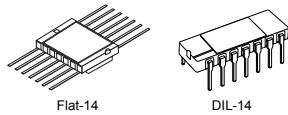
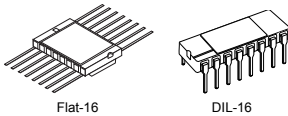


Rad-hard advanced high-speed 5 V CMOS logic series



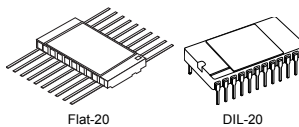
Flat-14

DIL-14



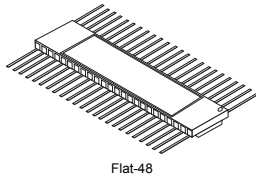
Flat-16

DIL-16



Flat-20

DIL-20



Flat-48

For some of references (see ordering information table) the upper metallic lid is electrically connected to the ground pin

Features

- RHA QML-V qualified
- 7 V Absolute maximum ratings
- 2 V to 6 V operating voltage for CMOS 54ACxxx series
- 4.5 V to 5.5 V operating voltage for TTL 54ACTxxx series
- Hermetic packages
- Rad-hard 300 krad (Si) TID
- SEL immune up to 110 MeV.cm²/mg
- -55 °C to +125 °C temperature range
- SMD (standard microcircuit drawing) available on DLA website for each part

Description

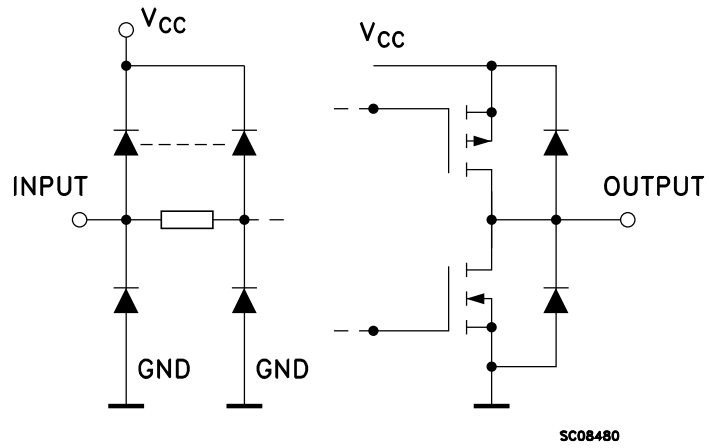
The 54ACxxxx and 54ACTxxxx series are composed of high-speed CMOS functions, specifically designed to meet the radiation requirements of the aerospace industry. They include a large set of gates, flip-flops, multiplexers, counters, bus interfaces, and several other functions. Their radiation hardness, immunity from single event latch-up (SEL) and single event upset (SEU), and housing in hermetic packages make them suitable for the most difficult environmental conditions. STMicroelectronics guarantees full compliance of qualified parts with SMD specifications.

Product status link

[54ACxxxx, 54ACTxxxx](#)

1 Input and output equivalent circuit diagram

Figure 1. Input and output equivalent circuit diagram



Note: For the RHRAC164245 input equivalent circuit, there is no diode connected to V_{CC} .

2 Radiations

Data related to radiations (cumulated dose and heavy-ions) are synthetized in technical notes available on st.com as mentioned in the following table:

Table 1. List of radiation reports

Product	Radiation report	Product	Radiation report
54AC00	TN1006	54ACT00	TN1120
54AC02	TN1020	54ACT02	TN1121
54AC04	TN1007	54ACT04	TN1122
54AC08	TN0992	54ACT08	TN1123
54AC10	TN1021	54ACT10	TN1124
54AC11	TN1022	54ACT11	TN1125
54AC14	TN0967	54ACT14	TN1012
54AC32	TN0996	54ACT32	TN1014
54AC74	TN0997	54ACT74	TN1015
54AC86	TN1009	54ACT86	TN1133
54AC138	TN0993	54ACT138	TN1126
54AC139	TN1023	54ACT139	TN1127
54AC157	TN1025	54ACT151	TN1128
54AC161	TN1008	54ACT157	TN1129
54AC174	TN1026	54ACT161	TN1130
54AC191	TN1027	54ACT174	TN1131
54AC240	TN1000	54ACT191	TN1132
54AC244	TN1001	54ACT240	TN1018
54AC245	TN1002	54ACT244	TN1004
54AC273	TN0995	54ACT245	TN1005
54AC373	TN1031	54ACT273	TN1013
54AC374	TN1032	54ACT373	TN1136
54AC521	TN1028	54ACT374	TN1137
54AC540	TN1119	54ACT541	TN1019
54AC541	TN1003	54ACT574	TN1138
54AC574	TN1011	54ACT16245	TN1017
54AC2525	TN0994	54ACT16373	TN1134
54AC16244	TN0998	54ACT16374	TN1135
54AC16245	TN1010		
54AC16373	TN1029		
54AC16374	TN1030		
54AC164245	TN0999		

3 Ordering information

Table 2. Ordering information

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC00	Rad-hard quad 2-input NAND gate	RHFAC00D03V		5962F8754901VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFAC00K01V		5962F8754901VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC00K02V		5962F8754901VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC00K03V	Grounded lid	5962F8754901VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC00K04V	Grounded lid	5962F8754901VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC00K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT00	Rad-hard quad 2-input NAND gate	RHFACT00K01V		5962F8769903VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT00K02V		5962F8769903VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT00K03V	Grounded lid	5962F8769903VYC	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT00K04V	Grounded lid	5962F8769903VYA	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT00K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC02	Rad-hard quad 2-input NOR gate	RHFAC02D03V		5962F8761201VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFAC02K01V		5962F8761201VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC02K02V		5962F8761201VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC02	Rad-hard quad 2-input NOR gate	RHFAC02K03V	Grounded lid	5962F8761201VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC02K04V	Grounded lid	5962F8761201VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC02K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT02	Rad-hard quad 2-input NOR gate	RHFACT02K01V		5962F8979101VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT02K02V		5962F8979101VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT02K03V	Grounded lid	5962F8979101VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT02K04V	Grounded lid	5962F8979101VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT02K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC04	Rad-hard hex inverter	RHFAC04D03V		5962F8760901VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFAC04K01V		5962F8760901VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC04K02V		5962F8760901VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC04K03V	Grounded lid	5962F8760901VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC04K04V	Grounded lid	5962F8760901VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC04K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT04	Rad-hard hex inverter	RHFACT04D03V		5962F8973403VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFACT04K01V		5962F8973403VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT04K02V		5962F8973403VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT04K03V	Grounded lid	5962F8973403VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT04	Rad-hard hex inverter	RHFACT04K04V	Grounded lid	5962F8973403VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT04K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC08	Rad-hard quad 2-input AND gate	RHFAC08K01V		5962F8761501VXC	QML-V Flight	FLAT14 QML narrow EM	Gold	596
		RHFAC08K02V		5962F8761501VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC08K03V	Grounded lid	5962F8761501VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC08K04V	Grounded lid	5962F8761501VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC08K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT08	Rad-hard quad 2-input AND gate	RHFACT08K01V		5962F8954703VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT08K02V		5962F8954703VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT08K03V	Grounded lid	5962F8954703VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT08K04V	Grounded lid	5962F8954703VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT08K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC10	Rad-hard triple 3-input NAND gate	RHFAC10D03V		5962F8761001VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFAC10K01V		5962F8761001VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC10K02V		5962F8761001VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC10K03V	Grounded lid	5962F8761001VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC10K04V	Grounded lid	5962F8761001VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC10K1		-	Eng. model	FLAT14 QML narrow EM	Gold	

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT10	Rad-hard triple 3-input NAND gate	RHFACT10K01V		5962F9218202VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT10K02V		5962F9218202VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT10K03V	Grounded lid	5962F9218202VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT10K04V	Grounded lid	5962F9218202VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT10K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC11	Rad-hard triple 3-input AND gate	RHFAC11D03V		5962F8761101VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFAC11K01V		5962F8761101VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC11K02V		5962F8761101VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC11K03V	Grounded lid	5962F8761101VYC	QML-V Flight	FLAT14 QML narrow EM	Gold	596
		RHFAC11K04V	Grounded lid	5962F8761101VYA	QML-V Flight	FLAT14 QML narrow EM	Solder Dip	596
		RHFAC11K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT11	Rad-hard triple 3-input AND gate	RHFACT11K01V		5962F9077202VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT11K02V		5962F9077202VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT11K03V	Grounded lid	5962F9077202VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT11K04V	Grounded lid	5962F9077202VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT11K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC14	Rad-hard hex Schmitt inverter	RHFAC14D03V		5962F8762401VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFAC14K01V		5962F8762401VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC14	Rad-hard hex Schmitt inverter	RHFAC14K02V		5962F8762401VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC14K03V	Grounded lid	5962F8762401VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC14K04V	Grounded lid	5962F8762401VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC14K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT14	Rad-hard hex Schmitt inverter	RHFACT14K01V		5962F9681301VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT14K02V		5962F9681301VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT14K03V	Grounded lid	5962F9681301VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT14K04V	Grounded lid	5962F9681301VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT14K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC14A	Rad-hard hex Schmitt inverter low power	RHFAC14AK01V	Low Transient Current	5962F8762403VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC14AK02V	Low Transient Current	5962F8762403VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC14AK03V	Low Transient Current; Grounded lid	5962F8762403VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC14AK04V	Low Transient Current; Grounded lid	5962F8762403VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC14AK1	Low Transient Current	-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC32	Rad-hard quad 2-input OR gate	RHFAC32K01V		5962F8761401VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC32K02V		5962F8761401VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC32K03V	Grounded lid	5962F8761401VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC32K04V	Grounded lid	5962F8761401VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC32	Rad-hard quad 2-input OR gate	RHFAC32K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT32	Rad-hard quad 2-input OR gate	RHFACT32K01V		5962F8973603VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT32K02V		5962F8973603VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT32K03V	Grounded lid	5962F8973603VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT32K04V	Grounded lid	5962F8973603VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT32K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC74	Rad-hard dual D-type flip-flop with Preset & clear	RHFAC74D03V		5962F8852003VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFAC74K01V		5962F8852003VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC74K02V		5962F8852003VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC74K03V	Grounded lid	5962F8852003VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC74K04V	Grounded lid	5962F8852003VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC74K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT74	Rad-hard dual D-type flip-flop with Preset & clear	RHFACT74D03V		5962F8752503VCC	QML-V Flight	DIL14 FP	Gold	596
		RHFACT74K01V		5962F8752503VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT74K02V		5962F8752503VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT74K03V	Grounded lid	5962F8752503VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT74K04V	Grounded lid	5962F8752503VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT74K1		-	Eng. model	FLAT14 QML narrow EM	Gold	

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC86	Rad-hard quad exclusive OR	RHFAC86K01V		5962F8955001VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC86K02V		5962F8955001VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC86K03V	Grounded lid	5962F8955001VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC86K04V	Grounded lid	5962F8955001VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC86K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFACT86	Rad-hard quad exclusive OR	RHFACT86K01V		5962F9068702VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT86K02V		5962F9068702VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT86K03V	Grounded lid	5962F9068702VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFACT86K04V	Grounded lid	5962F9068702VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFACT86K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC138	Rad-hard 3 to 8 line decoder inverter	RHFAC138D03V		5962F8762201VEC	QML-V Flight	DIL16 FP	Gold	596
		RHFAC138K01V		5962F8762201VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC138K02V		5962F8762201VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC138K03V	Grounded lid	5962F8762201VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC138K04V	Grounded lid	5962F8762201VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
RHFACT138	Rad-hard 3 to 8 line decoder inverter	RHFACT138K01V		5962F8755403VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT138K02V		5962F8755403VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT138K03V	Grounded lid	5962F8755403VYC	QML-V Flight	FLAT16 QML FP	Gold	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT138	Rad-hard 3 to 8 line decoder inverter	RHFACT138K04V	Grounded lid	5962F8755403VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT138K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFAC139	Rad-hard dual 2 to 4 line decoder / demultiplexer	RHFAC139K01V		5962F8762301VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC139K02V		5962F8762301VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC139K03V	Grounded lid	5962F8762301VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC139K04V	Grounded lid	5962F8762301VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC139K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFACT139	Rad-hard dual 2 to 4 line decoder / demultiplexer	RHFACT139D03V		5962F8755302VEC	QML-V Flight	DIL16 FP	Gold	596
		RHFACT139K01V		5962F8755302VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT139K02V		5962F8755302VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT139K03V	Grounded lid	5962F8755302VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT139K04V	Grounded lid	5962F8755302VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT139K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFAC151	Rad-hard 8-channel multiplexer	RHFAC151K01V		5962F8769102VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC151K02V		5962F8769102VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC151K03V	Grounded lid	5962F8769102VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC151K04V	Grounded lid	5962F8769102VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC151K1		-	Eng. model	FLAT16 QML EM	Gold	

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT151	Rad-hard 8-channel multiplexer	RHFACT151K01V		5962F8875602VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT151K02V		5962F8875602VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT151K03V	Grounded lid	5962F8875602VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT151K04V	Grounded lid	5962F8875602VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT151K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFAC157	Rad-hard quad 2-channel multiplexer	RHFAC157K01V		5962F8953901VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC157K02V		5962F8953901VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC157K03V	Grounded lid	5962F8953901VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC157K04V	Grounded lid	5962F8953901VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC157K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFACT157	Rad-hard quad 2-channel multiplexer	RHFACT157K01V		5962F8968802VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT157K02V		5962F8968802VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT157K03V	Grounded lid	5962F8968802VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT157K04V	Grounded lid	5962F8968802VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT157K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFAC161	Rad-hard Synchronous binary counter with asynchronous clear	RHFAC161D03V		5962F8956101VEC	QML-V Flight	DIL16 FP	Gold	596
		RHFAC161K01V		5962F8956101VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC161K02V		5962F8956101VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC161	Rad-hard Synchronous binary counter with asynchronous clear	RHFAC161K03V	Grounded lid	5962F8956101VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC161K04V	Grounded lid	5962F8956101VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC161K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFACT161	Rad-hard Synchronous binary counter with asynchronous clear	RHFACT161K01V		5962F9172202VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT161K02V		5962F9172202VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT161K03V	Grounded lid	5962F9172202VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT161K04V	Grounded lid	5962F9172202VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT161K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFAC174	Rad-hard hex D-type flip-flop with clear	RHFAC174K01V		5962F8762602VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC174K02V		5962F8762602VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC174K03V	Grounded lid	5962F8762602VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC174K04V	Grounded lid	5962F8762602VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC174K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFACT174	Rad-hard hex D-type flip-flop with clear	RHFACT174K01V		5962F8775702VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT174K02V		5962F8775702VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT174K03V	Grounded lid	5962F8775702VYC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT174K04V	Grounded lid	5962F8775702VYA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT174K1		-	Eng. model	FLAT16 QML EM	Gold	

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC191	Rad-hard 4 Bit Synchronous binary up / down counter	RHFAC191D03V		5962F8974902VEEC	QML-V Flight	DIL16 FP	Gold	596
		RHFAC191K01V		5962F8974902VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFAC191K02V		5962F8974902VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFAC191K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFACT191	Rad-hard 4 Bit Synchronous binary up / down counter	RHFACT191K01V		5962F0422801VXC	QML-V Flight	FLAT16 QML FP	Gold	596
		RHFACT191K02V		5962F0422801VXA	QML-V Flight	FLAT16 QML FP	Solder Dip	596
		RHFACT191K1		-	Eng. model	FLAT16 QML EM	Gold	
RHFAC240	Rad-hard octal bus buffer 3-state inverter	RHFAC240K01V		5962F8755001VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC240K02V		5962F8755001VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC240K03V	Grounded lid	5962F8755001VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC240K04V	Grounded lid	5962F8755001VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC240K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFACT240	Rad-hard octal bus buffer 3-state inverter	RHFACT240K01V		5962F8775903VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT240K02V		5962F8775903VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT240K03V	Grounded lid	5962F8775903VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT240K04V	Grounded lid	5962F8775903VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT240K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC244	Rad-hard octal bus buffer 3-state	RHFAC244K01V		5962F8755201VXC	QML-V Flight	FLAT20 QML FP	Gold	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC244	Rad-hard octal bus buffer 3-state	RHFAC244K02V		5962F8755201VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC244K03V	Grounded lid	5962F8755201VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC244K04V	Grounded lid	5962F8755201VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC244K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFACT244	Rad-hard octal bus buffer 3-state	RHFACT244K01V		5962F8776003VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT244K02V		5962F8776003VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT244K03V	Grounded lid	5962F8776003VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT244K04V	Grounded lid	5962F8776003VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT244K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC245	Rad-hard octal bus transceiver 3-state	RHFAC245K01V		5962F8775802VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC245K02V		5962F8775802VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC245K03V	Grounded lid	5962F8775802VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC245K04V	Grounded lid	5962F8775802VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC245K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFACT245	Rad-hard octal bus transceiver 3-state	RHFACT245K01V		5962F8766303VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT245K02V		5962F8766303VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT245K03V	Grounded lid	5962F8766303VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT245K04V	Grounded lid	5962F8766303VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT245	Rad-hard octal bus transceiver 3-state	RHFACT245K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC273	Rad-hard octal D-type flip-flop with clear	RHFAC273K01V		5962F8775601VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC273K02V		5962F8775601VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC273K03V	Grounded lid	5962F8775601VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC273K04V	Grounded lid	5962F8775601VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC273K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFACT273	Rad-hard octal D-type flip-flop with clear	RHFACT273K01V		5962F0152701VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT273K02V		5962F0152701VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT273K03V	Grounded lid	5962F0152701VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT273K04V	Grounded lid	5962F0152701VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT273K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC373	Rad-hard octal D-type latch 3-state	RHFAC373K01V		5962F8755501VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC373K02V		5962F8755501VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC373K03V	Grounded lid	5962F8755501VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC373K04V	Grounded lid	5962F8755501VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC373K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFACT373	Rad-hard octal D-type latch 3-state	RHFACT373K01V		5962F8755603VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT373K02V		5962F8755603VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT373	Rad-hard octal D-type latch 3-state	RHFACT373K03V	Grounded lid	5962F8755603VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT373K04V	Grounded lid	5962F8755603VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT373K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC374	Rad-hard octal D-type flip-flop 3-state	RHFAC374K01V		5962F8769401VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC374K02V		5962F8769401VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC374K03V	Grounded lid	5962F8769401VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC374K04V	Grounded lid	5962F8769401VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC374K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFACT374	Rad-hard octal D-type flip-flop 3-state	RHFACT374K01V		5962F8763103VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT374K02V		5962F8763103VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT374K03V	Grounded lid	5962F8763103VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT374K04V	Grounded lid	5962F8763103VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT374K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC521	Rad-hard 8-bit Comparator with Enable	RHFAC521K01V		5962F9098503VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC521K02V		5962F9098503VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC521K03V	Grounded lid	5962F9098503VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC521K04V	Grounded lid	5962F9098503VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC521K1		-	Eng. model	FLAT20 QML EM	Gold	

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC540	Rad-hard octal buffer/line driver 3-State	RHFAC540K01V		5962F8769502VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC540K02V		5962F8769502VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC540K03V	Grounded lid	5962F8769502VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC540K04V	Grounded lid	5962F8769502VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC540K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC541	Rad-hard octal bus buffer 3-state	RHFAC541K01V		5962F8870601VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC541K02V		5962F8870601VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC541K03V	Grounded lid	5962F8870601VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC541K04V	Grounded lid	5962F8870601VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC541K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFACT541	Rad-hard octal bus buffer 3-state	RHFACT541K01V		5962F8979502VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT541K02V		5962F8979502VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT541K03V	Grounded lid	5962F8979502VYC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT541K04V	Grounded lid	5962F8979502VYA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT541K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC574	Rad-hard octal D-type flip-flop 3-state	RHFAC574K01V		5962F9677302VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFAC574K02V		5962F9677302VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFAC574K1		-	Eng. model	FLAT20 QML EM	Gold	

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT574	Rad-hard octal D-type flip-flop 3-state	RHFACT574K01V		5962F8960102VXC	QML-V Flight	FLAT20 QML FP	Gold	596
		RHFACT574K02V		5962F8960102VXA	QML-V Flight	FLAT20 QML FP	Solder Dip	596
		RHFACT574K1		-	Eng. model	FLAT20 QML EM	Gold	
RHFAC2525	Rad-hard 1-to-8 skew clock driver	RHFAC2525K01V		5962F9217402VXC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC2525K02V		5962F9217402VXA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC2525K03V	Grounded lid	5962F9217402VYC	QML-V Flight	FLAT14 QML narrow FP	Gold	596
		RHFAC2525K04V	Grounded lid	5962F9217402VYA	QML-V Flight	FLAT14 QML narrow FP	Solder Dip	596
		RHFAC2525K1		-	Eng. model	FLAT14 QML narrow EM	Gold	
RHFAC16244	Rad-hard 16-bit buffer 3-state	RHFAC16244K01V		5962F0421001VXC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16244K02V		5962F0421001VXA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16244K03V	Grounded lid	5962F0421001VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16244K04V	Grounded lid	5962F0421001VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16244K1		-	Eng. model	FLAT48 EM	Gold	
RHFAC16245	Rad-hard 16-bit transceiver 3-state	RHFAC16245K01V		5962F0421101VXC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16245K02V		5962F0421101VXA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16245K03V	Grounded lid	5962F0421101VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16245K04V	Grounded lid	5962F0421101VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16245K1		-	Eng. model	FLAT48 EM	Gold	

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFAC16373	Rad-hard 16-bit D-type latch 3-state	RHFAC16373K01V		5962F0421201VXC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16373K02V		5962F0421201VXA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16373K03V	Grounded lid	5962F0421201VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16373K04V	Grounded lid	5962F0421201VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16373K1		-	Eng. model	FLAT48 EM	Gold	
RHFAC16374	Rad-hard 16-bit D-type Flip Flop 3-state	RHFAC16374K01V		5962F0421301VXC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16374K02V		5962F0421301VXA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16374K03V	Grounded lid	5962F0421301VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFAC16374K04V	Grounded lid	5962F0421301VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFAC16374K1		-	Eng. model	FLAT48 EM	Gold	
RHFACT16244	Rad-hard 16-bit buffer 3-state	RHFACT16244K01V		5962F9202202VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFACT16244K02V		5962F9202202VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16244K03V	Grounded lid	5962F9202202VZC	QML-V Flight	FLAT48 FP	Gold	596
		RHFACT16244K04V	Grounded lid	5962F9202202VZA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16244K1		-	Eng. model	FLAT48 EM	Gold	
RHFACT16245	Rad-hard 16-bit transceiver 3-state	RHFACT16245K01V		5962F9202302VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFACT16245K02V		5962F9202302VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16245K03V	Grounded lid	5962F9202302VZC	QML-V Flight	FLAT48 FP	Gold	596

Product name	Description	Commercial Product	Other features	SMD pin ⁽¹⁾	Quality level	Package	Lead finish	
RHFACT16245	Rad-hard 16-bit transceiver 3-state	RHFACT16245K04V	Grounded lid	5962F9202302VZA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16245K1		-	Eng. model	FLAT48 EM	Gold	
RHFACT16373	Rad-hard 16-bit D-type latch 3-state	RHFACT16373K01V		5962F9202402VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFACT16373K02V		5962F9202402VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16373K03V	Grounded lid	5962F9202402VZC	QML-V Flight	FLAT48 FP	Gold	596
		RHFACT16373K04V	Grounded lid	5962F9202402VZA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16373K1		-	Eng. model	FLAT48 EM	Gold	
RHFACT16374	Rad-hard 16-bit D-type flip-flop 3-state	RHFACT16374K01V		5962F9202502VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHFACT16374K02V		5962F9202502VYA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16374K03V	Grounded lid	5962F9202502VZC	QML-V Flight	FLAT48 FP	Gold	596
		RHFACT16374K04V	Grounded lid	5962F9202502VZA	QML-V Flight	FLAT48 FP	Solder Dip	596
		RHFACT16374K1		-	Eng. model	FLAT48 EM	Gold	
RHRAC164245 ⁽³⁾	Rad-hard 16-bit 3 to 5 V level shifter transceiver 3-state	RHRAC164245K01V	100 krad	5962R9858008VYC	QML-V Flight	FLAT48 FP	Gold	596
		RHRAC164245K03V	100 krad; Grounded lid	5962R9858008VZC	QML-V Flight	FLAT48 FP	Gold	596
		RHRAC164245K1		-	Eng. model	FLAT48 EM	Gold	

1. The complete specification of each type (including information about packages) is available in SMD (standard microcircuit drawing) from the DLA website.

2. Specific marking only. Complete marking includes the following:

- SMD pin (as included in the table above)
- ST logo
- Data code (date the package was sealed) in YYWWA(year, week, and lot index of week)
- QML logo (Q or V)
- Country of origin (FR=France).

3. *A dedicated datasheet is available on st.com.*

Note: Contact ST sales office for information about the specific conditions for other 54HC or 54HCT part numbers and for proo

4 Other information

Date code:

The date code is structured as engineering model: EM xyywwz

x = 3 (EM only), assembly location Rennes (France), yy = last two digits of the year, ww = week digits and z = lot index of the week.

Product documentation

Each product shipment includes a set of associated documentation within the shipment box. This documentation depends on the quality level of the products, as detailed in the table below.

The Certificate of Conformance is provided on paper whatever the quality level. For QML parts, complete documentation, including the Certificate of Conformance, is provided on a CDROM.

Table 3. Product documentation

Quality level	Item
Engineering model	Certificate of Conformance including : Customer name Customer purchase order number ST sales order number and item ST part number Quantity delivered Date code Reference to ST datasheet Reference to TN1181 on engineering models ST Rennes assembly lot ID
QML-V Flight	Certificate of Conformance including: Customer name Customer purchase order number ST sales order number and item ST part number Quantity delivered Date code Serial numbers Group C reference Group D reference Reference to the applicable SMD ST Rennes assembly lot ID
	Quality control inspection (groups A, B, C, D, E)
	Screening electrical data in/out summary
	Precap report
	PIND (particle impact noise detection) test
	SEM (scanning electronic microscope) inspection report
	X-ray plates

Revision history

Table 4. Document revision history

Date	Version	Changes
06-Apr-2010	1	Initial release.
02-Aug-2011	2	Added Note: on page 11, Note: on page 12, Note: on page 13, Note: on page 14, Note: on page 15, Note: on page 15, Note: on page 17 and in the "Pin connections" diagram on the cover page
23-Apr-2012	3	Updated drawing Flat-20 on the cover page, added list of tables and figures, updated title of Table 4 and Table 5, reformatted Section 4: Package mechanical data and updated titles of Figure 2 to 8 and titles and headers of Table 6 to 12, updated data of Table 10 and Table 12, minor text corrections throughout document.
23-May-2013	4	Updated operating voltage in Features. Updated Table 1: Device summary, Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12, and Table 13: Ordering information. Added Section 6: Other information
09-Apr-2014	5	Updated ceramic Flat-14 package in Figure 2 and Table 6 Specified MIL-STD-1835 for Flat 14 (Table 6), DIL 14 (Table 7), Flat 16 (Table 8), DIL 16 (Table 9) and DIL 20 (Table 11) packages Removed "DSCC" from ceramic Flat-20 package (Figure 6 and Figure 10) Replaced "ESCC" with "QML-V" in title of Table 14
18-Jan-2017	6	Features: removed "Power-down input protection" Table 1: Device summary: removed footnote 1 from 54AC521 and 54AC540, added footnote 2, and updated general note below table. Table 2: Absolute maximum ratings - 54AC series: updated value of VI parameter. Table 3: Absolute maximum ratings - 54ACT series: added footnote 1; updated values of VCC and VI parameters. Section 4: Package information: updated layout of this section and removed superfluous information. Table 13: Ordering information: updated marking of order code RHRAC164245K1, added footnote 2, and updated general note below table. Table 14: Documentation provided for QML-V flight: updated documentation information for engineering model.
13-Dec-2018	7	Added: feature on the cover page, ESD parameter in Table 2: Absolute maximum ratings - 54AC series, Table 3: Absolute maximum ratings - 54ACT series and new Section 4: Radiations. Updated: Description on the cover page, Table 13: Ordering information and Section 7: Other information.
18-Apr-2019	8	Updated Table 13: Ordering information.
20-Nov-2019	9	Updated Table 13: Ordering information.
18-Nov-2020	10	Updated features, Section 1 Input and output equivalent circuit diagram and Ordering information . Removed "Maximum ratings" section.
15-Sep-2021	11	Updated Section 2 Radiations and Section 3 Ordering information .
04-Oct-2021	12	Updated Section 3 Ordering information .

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