.9	2.0 ... 3.5	160
IPB042N10N3 G	SP000446880	IPB042N10N3GATMA1	D²PAK	100	4.2	2.0 ... 3.5	100
IPB042N10N3 G	SP000939332	IPB042N10N3GE8187ATMA1	D²PAK	100	4.2	2.0 ... 3.5	100
IPB083N10N3 G	SP000458812	IPB083N10N3GATMA1	D²PAK	100	8.2	2.0 ... 3.5	80
IPB123N10N3 G	SP000485968	IPB123N10N3GATMA1	D²PAK	100	12.3	2.0 ... 3.5	58

SMD = Surface Mounted Device

Power Semiconductors

Type	Ordering Code	Orderable Part Number	Package	Data			
				V_{DS}	$R_{DS(on)max}$	$V_{GS(th)}$	I_D
				V	mΩ	V	A

N-Channel MOSFETs

600V CP Series

IPA60R125CP	SP000095275	IPA60R125CPXKSA1	TO-220 FullPAK	600	125	2.5 ... 3.5	25.0
IPA60R165CP	SP000096437	IPA60R165CPXKSA1	TO-220 FullPAK	600	165	2.5 ... 3.5	21.0
IPA60R199CP	SP000094146	IPA60R199CPXKSA1	TO-220 FullPAK	600	199	2.5 ... 3.5	16.0
IPA60R250CP	SP000310226	IPA60R250CPXKSA1	TO-220 FullPAK	600	250	2.5 ... 3.5	12.0
IPA60R299CP	SP000096438	IPA60R299CPXKSA1	TO-220 FullPAK	600	299	2.5 ... 3.5	11.0
IPA60R385CP	SP000089316	IPA60R385CPXKSA1	TO-220 FullPAK	600	385	2.5 ... 3.5	9.0
IPA60R520CP	SP000405856	IPA60R520CPXKSA1	TO-220 FullPAK	600	520	2.5 ... 3.5	6.8
IPA60R600CP	SP000405884	IPA60R600CPXKSA1	TO-220 FullPAK	600	600	2.5 ... 3.5	6.1
IPB60R099CP	SP000088490	IPB60R099CPATMA1	D ² PAK	600	99	2.5 ... 3.5	31.0
IPB60R125CP	SP000297368	IPB60R125CPATMA1	D ² PAK	600	125	2.5 ... 3.5	25.0
IPB60R165CP	SP000096439	IPB60R165CPATMA1	D ² PAK	600	165	2.5 ... 3.5	21.0
IPB60R199CP	SP000223256	IPB60R199CPATMA1	D ² PAK	600	199	2.5 ... 3.5	16.0
IPB60R250CP	SP000358140	IPB60R250CPATMA1	D ² PAK	600	250	2.5 ... 3.5	12.0
IPB60R299CP	SP000301161	IPB60R299CPATMA1	D ² PAK	600	299	2.5 ... 3.5	11.0
IPB60R385CP	SP000228365	IPB60R385CPATMA1	D ² PAK	600	385	2.5 ... 3.5	9.0
IPB60R520CP	SP000405868	IPB60R520CPATMA1	D ² PAK	600	520	2.5 ... 3.5	6.8
IPB60R600CP	SP000405892	IPB60R600CPATMA1	D ² PAK	600	600	2.5 ... 3.5	6.1
▼ IPD60R385CP	SP000680638	IPD60R385CPATMA1	DPAK	600	385	2.5 ... 3.5	9.0
IPD60R385CP	SP000307381	IPD60R385CPBTMA1	DPAK	600	385	2.5 ... 3.5	9.0
▼ IPD60R520CP	SP000680640	IPD60R520CPATMA1	DPAK	600	520	2.5 ... 3.5	6.8
IPD60R520CP	SP000405852	IPD60R520CPBTMA1	DPAK	600	520	2.5 ... 3.5	6.8
IPD60R600CP	SP000405878	IPD60R600CPBTMA1	DPAK	600	600	2.5 ... 3.5	6.1
IPI60R099CP	SP000297356	IPI60R099CPXKSA1	I ² PAK	600	99	2.5 ... 3.5	31.0
IPI60R125CP	SP000297355	IPI60R125CPXKSA1	I ² PAK	600	125	2.5 ... 3.5	25.0
IPI60R165CP	SP000680744	IPI60R165CPXKSA1	I ² PAK	600	165	2.5 ... 3.5	21.0
IPI60R199CP	SP000103248	IPI60R199CPXKSA1	I ² PAK	600	199	2.5 ... 3.5	16.0
▼ IPI60R250CP	SP000358141	IPI60R250CPAKSA1	I ² PAK	600	250	2.5 ... 3.5	12.0
IPI60R299CP	SP000103249	IPI60R299CPXKSA1	I ² PAK	600	299	2.5 ... 3.5	11.0
IPI60R385CP	SP000103250	IPI60R385CPXKSA1	I ² PAK	600	385	2.5 ... 3.5	9.0
IPI60R520CP	SP000405872	IPI60R520CPAKSA1	I ² PAK	600	520	2.5 ... 3.5	6.8
IPI60R600CP	SP000405896	IPI60R600CPAKSA1	I ² PAK	600	600	2.5 ... 3.5	6.1
IPL60R199CP	SP000841892	IPL60R199CPAUMA1	ThinPAK 8x8	600	199	2.5 ... 3.5	16.4
IPL60R299CP	SP000841896	IPL60R299CPAUMA1	ThinPAK 8x8	600	299	2.5 ... 3.5	11.1
IPL60R385CP	SP000841898	IPL60R385CPAUMA1	ThinPAK 8x8	600	385	2.5 ... 3.5	9.0
IPP60R099CP	SP000057021	IPP60R099CPXKSA1	TO-220	600	99	2.5 ... 3.5	31.0
IPP60R125CP	SP000088488	IPP60R125CPXKSA1	TO-220	600	125	2.5 ... 3.5	25.0
IPP60R165CP	SP000084279	IPP60R165CPXKSA1	TO-220	600	165	2.5 ... 3.5	21.0
IPP60R199CP	SP000084278	IPP60R199CPXKSA1	TO-220	600	199	2.5 ... 3.5	16.0
IPP60R250CP	SP000358136	IPP60R250CPXKSA1	TO-220	600	250	2.5 ... 3.5	12.0

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Data			
				V_{DS}	$R_{DS(on) max}$	$V_{GS(th)}$	I_D
				V	mΩ	V	A

N-Channel MOSFETs**650V
CFD Series**

IPA65R110CFD	SP000895230	IPA65R110CFDXKSA1	TO-220 FullPAK	650	110	3.5... 4.5	31.2
IPA65R150CFD	SP000907026	IPA65R150CFDXKSA1	TO-220 FullPAK	650	150	3.5... 4.5	22.4
IPA65R190CFD	SP000905382	IPA65R190CFDXKSA1	TO-220 FullPAK	650	190	3.5... 4.5	17.5
IPA65R310CFD	SP000890320	IPA65R310CFDXKSA1	TO-220 FullPAK	650	310	3.5... 4.5	11.4
IPA65R420CFD	SP000890322	IPA65R420CFDXKSA1	TO-220 FullPAK	650	420	3.5... 4.5	8.7
IPA65R660CFD	SP000838284	IPA65R660CFDXKSA1	TO-220 FullPAK	650	660	3.5... 4.5	6.0
IPB65R110CFD	SP000896400	IPB65R110CFDATMA1	D ² PAK	650	110	3.5... 4.5	31.2
IPB65R150CFD	SP000907034	IPB65R150CFDATMA1	D ² PAK	650	150	3.5... 4.5	22.4
IPB65R190CFD	SP000905378	IPB65R190CFDATMA1	D ² PAK	650	190	3.5... 4.5	17.5
IPB65R310CFD	SP000745032	IPB65R310CFDATMA1	D ² PAK	650	310	3.5... 4.5	11.4
IPB65R420CFD	SP000890680	IPB65R420CFDATMA1	D ² PAK	650	420	3.5... 4.5	8.7
▼ IPB65R660CFD	SP000861698	IPB65R660CFDATMA1	D ² PAK	650	660	3.5... 4.5	6.0
▼ IPD65R420CFD	SP001117738	IPD65R420CFDATMA1	DPAK	650	420	3.5... 4.5	8.7
IPD65R420CFD	SP000891704	IPD65R420CFDBTMA1	DPAK	650	420	3.5... 4.5	8.7
▼ IPD65R660CFD	SP001117748	IPD65R660CFDATMA1	DPAK	650	660	3.5... 4.5	6.0
IPD65R660CFD	SP000745024	IPD65R660CFDBTMA1	DPAK	650	660	3.5... 4.5	6.0
▼ IPD65R950CFD	SP001117750	IPD65R950CFDATMA1	DPAK	650	950	3.5... 4.5	3.9
IPD65R950CFD	SP000953124	IPD65R950CFDBTMA1	DPAK	650	950	3.5... 4.5	3.9
▼ IPD65R1K4CFD	SP001117732	IPD65R1K4CFDATMA1	DPAK	650	1400	3.5... 4.5	2.8
IPD65R1K4CFD	SP000953126	IPD65R1K4CFDBTMA1	DPAK	650	1400	3.5... 4.5	2.8
IPI65R110CFD	SP000896398	IPI65R110CFDXKSA1	I ² PAK	650	110	3.5... 4.5	31.2
IPI65R150CFD	SP000907028	IPI65R150CFDXKSA1	I ² PAK	650	150	3.5... 4.5	22.4
IPI65R190CFD	SP000905386	IPI65R190CFDXKSA1	I ² PAK	650	190	3.5... 4.5	17.5
IPI65R310CFD	SP000891700	IPI65R310CFDXKSA1	I ² PAK	650	310	3.5... 4.5	11.4
IPI65R420CFD	SP000891702	IPI65R420CFDXKSA1	I ² PAK	650	420	3.5... 4.5	8.7
IPI65R660CFD	SP000861696	IPI65R660CFDXKSA1	I ² PAK	650	660	3.5... 4.5	6.0
▼ IPL65R340CFD	SP000949258	IPL65R340CFDAUMA1	ThinPAK 8x8	650	340	3.5... 4.5	10.9
▼ IPL65R460CFD	SP000949260	IPL65R460CFDAUMA1	ThinPAK 8x8	650	460	3.5... 4.5	8.3
▼ IPL65R725CFD	SP000949266	IPL65R725CFDAUMA1	ThinPAK 8x8	650	725	3.5... 4.5	5.8
IPP65R110CFD	SP000895226	IPP65R110CFDXKSA1	TO-220	650	110	3.5... 4.5	31.2
IPP65R150CFD	SP000907024	IPP65R150CFDXKSA1	TO-220	650	150	3.5... 4.5	22.4
IPP65R190CFD	SP000881160	IPP65R190CFDXKSA1	TO-220	650	190	3.5... 4.5	17.5
IPP65R310CFD	SP000745028	IPP65R310CFDXKSA1	TO-220	650	310	3.5... 4.5	11.4
IPP65R420CFD	SP000876824	IPP65R420CFDXKSA1	TO-220	650	420	3.5... 4.5	8.7
IPP65R660CFD	SP000745026	IPP65R660CFDXKSA1	TO-220	650	660	3.5... 4.5	6.0
IPW65R041CFD	SP000756288	IPW65R041CFDFKSA1	TO-247	650	41	3.5... 4.5	68.5
IPW65R080CFD	SP000745036	IPW65R080CFDFKSA1	TO-247	650	80	3.5... 4.5	43.3
IPW65R110CFD	SP000895232	IPW65R110CFDFKSA1	TO-247	650	110	3.5... 4.5	31.2
IPW65R150CFD	SP000907038	IPW65R150CFDFKSA1	TO-247	650	150	3.5... 4.5	22.4
IPW65R190CFD	SP000905376	IPW65R190CFDFKSA1	TO-247	650	190	3.5... 4.5	17.5
IPW65R310CFD	SP000890688	IPW65R310CFDFKSA1	TO-247	650	310	3.5... 4.5	11.4
IPW65R420CFD	SP000890686	IPW65R420CFDFKSA1	TO-247	650	420	3.5... 4.5	8.7
IPW65R660CFD	SP000861700	IPW65R660CFDFKSA1	TO-247	650	660	3.5... 4.5	6.0

SMD = Surface Mounted Device

Power Semiconductors

Type	Ordering Code	Orderable Part Number	Package	Data			
				V_{CE}	I_C	I_C (pulse) (max)	V_{CE} (sat) (typ)
				V	A	A	V

TRENCHSTOP™ RC (Reverse Conducting - Soft Switching Applications) 1100V

IHW30N110R3	SP000702510	IHW30N110R3FKSA1	TO-247	1100	30	90	1.55
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1200V

IHW15N120R3	SP000521590	IHW15N120R3FKSA1	TO-247	1200	15	45	1.48
IHW20N120R3	SP000437702	IHW20N120R3FKSA1	TO-247	1200	20	60	1.48
IHW25N120R2	SP000212016	IHW25N120R2FKSA1	TO-247	1200	25	75	1.60
▼ IHW30N120R2	SP000212017	IHW30N120R2FKSA1	TO-247	1200	30	90	1.65
IHW30N120R3	SP000999768	IHW30N120R3FKSA1	TO-247	1200	30	90	1.55
IHW40N120R3	SP000999770	IHW40N120R3FKSA1	TO-247	1200	40	120	1.55

1350V

IHW20N135R3	SP000909532	IHW20N135R3FKSA1	TO-247	1350	20	60	1.6
▼ IHW20N135R5	SP001078568	IHW20N135R5XKSA1	TO-247	1350	20	60	1.65
IHW30N135R3	SP000989496	IHW30N135R3FKSA1	TO-247	1350	30	90	1.65
IHW40N135R3	SP000989498	IHW40N135R3FKSA1	TO-247	1350	40	120	1.65

1600V

IHW30N160R2	SP000273701	IHW30N160R2FKSA1	TO-247	1600	30	90	1.65
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SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Data			
				V_s	$R_{DS(on)}$	$I_{L(nom)} \text{ min.}$	$I_{L(SCP)} \text{ typ.}$
				V	mΩ	A	A

Smart High-Side Switches

PROFET™ for automotive applications

BTS307 E3062A	SP000011225	BTS307E3062ANTMA1	P-TO220-5-62	65	250	1.7	10
BTS409L1 E3062A	SP000011232	BTS409L1E3062ANTMA1	P-TO220-5-62	43	200	2	7.5
BTS410E2 E3043	SP000011234	BTS410E2E3043NKSA1	P-TO220-5-43	65	220	2	12
BTS410E2 E3062A	SP000011235	BTS410E2E3062ANTMA1	P-TO220-5-62	65	220	2	12
BTS410F2 E3062A	SP000016371	BTS410F2E3062ANTMA1	P-TO220-5-62	65	220	2	5.5
BTS426L1 E3062A	SP000011244	BTS426L1E3062ANTMA1	P-TO220-5-62	> 40	60	4	25
BTS428L2	SP000506234	BTS428L2ATMA1	PG-TO252-3-1	> 40	60	3.6	22
BTS432E2	SP000711528	BTS432E2BKSA1	PG-TO220-5-3	63	38	9	44
BTS432E2 E3062A	SP000663358	BTS432E2E3062ABUMA1	PG-TO263-5-2	63	38	9	44
BTS436L2G	SP000011257	BTS436L2GNTMA1	P-TO263-5-2	> 40	38	5.2	51
BTS442E2	SP000711526	BTS442E2BKSA1	PG-TO220-5-3	63	18	17	95
BTS442E2 E3062A	SP000663460	BTS442E2E3062ABUMA1	PG-TO263-5-2	63	18	17	95
BTS640S2G	SP000528876	BTS640S2GATMA1	PG-TO263-7-2	> 40	30	4.0	50
BTS730	SP000272333	BTS730XUMA1	PG-DSO-20-9	> 40	70	3.5	20

PROFET™ for industrial applications

ITS428L2	SP000525146	ITS428L2ATMA1	PG-TO252-3-1	> 40	60	3.6	22
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SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
Power Management ICs				
Automotive ICs				
High Current Motor Drivers				
NovalithIC™				
(cont'd)				
■ BTS7960S	SP000355960	BTN7960SAKSA1	PG-TO220-7-12	16.2 mΩ NovalithIC™, high current PN half-bridge driver, 47A, status flag, 5.5 to 28V operating range, tube
■ BTN7963B	SP000481608	BTN7963BAUMA1	PG-TO263-7-1	16mΩ NovalithIC™, high current PN half-bridge driver, 47A, status flag, 4.5 to 28V operating range, tape & reel
■ BTN7970B	SP000299769	BTN7970BAUMA1	PG-TO263-7-1	16mΩ NovalithIC™, high current PN half-bridge driver, 70A, status flag, 5.5 to 28V operating range, tape & reel
■ BTN7970P	SP000355967	BTN7970PAKSA1	PG-TO220-7-11	17.6mΩ NovalithIC™, high current PN half-bridge driver, 70A, status flag, 5.5 to 28V operating range, tube
■ BTN7970S	SP000355961	BTN7970SAKSA1	PG-TO220-7-12	16.2mΩ NovalithIC™, high current PN half-bridge driver, 70A, status flag, 5.5 to 28V operating range, tube
■ BTN7971B	SP000379686	BTN7971BAUMA1	PG-TO263-7-1	16mΩ NovalithIC™, high current PN half-bridge driver, 70A, status flag, 4.5 to 28V operating range, tape & reel
■ BTN7973B	SP000481626	BTN7973BAUMA1	PG-TO263-7-1	16mΩ NovalithIC™, high current PN half-bridge driver, 70A, status flag, 4.5 to 28V operating range, tape & reel
▼ BTN8946TA	SP000784968	BTN8946TAAUMA1	PG-TO263-7-1	6.7mΩ NovalithIC™, high current PN half-bridge driver, 42A, 5.5 to 40V operating range, switching time 0.25μs, tape & reel
▼ BTN8960TA	SP000785172	BTN8960TAAUMA1	PG-TO263-7-1	14.2mΩ NovalithIC™, high current PN half-bridge driver, 42A, 6 to 40V operating range, status flag, tape & reel
▼ BTN8962TA	SP001054232	BTN8962TAAUMA1	PG-TO263-7-1	14.2mΩ NovalithIC™, high current PN half-bridge driver, 42A, 5.5 to 40V operating range, switching time 0.25μs, tape & reel
▼ BTN8980TA	SP000785250	BTN8980TAAUMA1	PG-TO263-7-1	10mΩ NovalithIC™, high current PN half-bridge driver, 42A, 6 to 40V operating range, status flag, tape & reel
▼ BTN8982TA	SP001054216	BTN8982TAAUMA1	PG-TO263-7-1	10mΩ NovalithIC™, high current PN half-bridge driver, 70A, 5.5 to 40V operating range, switching time 0.25μs, tape & reel

SMD = Surface Mounted Device

Type	Ordering Code	Orderable Part Number	Package	Description
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Power Management ICs**Automotive Linear Voltage Regulators****5V Standard Regulators (> 200mA output current)**

(cont'd)

■ TLE4276D V50	SP000306323	TLE4276DV50ATMA1	PG-TO252-5-11	5V, I_{out} = 400mA, Inhibit, tape & reel
■ TLE4276G V50	SP000306743	TLE4276GV50ATMA1	PG-TO263-5-1	
■ TLE4275D	SP000300949	TLE4275DATMA1	PG-TO252-5-11	5V, I_{out} = 400mA, Reset, tape & reel
■ TLE4275G	SP000297816	TLE4275GATMA1	PG-TO263-5-1	
TLE4290D	SP000360722	TLE4290DATMA1	PG-TO252-5-11	5V, I_{out} = 450mA, Power Good, tape & reel
TLE4290G	SP000362375	TLE4290GATMA1	PG-TO263-5-1	
TLE4291E	SP000754260	TLE4291EXUMA1	PG-SSOP-14 EP	5V, I_{out} = 450mA, Reset, tape & reel
TLE4270-2S	SP000304936	TLE42702SAKSA1	PG-TO220-5-12	5V, I_{out} = 550mA, Reset, tube
TLE4270-2D	SP000304937	TLE42702DATMA1	PG-TO252-5-11	5V, I_{out} = 550mA, Reset, tape & reel
TLE4270-2G	SP000304929	TLE42702GATMA1	PG-TO263-5-1	
■ TLE4271-2	SP000306836	TLE42712AKSA1	PG-TO220-7-11	5V, I_{out} = 550mA, Reset, Inhibit, Watchdog, tube
■ TLE4271-2S	SP000306320	TLE42712SAKSA1	PG-TO220-7-12	
TLE4271-2G	SP000300945	TLE42712GATMA1	PG-TO263-7-1	5V, I_{out} = 550mA, Reset, Inhibit, Watchdog, tape & reel
TLE4284D V50	SP000362371	TLE4284DV50ATMA1	PG-TO252-3-11	5V, I_{out} = 1A, short circuit protected, overtemperature protected, tape & reel
TLE42754D	SP000354517	TLE42754DATMA1	PG-TO252-5-11	5V, I_{out} = 450mA, Reset, overtemperature protected, tape & reel
TLE42754G	SP000354518	TLE42754GATMA1	PG-TO263-5-1	
TLE42754E	SP000441598	TLE42754EXUMA1	PG-SSOP-14EP	
TLE4675D	SP000315008	TLE4675DATMA1	PG-TO252-5-11	5V, I_{out} = 400mA, Reset, tape & reel
TLE4675G	SP000315009	TLE4675GATMA1	PG-TO263-5-1	
TLF80511TC	SP000906390	TLF80511TCATMA1	PG-TO263-3	5V, I_{out} = 400mA, overtemperature shutdown, tape & reel

8.5V and 10V Standard Regulators

TLE4266GS V10	SP000317563	TLE4266GSV10HTMA1	PG-SOT223-4	10V, I_{out} = 120mA, Inhibit, tape & reel
■ TLE4274G V10	SP000362359	TLE4274GV10ATMA1	PG-TO263-3-1	10V, I_{out} = 400mA, tape & reel
■ TLE4274G V85	SP000362362	TLE4274GV85ATMA1	PG-TO263-3-1	8.5V, I_{out} = 400mA, tape & reel
■ TLE4274 V10	SP000011811	TLE4274V10NKSA1	P-TO220-3-1	10V, I_{out} = 400mA, Inhibit, tube
■ TLE4276G V85	SP000357978	TLE4276GV85ATMA1	PG-TO263-5-1	8.5V, I_{out} = 400mA, Inhibit, tape & reel
■ TLE4276G V10	SP000300972	TLE4276GV10ATMA1	PG-TO263-5-1	10V, I_{out} = 400mA, Inhibit, tape & reel

Adjustable Ultra Low Quiescent Regulators

TLE42764DV	SP000427326	TLE42764DVATMA1	PG-TO252-5-11	adjustable voltage, I_{out} = 400mA, short circuit protected, overtemperature protected, Enable function, tape & reel
TLE42764GV	SP000427324	TLE42764GVATMA1	PG-TO263-5-1	

2.6V and 3.3V Ultra Low Quiescent Regulators

TLE4266-2GS V33	SP000804764	TLE42662GSV33HTMA2	PG-SOT223-4	3.3V, I_{out} = 150mA, Inhibit, tape & reel
TLE42744D V33	SP000644994	TLE42744DV33ATMA1	PG-TO252-3-11	3.3V, I_{out} = 400mA, tape & reel
TLE42744G V33	SP000619810	TLE42744GV33ATMA1	PG-TO263-3-1	
TLE42744GS V33	SP000653070	TLE42744GSV33HUMA1	PG-SOT223-4	
TLE4299GM V33	SP000300974	TLE4299GMV33XUMA1	PG-DSO-14-30	3.3V, I_{out} = 150mA, Inhibit, early warning, tape & reel
TLE4299G V33	SP000306730	TLE4299GV33XUMA1	PG-DSO-8-16	
TLE7273-2G V26	SP000369461	TLE72732GV26XUMA1	PG-DSO-14-4	2.6V, I_{out} = 180mA, Inhibit, Reset, Window Watchdog, tape & reel

SMD = Surface Mounted Device

RF & Protection Devices

Type	Ordering Code	Orderable Part Number	Packages	Switch Type	Operation Ranges		Characteristics	
					f GHz	V_{dd} V	Insertion Loss dB	Isolation dB

RF Switches

General Purpose Switches

BGS12AL7-4	7.5k*	SP000427434	BGS12AL74E6327XTSA1	TSLP-7-4	SPDT	0.1 - 3	2.4 - 3.6	0.40	32
BGS12AL7-6	7.5k*	SP000531668	BGS12AL76E6327XTMA1	TSLP-7-6	SPDT	0.1 - 3	2.4 - 3.6	0.40	32
▼ BGS12PL6	15k*	SP001003644	BGS12PL6E6327XTSA1	TSLP-6-4	SPDT	0.1 - 4	2.4 - 3.6	0.40	37
▼ BGS12SL6	15k*	SP001030986	BGS12SL6E6327XTSA1	TSLP-6-2	SPDT	0.1 - 6	2.4 - 3.6	0.25	36
▼ BGS12SN6	15k*	SP001068580	BGS12SN6E6327XTSA1	TSNP-6-2	SPDT	0.1 - 6	1.8 - 3.5	0.25	40
▼ BGS13SL9	7.5k*	SP001003646	BGS13SL9E6327XTSA1	TSLP-9-3	SPT3T	0.1 - 3	2.4 - 3.6	0.35	37
▼ BGS22W2L10	7.5k*	SP001000962	BGS22W2L10E6327XTSA1	TSLP-10-1	DPDT	0.1 - 3	2.4 - 3.6	0.33	38
▼ BGS22WL10	7.5k*	SP000977020	BGS22WL10E6327XTSA1	TSLP-10-1	DPDT	0.1 - 3	2.4 - 3.6	0.33	35

Diversity Switches

▼ BGS14AN16	3k*	SP001078872	BGS14AN16E6327XTSA1	TSNP-16-6	SP4T	0.1 - 3	2.85 - 4.7	0.34	40
BGS15AN16	7.5k*	SP000795644	BGS15AN16E6327XTSA1	TSNP-16-6	SP5T	0.1 - 3	2.85 - 4.7	0.34	35

Antenna Switch Modules

▼ BGSF18DM20	4k*	SP000837138	BGSF18DM20E6327XUMA1	VCCN-20-1	SP8T	0.1 - 2.7	2.85 - 4.7	0.6	35
▼ BGSF18DM20	4k*	SP000971912	BGSF18DM20E6727XUMA1	VCCN-20-1	SP8T	0.1 - 2.7	2.85 - 4.7	0.6	35
▼ BGSF110GN26	2k*	SP001006660	BGSF110GN26E6327XTSA1	TSNP-26-1	SP10T	0.1 - 3.8	2.4 - 3.3	0.5	37
▼ BGSF1717MN26	2k*	SP001135902	BGSF1717MN26E6327XTSA1	TSNP-26-3	DP14T	0.1 - 3.8	2.4 - 3.3	0.5	47

* order unit

SMD = Surface Mounted Device

General Purpose Diodes & Transistors

Type	Ordering Code	Orderable Part Number	Package	Maximum Ratings		Characteristics ($T_A = 25^\circ\text{C}$)	
				V_R	I_F	V_F	at I_F
				V	mA	V	mA

Schottky Diodes

High Speed Switching, Clipping and Clamping (cont'd)

BAS70	3k*	SP000010247	BAS70E6327HTSA1	SOT23	70	70	0.375	1
BAS70	10k*	SP000010248	BAS70E6433HTMA1	SOT23	70	70	0.375	1
BAS70-02L	15k*	SP000013550	BAS7002LE6327XTMA1	TSLP-2-1	70	70	0.375	1
BAS70-02W (Dual)	3k*	SP000749812	BAS7002WH6327XTSA1	SCD80	70	70	0.375	1
BAS70-04 (Dual)	3k*	SP000010253	BAS7004E6327HTSA1	SOT23	70	70	0.375	1
BAS70-04 (Dual)	10k*	SP000010256	BAS7004E6433HTMA1	SOT23	70	70	0.375	1
BAS70-04S (Quad)	3k*	SP000749814	BAS7004SH6327XTSA1	SOT363	70	70	0.375	1
BAS70-04S (Quad)	3k*	SP000749818	BAS7004SH6827XTSA1	SOT363	70	70	0.375	1
BAS70-04W (Dual)	3k*	SP000749820	BAS7004WH6327XTSA1	SOT323	70	70	0.375	1
BAS70-05 (Dual)	3k*	SP000010252	BAS7005E6327HTSA1	SOT23	70	70	0.375	1
BAS70-05 (Dual)	10k*	SP000078827	BAS7005E6433HTMA1	SOT23	70	70	0.375	1
BAS70-05W (Dual)	3k*	SP000749822	BAS7005WH6327XTSA1	SOT323	70	70	0.375	1
BAS70-06 (Dual)	3k*	SP000010254	BAS7006E6327HTSA1	SOT23	70	70	0.375	1
BAS70-06 (Dual)	10k*	SP000010260	BAS7006E6433HTMA1	SOT23	70	70	0.375	1
BAS70-06W (Dual)	3k*	SP000749824	BAS7006WH6327XTSA1	SOT323	70	70	0.375	1
BAS70-07 (Dual)	3k*	SP000010266	BAS7007E6327HTSA1	SOT143	70	70	0.375	1
BAS70-07 (Dual)	10k*	SP000010269	BAS7007E6433HTMA1	SOT143	70	70	0.375	1
BAS70-07W (Dual)	3k*	SP000749826	BAS7007WH6327XTSA1	SOT343	70	70	0.375	1
BAT54	3k*	SP000068499	BAT54E6327HTSA1	SOT23	30	200	≤ 0.320	1
BAT54-02LRH	15k*	SP000234099	BAT5402LRHE6327XTSA1	TSLP-2-7	30	200	≤ 0.320	1
BAT54-02V	3k*	SP000749828	BAT5402VH6327XTSA1	SC79	30	200	≤ 0.320	1
BAT54-03W	3k*	SP000426668	BAT5403WE6327HTSA1	SOD323	30	200	≤ 0.320	1
BAT54-04 (Dual)	3k*	SP000068500	BAT5404E6327HTSA1	SOT23	30	200	≤ 0.320	1
BAT54-04W (Dual)	3k*	SP000749830	BAT5404WH6327XTSA1	SOT323	30	200	≤ 0.320	1
BAT54-05 (Dual)	3k*	SP000068509	BAT5405E6327HTSA1	SOT23	30	200	≤ 0.320	1
BAT54-05W (Dual)	3k*	SP000749832	BAT5405WH6327XTSA1	SOT323	30	200	≤ 0.320	1
BAT54-06 (Dual)	3k*	SP000068510	BAT5406E6327HTSA1	SOT23	30	200	≤ 0.320	1
BAT54-06W (Dual)	3k*	SP000749834	BAT5406WH6327XTSA1	SOT323	30	200	≤ 0.320	1
BAT54W (Dual)	3k*	SP000786162	BAT54WH6327XTSA1	SOT323	30	200	≤ 0.320	1
BAT64	3k*	SP000010307	BAT64E6327HTSA1	SOT23	40	250	0.320	1
BAT64-02W	3k*	SP000749836	BAT6402WH6327XTSA1	SCD80	40	250	0.320	1
BAT64-04 (Dual)	3k*	SP000010309	BAT6404E6327HTSA1	SOT23	40	250	0.320	1
BAT64-04 (Dual)	10k*	SP000010314	BAT6404E6433HTMA1	SOT23	40	250	0.320	1
BAT64-04W (Dual)	3k*	SP000749838	BAT6404WH6327XTSA1	SOT323	40	250	0.320	1
BAT64-05 (Dual)	3k*	SP000010310	BAT6405E6327HTSA1	SOT23	40	250	0.320	1
BAT64-05W (Dual)	3k*	SP000749840	BAT6405WH6327XTSA1	SOT323	40	250	0.320	1
BAT64-06 (Dual)	3k*	SP000010311	BAT6406E6327HTSA1	SOT23	40	250	0.320	1
BAT64-06W (Dual)	3k*	SP000749842	BAT6406WH6327XTSA1	SOT323	40	250	0.320	1
BAT240A (Dual)	3k*	SP000010292	BAT240AE6327HTSA1	SOT23	240	400	0.325	10
BAT240A (Dual)	10k*	SP000426394	BAT240AE6433HTMA1	SOT23	240	400	0.325	10

* order unit

SMD = Surface Mounted Device

Summary of Types

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BCX69-25	1k	SP000010930	BCX6925E6327HTSA1	197	BFP640	3k	SP000745306	BFP640H6327XTSA1	172
BCX70G	3k	SP000010555	BCX70GE6327HTSA1	195	BFP640ESD	3k	SP000785482	BFP640ESDH6327XTSA1	172
BCX70H	10k	SP000010578	BCX70HE6433HTMA1	195	BFP640F	3k	SP000750404	BFP640FH6327XTSA1	172
BCX70H	3k	SP000010550	BCX70HE6327HTSA1	195	BFP640FESD	3k	SP000890034	BFP640FESDH6327XTSA1	172
BCX70J	10k	SP000010573	BCX70JE6433HTMA1	195	BFP650	3k	SP000750406	BFP650H6327XTSA1	173
BCX70J	3k	SP000010556	BCX70JE6327HTSA1	195	BFP650F	3k	SP000750408	BFP650FH6327XTSA1	173
BCX70K	3k	SP000010558	BCX70KE6327HTSA1	195	BFP720	3k	SP000750410	BFP720H6327XTSA1	172
BCX71G	3k	SP000010623	BCX71GE6327HTSA1	195	BFP720ESD	3k	SP000785484	BFP720ESDH6327XTSA1	172
BCX71H	3k	SP000010631	BCX71HE6327HTSA1	195	BFP720F	3k	SP000750412	BFP720FH6327XTSA1	172
BCX71J	10k	SP000010647	BCX71JE6433HTMA1	195	BFP720FESD	3k	SP000853562	BFP720FESDH6327XTSA1	172
BCX71J	3k	SP000010625	BCX71JE6327HTSA1	195	BFP740	3k	SP000750414	BFP740H6327XTSA1	172
BCX71K	3k	SP000010632	BCX71KE6327HTSA1	195	BFP740ESD	3k	SP000785486	BFP740ESDH6327XTSA1	172
BDP947	1k	SP000010931	BDP947E6327HTSA1	197	BFP740F	3k	SP000750416	BFP740FH6327XTSA1	173
BDP948	1k	SP000010938	BDP948E6327HTSA1	197	BFP740FESD	3k	SP000890036	BFP740FESDH6327XTSA1	172
BDP948	4k	SP000010943	BDP948E6433HTMA1	197	BFP760	3k	SP001023768	BFP760H6327XTSA1	173
BDP949	1k	SP000010932	BDP949E6327HTSA1	197	BFP840ESD	3k	SP000943010	BFP840ESDH6327XTSA1	172
BDP950	1k	SP000010939	BDP950E6327HTSA1	197	BFP840FESD	3k	SP000977846	BFP840FESDH6327XTSA1	172
BDP953	1k	SP000010934	BDP953E6327HTSA1	197	BFP842ESD	3k	SP000943012	BFP842ESDH6327XTSA1	172
BDP954	1k	SP000010941	BDP954E6327HTSA1	197	BFP843	3k	SP001062586	BFP843H6327XTSA1	172
BF1005	3k	SP000010946	BF1005E6327HTSA1	182	BFP843F	3k	SP001062606	BFP843FH6327XTSA1	172
BF1005S	3k	SP000010949	BF1005SE6327HTSA1	182	BFQ19S	1k	SP000011042	BFQ19SE6327HTSA1	173
BF1009S	3k	SP000010955	BF1009SE6327HTSA1	182	BFR106	3k	SP000011044	BFR106E6327HTSA1	173
BF1009SR	3k	SP000010956	BF1009SRE6327HTSA1	182	BFR181	3k	SP000011047	BFR181E6327HTSA1	171
BF2030	3k	SP000012219	BF2030E6814HTSA1	182	BFR181W	3k	SP000750418	BFR181WH6327XTSA1	171
BF2030W	3k	SP000752012	BF2030WH6814XTSA1	182	BFR182	3k	SP000011051	BFR182E6327HTSA1	171
BF2040	3k	SP000012215	BF2040E6814HTSA1	182	BFR182W	3k	SP000750420	BFR182WH6327XTSA1	171
BF2040R	3k	SP000012216	BF2040RE6814HTSA1	182	BFR183	3k	SP000011054	BFR183E6327HTSA1	171
BF2040W	3k	SP000753484	BF2040WH6814XTSA1	182	BFR183W	3k	SP000750422	BFR183WH6327XTSA1	171
BF5020W	3k	SP000753486	BF5020WH6327XTSA1	182	BFR193	3k	SP000011056	BFR193E6327HTSA1	173
BF5030W	3k	SP000753488	BF5030WH6327XTSA1	182	BFR193F	3k	SP000750424	BFR193FH6327XTSA1	173
BF517	3k	SP000010958	BF517E6327HTSA1	171	BFR193L3	3k	SP000013557	BFR193L3E6327XTMA1	173
BF771	3k	SP000010967	BF771E6327HTSA1	173	BFR193W	3k	SP000734404	BFR193WH6327XTSA1	173
BF799	3k	SP000010973	BF799E6327HTSA1	173	BFR340F	3k	SP000750426	BFR340FH6327XTSA1	171
BF799W	3k	SP000734406	BF799WH6327XTSA1	173	BFR340L3	15k	SP000013558	BFR340L3E6327XTMA1	171
BF998	3k	SP000010978	BF998E6327HTSA1	182	BFR35AP	3k	SP000011060	BFR35APE6327HTSA1	171
BF998R	3k	SP000010979	BF998RE6327HTSA1	182	BFR360F	3k	SP000750428	BFR360FH6327XTSA1	171
BF999	10k	SP000426300	BF999E6433HTMA1	182	BFR360F	3k	SP000750442	BFR360FH6765XTSA1	171
BF999	3k	SP000010985	BF999E6327HTSA1	182	BFR360L3	15k	SP000013561	BFR360L3E6765XTMA1	171
BFN18	1k	SP000010997	BFN18E6327HTSA1	199	BFR380F	15k	SP000750444	BFR380FH6327XTSA1	173
BFN19	1k	SP000010998	BFN19E6327HTSA1	199	BFR380L3	15k	SP000013562	BFR380L3E6327XTMA1	173
BFN24	3k	SP000014784	BFN24E6327HTSA1	199	BFR460L3	15k	SP000014238	BFR460L3E6327XTMA1	171
BFN26	3k	SP000014785	BFN26E6327HTSA1	199	BFR720L3RH	3k	SP000463888	BFR720L3RHE6327XTSA1	172
BFN27	3k	SP000014782	BFN27E6327HTSA1	199	BFR740L3RH	15k	SP000252393	BFR740L3RHE6327XTSA1	172
BFN38	1k	SP000011006	BFN38E6327HTSA1	199	BFR750L3RH	15k	SP000252588	BFR750L3RHE6327XTSA1	172
BFN39	1k	SP000014781	BFN39E6327HTSA1	199	BFR840L3RHESD	15k	SP000978848	BFR840L3RHE6327XTSA1	172
BFP181	3k	SP000011013	BFP181E7764HTSA1	171	BFR92P	3k	SP000011062	BFR92PE6327HTSA1	171
BFP182R	3k	SP000011016	BFP182RE7764HTSA1	171	BFR92W	3k	SP000750446	BFR92WH6327XTSA1	171
BFP182W	3k	SP000745176	BFP182WH6327XTSA1	171	BFR93A	3k	SP000011066	BFR93AE6327HTSA1	173
BFP183	3k	SP000011018	BFP183E7764HTSA1	171	BFR93AW	3k	SP000734402	BFR93AWH6327XTSA1	173
BFP183W	3k	SP000745244	BFP183WH6327XTSA1	171	BFS17P	3k	SP000011073	BFS17PE6327HTSA1	171
BFP193	3k	SP000011024	BFP193E6327HTSA1	173	BFS17S	3k	SP000750448	BFS17SH6327XTSA1	171
BFP193W	3k	SP000745248	BFP193WH6327XTSA1	173	BFS17W	3k	SP000750450	BFS17WH6327XTSA1	171
BFP196	3k	SP000011027	BFP196E6327HTSA1	173	BFS481	3k	SP000750462	BFS481H6327XTSA1	171
BFP196W	3k	SP000745250	BFP196WH6327XTSA1	173	BFS483	3k	SP000750464	BFS483H6327XTSA1	171
BFP405	3k	SP000745254	BFP405H6327XTSA1	171	BG3123	3k	SP000753490	BG3123H6327XTSA1	182
BFP405	3k	SP000745256	BFP405H6740XTSA1	171	BG3123R	3k	SP000753492	BG3123RH6327XTSA1	182
BFP405F	3k	SP000745258	BFP405FH6327XTSA1	171	BG3130	3k	SP000753494	BG3130H6327XTSA1	182
BFP410	3k	SP000762244	BFP410H6327XTSA1	171	BG3130R	3k	SP000753496	BG3130RH6327XTSA1	182
BFP420	10k	SP000745262	BFP420H6433XTMA1	171	BG3430R	3k	SP000753498	BG3430RH6327XTSA1	182
BFP420	3k	SP000745260	BFP420H6327XTSA1	171	BG5120K	3k	SP000753500	BG5120KH6327XTSA1	182
BFP420	3k	SP000745264	BFP420H6740XTSA1	171	BG5412K	3k	SP000753502	BG5412KH6327XTSA1	182
BFP420	3k	SP000745266	BFP420H6801XTSA1	171	BGA231N7	6k	SP001067512	BGA231N7E6330XTSA1	175
BFP420F	3k	SP000745268	BFP420FH6327XTSA1	171	BGA231N7	7.5k	SP001069624	BGA231N7E6327XTSA2	175
BFP450	10k	SP000745272	BFP450H6433XTMA1	173	BGA416	3k	SP000013607	BGA416E6327HTSA1	175
BFP450	3k	SP000745270	BFP450H6327XTSA1	173	BGA420	3k	SP000753504	BGA420H6327XTSA1	175
BFP460	3k	SP000745276	BFP460H6327XTSA1	171	BGA427	3k	SP000753506	BGA427H6327XTSA1	175
BFP520	3k	SP000745280	BFP520H6327XTSA1	171	BGA428	3k	SP000753508	BGA428H6327XTSA1	175
BFP520F	3k	SP000745282	BFP520FH6327XTSA1	171	BGA461	7.5k	SP000463628	BGA461E6327XTSA1	175
BFP540	3k	SP000745288	BFP540H6327XTSA1	171	BGA612	3k	SP000753510	BGA612H6327XTSA1	175
BFP540ESD	3k	SP000745298	BFP540ESDH6327XTSA1	171	BGA614	3k	SP000753512	BGA614H6327XTSA1	175
BFP540FESD	3k	SP000745300	BFP540FESDH6327XTSA1	171	BGA616	3k	SP000753514	BGA616H6327XTSA1	175
BFP620	3k	SP000745302	BFP620H7764XTSA1	172	BGA622	3k	SP000753516	BGA622H6820XTSA1	175
BFP620F	3k	SP000745304	BFP620FH7764XTSA1	172	BGA622L7	7.5k	SP000017535	BGA622L7E6327XTSA1	175

Summary of Types

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SAF-XE161FL-12F80V AA-Step	SP000859298	XE161FL12F80VAAFUXUMA1	33	SAH-XC2361B-40F66L AA-Step	SP000365913	XC2361B40F66LAAHXUMA1	58
SAF-XE161FL-20F80V AA-Step	SP000859290	XE161FL20F80VAAFUXUMA1	34	SAH-XC2361B-40F80L AA-Step	SP000524448	XC2361B40F80LAAHXUMA1	58
SAF-XE161FU-4F66V AA-Step	SP000859282	XE161FU4F66VAAFUXUMA1	34	SAK-C161CS-LF CA-Step	SP000106868	C161CSLFCAXQMA1	26
SAF-XE161FU-8F66V AA-Step	SP000859286	XE161FU8F66VAAFUXUMA1	34	SAK-C161JC-LF CA-Step	SP000106870	C161JCLFCAXQMA1	26
SAF-XE161HL-12F80V AA-Step	SP000859302	XE161HL12F80VAAFUXUMA1	34	SAK-C164CI-8E25M DB-Step	SP000104057	C164CI8E25MDBKXQMA1	29
SAF-XE161HL-20F80V AA-Step	SP000966484	XE161HL20F80VAAFUXUMA1	34	SAK-C164CI-8E25M DB-Step	SP000104058	C164CI8E25MDBKXQMA1	29
SAF-XE161HL-20F80V AA-Step	SP000859294	XE161HL20F80VAAFUXUMA1	34	SAK-C164CI-8EM CB-Step	SP000103500	C164CI8EMCBKXQMA1	29
SAF-XE162FL-12F80L AA-Step	SP000859314	XE162FL12F80LAAFXQSA1	35	SAK-C164CI-8EM CB-Step	SP000103501	C164CI8EMCBKXQMA1	29
SAF-XE162FL-20F80L AA-Step	SP000859306	XE162FL20F80LAAFXQSA1	35	SAK-C164CI-8EM DB-Step	SP000104059	C164CI8EMDBKXQMA1	29
SAF-XE162FM-24F80L AA-Step	SP000397634	XE162FM24F80LAAFXUMA1	35	SAK-C164CI-8EM DB-Step	SP000104060	C164CI8EMDBKXQMA1	29
SAF-XE162FM-72F80L AA-Step	SP000397630	XE162FM72F80LAAFXUMA1	35	SAK-C164CI-L25M CA+-Step	SP000103496	C164CIL25MCAKXUMA1	29
SAF-XE162FN-16F80L AA-Step	SP000518060	XE162FN16F80LAAFXUMA1	35	SAK-C164CI-LM CA+-Step	SP000103497	C164CILMCAKXUMA1	29
SAF-XE162FN-24F80L AA-Step	SP000518062	XE162FN24F80LAAFXUMA1	36	SAK-C164CM-4EF AB-Step	SP000104063	C164CM4EFABKXUMA1	30
SAF-XE162FN-40F80L AA-Step	SP000726684	XE162FN40F80LAAFXQSA1	36	SAK-C167CR-L33M HA+-Step	SP000103460	C167CRL33MHAKXQMA1	31
SAF-XE162HL-12F80L AA-Step	SP000859318	XE162HL12F80LAAFXQSA1	36	SAK-C167CR-L33M HA+-Step	SP000103461	C167CRL33MHAKXQMA1	31
SAF-XE162HL-20F80L AA-Step	SP000859310	XE162HL20F80LAAFXQSA1	36	SAK-C167CR-LM HA+-Step	SP000103466	C167CRLMHAKXQMA1	31
SAF-XE162HL-20F80L AA-Step	SP000966486	XE162HL20F80LAAFXQSA2	36	SAK-C167CR-LM HA+-Step	SP000103467	C167CRLMHAKXQMA1	31
SAF-XE162HM-72F80L AA-Step	SP000397638	XE162HM72F80LAAFXUMA1	36	SAK-C167CS-L33M CA+-Step	SP000103489	C167CSL33MCAKXUMA1	31
SAF-XE162HN-16F80L AA-Step	SP000518066	XE162HN16F80LAAFXUMA1	36	SAK-C167CS-L40M CA+-Step	SP000103491	C167CSL40MCAKXUMA1	32
SAF-XE162HN-24F80L AA-Step	SP000518068	XE162HN24F80LAAFXUMA1	37	SAK-C167CS-LM CA+-Step	SP000103492	C167CSLMCAKXQMA1	31
SAF-XE164F-24F66L AC-Step	SP000363794	XE164F24F66LACFXQMA1	38	SAK-C167CS-LM CA+-Step	SP000103493	C167CSLMCAKXQMA1	31
SAF-XE164F-24F66L AC-Step	SP000363793	XE164F24F66LACFXQMA1	38	SAK-C167SR-LM HA+-Step	SP000103458	C167SRLMHAKXQMA1	32
SAF-XE164F-48F66L AC-Step	SP000363785	XE164F48F66LACFXQMA1	38	SAK-C167SR-LM HA+-Step	SP000103459	C167SRLMHAKXQMA1	32
SAF-XE164F-48F66L AC-Step	SP000363784	XE164F48F66LACFXQMA1	38	SAK-C505CA-4EM CA-Step	SP000106396	C505CA4EMCAKXQMA1	22
SAF-XE164F-72F66L AC-Step	SP000363775	XE164F72F66LACFXQMA1	38	SAK-C505CA-4EM CA-Step	SP000106397	C505CA4EMCAKXUMA1	22
SAF-XE164F-96F66L AC-Step	SP000363762	XE164F96F66LACFXQMA1	38	SAK-TC1197-256F180E AC-Step	SP000627556	TC1197256F180EACKXUMA1	64
SAF-XE164F-96F66L AC-Step	SP000363761	XE164F96F66LACFXQMA1	38	SAK-TC1197-512F180E AC-Step	SP000602872	TC1197512F180EACKXUMA1	64
SAF-XE164F-96F80L AC-Step	SP000884948	XE164F96F80LACFXQMA1	38	SAK-TC1724N-192F133HR AC-Step	SP001064674	TC1724N192F133HRACKXUMA1	65
SAF-XE164F-96F80L AC-Step	SP000450812	XE164F96F80LACFXQMA1	38	SAK-TC1736-128F80HL AC-Step	SP000366518	TC1736128F80HLAAKXQMA1	65
SAF-XE164FM-24F80L AA-Step	SP000397562	XE164FM24F80LAAFXQMA1	38	SAK-TC1766-192F80HL BD-Step	SP000771726	TC1766192F80HLBDKXUMA2	66
SAF-XE164FM-72F80L AA-Step	SP000397558	XE164FM72F80LAAFXQMA1	39	SAK-TC1767-256F133HR AD-Step	SP000855112	TC1767256F133HRADKQMA1	66
SAF-XE164FN-16F80L AA-Step	SP000518034	XE164FN16F80LAAFXQMA1	39	SAK-TC1767-256F133HR AD-Step	SP001007278	TC1767256F133HRADKXUMA1	66
SAF-XE164FN-40F80L AA-Step	SP000726688	XE164FN40F80LAAFXQSA1	39	SAK-TC1782F-320F180HR BA-Step	SP000862218	TC1782F320F180HRBAKXUMA1	66
SAF-XE164FN-40F80L AA-Step	SP000518038	XE164FN40F80LAAFXQMA1	39	SAK-TC1782N-320F180HL BA-Step	SP000884904	TC1782N320F180HLBAKXUMA1	66
SAF-XE164G-24F66L AC-Step	SP000363797	XE164G24F66LACFXQMA1	40	SAK-TC1782N-320F180HR BA-Step	SP000874788	TC1782N320F180HRBAKXUMA1	66
SAF-XE164G-24F66L AC-Step	SP000363795	XE164G24F66LACFXQMA1	40	SAK-TC1784N-320F180EL BA-Step	SP000947718	TC1784N320F180ELBAKXUMA1	66
SAF-XE164G-48F66L AC-Step	SP000363787	XE164G48F66LACFXQMA1	40	SAK-TC1791N-384F200EP AB-Step	SP000947722	TC1791N384F200EPABKXUMA1	67
SAF-XE164G-96F66L AC-Step	SP000363764	XE164G96F66LACFXQMA1	40	SAK-TC1793F-512F270EB AB-Step	SP000887646	TC1793F512F270EBABKXUMA1	67
SAF-XE164GM-24F80L AA-Step	SP000397568	XE164GM24F80LAAFXQMA1	40	SAK-TC1793FN-512F270EF AB-Step	SP000947760	TC1793FN512F270EFABKXUMA1	67
SAF-XE164GM-72F80L AA-Step	SP000397564	XE164GM72F80LAAFXQMA1	40	SAK-TC1796-256F150E BE-Step	SP000438972	TC1796256F150EBEKXUMA1	68
SAF-XE164H-72F66L AC-Step	SP000363780	XE164H72F66LACFXQMA1	41	SAK-TC1797-384F150E AC-Step	SP000608762	TC1797384F150EACKXUMA1	68
SAF-XE164H-72F66L AC-Step	SP000363779	XE164H72F66LACFXQMA1	41	SAK-TC1797-512F180E AC-Step	SP000478918	TC1797512F180EACKXUMA1	68
SAF-XE164H-96F66L AC-Step	SP000363766	XE164H96F66LACFXQMA1	41	SAK-TC1798N-512F300EP AB-Step	SP000947796	TC1798N512F300EPABKXUMA1	68
SAF-XE164H-96F66L AC-Step	SP000363765	XE164H96F66LACFXQMA1	41	SAK-XC161CJ-16F40F BB-Step	SP000224540	XC161CJ16F40FBBKXUMA1	23
SAF-XE164HM-72F80L AA-Step	SP000397570	XE164HM72F80LAAFXQMA1	41	SAK-XC161CS-32F40F BB-A-Step	SP000224544	XC161CS32F40FBBKXUMA1	23
SAF-XE164HN-16F80L AA-Step	SP000518046	XE164HN16F80LAAFXQMA1	41	SAK-XC164CM-16F20F BA-Step	SP000245661	XC164CM16F20FBAKXUMA1	24
SAF-XE164HN-40F80L AA-Step	SP000518048	XE164HN40F80LAAFXQMA1	41	SAK-XC164CM-16F40F BA-Step	SP000258408	XC164CM16F40FBAKXQMA1	24
SAF-XE164K-48F66L AC-Step	SP000363791	XE164K48F66LACFXQMA1	42	SAK-XC164CM-16F40F BA-Step	SP000258407	XC164CM16F40FBAKXUMA1	24
SAF-XE164K-96F66L AC-Step	SP000363771	XE164K96F66LACFXQMA1	42	SAK-XC164CM-8F20F AA-Step	SP000065643	XC164CM8F20FAAKXUMA1	23
SAF-XE164K-96F66L AC-Step	SP000363770	XE164K96F66LACFXQMA1	42	SAK-XC164CM-8F40F AA-Step	SP000203869	XC164CM8F40FAAKXQMA1	23
SAF-XE164KM-48F80L AA-Step	SP000397578	XE164KM48F80LAAFXQMA1	42	SAK-XC164CM-8F40F AA-Step	SP000065644	XC164CM8F40FAAKXUMA1	23
SAF-XE164KM-72F80L AA-Step	SP000397576	XE164KM72F80LAAFXQMA1	42	SAK-XC164CS-16F40F BB-Step	SP000224561	XC164CS16F40FBBKXQMA1	24
SAF-XE164KN-16F80L AA-Step	SP000518054	XE164KN16F80LAAFXQMA1	42	SAK-XC164CS-16F40F BB-Step	SP000224560	XC164CS16F40FBBKXUMA1	24
SAF-XE167F-48F66L AC-Step	SP000363822	XE167F48F66LACFXQMA1	43	SAK-XC164CS-32F20F BB-A-Step	SP000224594	XC164CS32F20FBBKXUMA1	24
SAF-XE167F-72F66L AC-Step	SP000363813	XE167F72F66LACFXQMA1	43	SAK-XC164CS-32F40F BB-A-Step	SP000224597	XC164CS32F40FBBKXQMA1	24
SAF-XE167F-96F66L AC-Step	SP000363803	XE167F96F66LACFXQMA1	43	SAK-XC164CS-32F40F BB-A-Step	SP000224596	XC164CS32F40FBBKXUMA1	24
SAF-XE167F-96F66L AC-Step	SP000363802	XE167F96F66LACFXQMA1	43	SAK-XC167CI-16F40F BB-Step	SP000224695	XC167CI16F40FBBKXQMA1	25
SAF-XE167F-96F80L AC-Step	SP000450816	XE167F96F80LACFXQMA1	43	SAK-XC167CI-16F40F BB-Step	SP000224694	XC167CI16F40FBBKXUMA1	25
SAF-XE167FH-136F100L AB-Step	SP000874840	XE167FH136F100LABFXUMA1	43	SAK-XC167CI-32F40F BB-A-Step	SP000224707	XC167CI32F40FBBKXQMA1	25
SAF-XE167FH-200F100L AB-Step	SP000845646	XE167FH200F100LABFXUMA1	43	SAK-XC167CI-32F40F BB-A-Step	SP000224706	XC167CI32F40FBBKXUMA1	25
SAF-XE167FM-72F80L AA-Step	SP000397582	XE167FM72F80LAAFXQMA1	44	SAK-XC2030N-40F80L AA-Step	SP000905004	XC2030N40F80LAAKXUMA1	48
SAF-XE167G-72F66L AC-Step	SP000363815	XE167G72F66LACFXQMA1	44	SAK-XC2060-96F66L AC-Step	SP000919142	XC206096F66LACKXUMA1	50
SAF-XE167G-96F66L AC-Step	SP000363805	XE167G96F66LACFXQMA1	44	SAK-XC2060-96F80L AC-Step	SP000904994	XC206096F80LACKXUMA1	50
SAF-XE167H-48F66L AC-Step	SP000363826	XE167H48F66LACFXQMA1	45	SAK-XC2060N-40F80L AA-Step	SP000905002	XC2060N40F80LAAKXUMA1	50
SAF-XE167H-96F66L AC-Step	SP000363806	XE167H96F66LACFXQMA1	45	SAK-XC2080-96F66L AC-Step	SP000919146	XC208096F66LACKXUMA1	53
SAF-XE167HM-72F80L AA-Step	SP000397594	XE167HM72F80LAAFXQMA1	45	SAK-XC2080-96F80L AC-Step	SP000904992	XC208096F80LACKXUMA1	53
SAF-XE167K-48F66L AC-Step	SP000363828	XE167K48F66LACFXQMA1	46	SAK-XC2080H-200F100L AB-Step	SP000905006	XC2080H200F100LABKXUMA1	53
SAF-XE167K-72F66L AC-Step	SP000363819	XE167K72F66LACFXQMA1	46	SAK-XC2210U-4F40R AA-Step	SP000858094	XC2210U4F40RAAKXUMA1	47
SAF-XE167K-96F66L AC-Step	SP000363809	XE167K96F66LACFXQMA1	46	SAK-XC2220U-4F40V AA-Step	SP000858088	XC2220U4F40VAAKXUMA1	47
SAF-XE169FH-136F100L AB-Step	SP000874844	XE169FH136F100LABFXUMA1	46	SAK-XC2220U-8F40V AA-Step	SP000846742	XC2220U8F40VAAKXUMA1	47
SAF-XE169FH-200F100L AB-Step	SP000874838	XE169FH200F100LABFXUMA1	46	SAK-XC2224L-20F66V AA-Step	SP000846740	XC2224L20F66VAAKXUMA1	47
SAH-XC2237M-104F80L AA-Step	SP000720382	XC2237M104F80LAAHXUMA1	48	SAK-XC2234L-20F66L AA-Step	SP000846738	XC2234L20F66LAAKXUMA1	48
SAH-XC2336B-40F80L AA-Step	SP000847032	XC2336B40F80LAAHXUMA1	57	SAK-XC2236N-40F80L AA-Step	SP000605510	XC2236N40F80LAAKXUMA1	48