

Features

- AC: 2 to 6 V operating voltage
- ACT: 4.5 to 5.5 V operating voltage
- High speed $T_{PD} = 4.5$ ns (typ.)
- Low DC power dissipation: 8 μ A max.
- Symmetrical 24 mA output characteristics
- High noise immunity: 28% of min. V_{CC}
- Balanced propagation delays
- Improved electrical latch-up immunity
- Controlled rise and fall times
- Operating temperature: - 55 to 150 °C
- Hermetic packages
- Rad-hard: 300 krad TID at any Mil1019 dose rates
- SEL immune to 110 MeV/cm²/mg LET ions
- RHA QML-V qualified
- SMD (standard microcircuit drawing) available on DLA website for each part
- Same die and electrical specification for engineering and flight models

Description

The 54AC and 54ACT series represent over 60 product types with different 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.

Contents

1	54AC and 54ACT series overview	5
2	Input and output equivalent circuit diagram	8
3	Maximum rating	9
3.1	Absolute maximum ratings	9
3.1.1	54AC series	9
3.1.2	54ACT series	9
3.2	Recommended operating conditions	10
3.2.1	54AC series	10
3.2.2	54ACT series	10
4	Radiations	11
5	Package information	12
5.1	Ceramic Flat-14 package information	13
5.2	Ceramic DIL-14 package information	14
5.3	Ceramic Flat-16 package information	15
5.4	Ceramic DIL-16 package information	16
5.5	Ceramic Flat-20 package information	17
5.6	Ceramic DIL-20 package information	18
5.7	Ceramic Flat-48 package information	19
6	Ordering information	20
7	Other information	31
8	Revision history	33

List of tables

Table 1.	Device summary	5
Table 2.	Absolute maximum ratings - 54AC series.	9
Table 3.	Absolute maximum ratings - 54ACT series.	9
Table 4.	Recommended operating conditions for 54AC series	10
Table 5.	Recommended operating conditions for 54ACT series	10
Table 6.	Ceramic Flat-14 mechanical data	13
Table 7.	Ceramic DIL-14 mechanical data	14
Table 8.	Ceramic Flat-16 mechanical data	15
Table 9.	Ceramic DIL-16 mechanical data	16
Table 10.	Ceramic Flat-20 mechanical data	17
Table 11.	Ceramic DIL-20 mechanical data	18
Table 12.	Ceramic Flat-48 mechanical data	19
Table 13.	Ordering information	20
Table 14.	Product documentation	31
Table 15.	Document revision history	33

List of figures

Figure 1.	Input and output equivalent circuit diagram	8
Figure 2.	Ceramic Flat-14 package outline	13
Figure 3.	Ceramic DIL-14 package outline	14
Figure 4.	Ceramic Flat-16 package outline	15
Figure 5.	Ceramic DIL-16 package outline	16
Figure 6.	Ceramic Flat-20 package outline	17
Figure 7.	Ceramic DIL-20 package outline	18
Figure 8.	Ceramic Flat-48 package outline	19



1 54AC and 54ACT series overview

Table 1. Device summary

Part number	Description	Radiation level	Agency qualification	EPPL	SMD / detailed specification	Package	Other features
54AC00	Rad-hard quad 2-input NAND gate	300 krad (Si)	QML-V	Y	5962F87549	Flat-14 - DIL-14	-
54ACT00	Rad-hard quad 2-input NAND gate			Y	5962F87699	Flat-14 - DIL-14	
54AC02	Rad-hard quad 2-input NOR gate			Y	5962F87612	Flat-14 - DIL-14	
54ACT02	Rad-hard quad 2-input NOR gate			-	5962F89791	Flat-14 - DIL-14	
54AC04	Rad-hard hex inverter			Y	5962F87609	Flat-14 - DIL-14	
54ACT04	Rad-hard hex inverter			-	5962F89734	Flat-14 - DIL-14	
54AC08	Rad-hard quad 2-input AND gate			Y	5962F87615	Flat-14 - DIL-14	
54ACT08	Rad-hard quad 2-input AND gate			-	5962F89547	Flat-14 - DIL-14	
54AC10	Rad-hard triple 3-input NAND gate			Y	5962F87610	Flat-14 - DIL-14	
54ACT10	Rad-hard triple 3-input NAND gate			-	5962F92182	Flat-14 - DIL-14	
54AC11	Rad-hard triple 3-input AND gate			Y	5962F87611	Flat-14 - DIL-14	
54ACT11	Rad-hard triple 3-input AND gate			-	5962F90772	Flat-14 - DIL-14	
54AC14	Rad-hard hex Schmitt inverter			Y	5962F87624	Flat-14 - DIL-14	
54AC14A	Rad-hard hex Schmitt inverter low power			-	5962F87624	Flat-14 - DIL-14	
54ACT14	Rad-hard hex Schmitt inverter			-	5962F96813	Flat-14 - DIL-14	
54AC32	Rad-hard quad 2-input OR gate			-	5962F87614	Flat-14 - DIL-14	
54ACT32	Rad-hard quad 2-input OR gate			-	5962F89736	Flat-14 - DIL-14	
54AC74	Rad-hard dual D-type flip-flop with preset and clear			Y	5962F88520	Flat-14 - DIL-14	
54ACT74	Rad-hard dual D-type flip-flop with preset and clear			-	5962F87525	Flat-14 - DIL-14	
54AC86	Rad-hard quad exclusive OR			-	5962F89550	Flat-14 - DIL-14	



Table 1. Device summary (continued)

Part number	Description	Radiation level	Agency qualification	EPPL	SMD / detailed specification	Package	Other features
54ACT86	Rad-hard quad exclusive OR	300 krad (Si)	QML-V	Y	5962F90687	Flat-14 - DIL-14	
54AC138	Rad-hard 3 to 8 line decoder inverter			Y	5962F87622	Flat-16 - DIL-16	
54ACT138	Rad-hard 3 to 8 line decoder inverter			-	5962F87554	Flat-16 - DIL-16	
54AC139	Rad-hard dual 2 to 4 line decoder/demultiplexer			Y	5962F87623	Flat-16 - DIL-16	
54ACT139	Rad-hard dual 2 to 4 line decoder/demultiplexer			-	5962F87553	Flat-16 - DIL-16	
54AC151	Rad-hard 8-channel multiplexer			-	5962F87691	Flat-16 - DIL-16	
54ACT151	Rad-hard 8-channel multiplexer			-	5962F88756	Flat-16 - DIL-16	
54AC157	Rad-hard quad 2-channel multiplexer			Y	5962F89539	Flat-16 - DIL-16	
54ACT157	Rad-hard quad 2-channel multiplexer			-	5962F89668	Flat-16 - DIL-16	
54AC161	Rad-hard synchronous binary counter with async. clear			Y	5962F89561	Flat-16 - DIL-16	
54ACT161	Rad-hard synchronous binary counter with async. clear			-	5962F91722	Flat-16 - DIL-16	
54AC174	Rad-hard hex D-type flip-flop with clear			-	5962F87626	Flat-16 - DIL-16	
54ACT174	Rad-hard hex D-type flip-flop with clear			-	5962F87757	Flat-16 - DIL-16	
54AC191	Rad-hard 4-bit synchronous binary up/down counter			-	5962F89749	Flat-16 - DIL-16	
54ACT191	Rad-hard 4-bit synchronous binary up/down counter			-	5962F04228	Flat-16 - DIL-16	
54AC240	Rad-hard octal bus buffer 3-state inverter			Y	5962F87550	Flat-20	
54ACT240	Rad-hard octal bus buffer 3-state inverter			Y	5962F87759	Flat-20	
54AC244	Rad-hard octal bus buffer 3-state			Y	5962F87552	Flat-20	Inverted enable
54ACT244	Rad-hard octal bus buffer 3-state			Y	5962F87760	Flat-20	
54AC245	Rad-hard octal bus transceiver 3-state			Y	5962F87758	Flat-20	
54ACT245	Rad-hard octal bus transceiver 3-state	Y	5962F87663	Flat-20			
54AC273	Rad-hard octal D-type flip-flop with clear	Y	5962F87756	Flat-20			
54ACT273	Rad-hard octal D-type flip-flop with clear	-	5962F01527	Flat-20			

Table 1. Device summary (continued)

Part number	Description	Radiation level	Agency qualification	EPPL	SMD / detailed specification	Package	Other features
54AC373	Rad-hard octal D-type latch 3-state	300 krad (Si)	QML-V	Y	5962F87555	Flat-20	
54ACT373	Rad-hard octal D-type latch 3-state			-	5962F87556	Flat-20	
54AC374	Rad-hard octal D-type flip-flop 3-state			Y	5962F87694	Flat-20	
54ACT374	Rad-hard octal D-type flip-flop 3-state			-	5962F87631	Flat-20	
54AC521	Rad-hard 8-bit comparator with enable			-	5962F87695	Flat-20	
54AC540	Rad-hard octal buffer/line driver 3-state			-	5962F90985	Flat-20	
54AC541	Rad-hard octal bus buffer 3-state			Y	5962F88706	Flat-20	Non inverted enable
54ACT541	Rad-hard octal bus buffer 3-state			-	5962F89795	Flat-20	
54AC574	Rad-hard octal D-type flip-flop 3-state			-	5962F96773	Flat-20	
54ACT574	Rad-hard octal D-type flip-flop 3-state			Y	5962F89601	Flat-20	
54AC2525 ⁽¹⁾	Rad-hard 1 to 8 skew clock driver			-	5962F92174	Flat-48	
54AC16244	Rad-hard 16-bit bus transceiver non inverting			-	5962F04210	Flat-48	
54ACT16244	Rad-hard 16-bit bus transceiver non inverting			-	5962F92022	Flat-48	
54AC16245	Rad-hard 16-bit bus transceiver 3-inverting			-	5962F04211	Flat-48	
54ACT16245	Rad-hard 16-bit 3-state buffer transceiver			-	5962F92023	Flat-48	
54AC16373	Rad-hard 16 D-type latch 3-state			-	5962F04212	Flat-48	
54ACT16373	Rad-hard 16-bit 3-state D-type latch			-	5962F92024	Flat-48	
54AC16374	Rad-hard 16 D-type flip flop 3-state	-	5962F04213	Flat-48			
54ACT16374	Rad-hard 16-bit 3-state D-type flip-flop	-	5962F92025	Flat-48			
54AC164245 ⁽²⁾	Rad-hard 16-bit 3 to 5 V level shifter transceiver 3-state	100 krad (Si)	-	5962R98580	Flat-48		

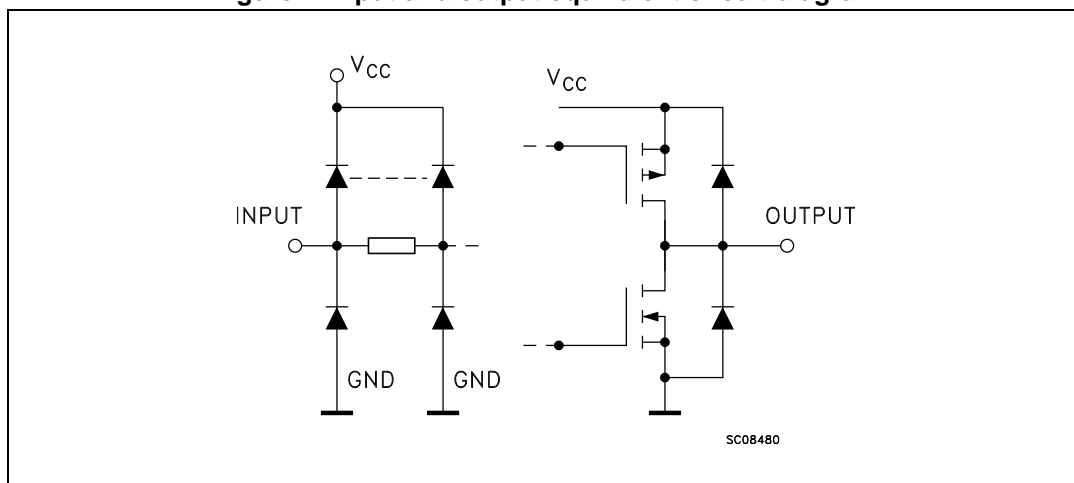
1. The product is not yet formally qualified by DSCC.

2. This product has a dedicated datasheet.

Contact an ST sales office for information on other 54AC or 54ACT part numbers and products in die form and QML-Q versions

2 Input and output equivalent circuit diagram

Figure 1. Input and output equivalent circuit diagram



3 Maximum ratings

3.1 Absolute maximum ratings

3.1.1 54AC series

Table 2. Absolute maximum ratings - 54AC series

Symbol	Parameter	Value	Unit
V_{CC}	Supply voltage	-0.5 to +7.0	V
T_{STG}	Storage temperature	-65 to +150	°C
T_L	Lead temperature (10 sec)	260	°C
ESD	HBM (Human Body Model)	2k	V

Note: All voltage values are referred to V_{SS} pin voltage.

3.1.2 54ACT series

Table 3. Absolute maximum ratings - 54ACT series

Symbol	Parameter	Value	Unit
V_{CC}	Supply voltage ⁽¹⁾	-0.5 to +7.0	V
T_{STG}	Storage temperature	-65 to +150	°C
T_L	Lead temperature (10 s)	260	°C
ESD	HBM (Human Body Model)	2k	V

1. All products of the RHFACT series are specified with an absolute maximum rating of 7 V for the supply voltage, even though the SMD variant of some of them is limited to 6 V by other suppliers.

Note: All voltage values are referred to V_{SS} pin voltage.

3.2 Recommended operating conditions

3.2.1 54AC series

Table 4. Recommended operating conditions for 54AC series

Symbol	Parameter	Value	Unit
V_{CC}	Supply voltage	2 to 6	V
V_I	Input voltage	0 to V_{CC}	V
V_O	Output voltage	0 to V_{CC}	V
T_{OP}	Operating temperature	-55 to 150	°C
dt/dv	Input rise and fall time ⁽¹⁾ $V_{CC} = 3.0, 4.5$ or 5.5	0 to 8	ns/V

1. V_{IN} from 30% to 70% of V_{CC} .

3.2.2 54ACT series

Table 5. Recommended operating conditions for 54ACT series

Symbol	Parameter	Value	Unit
V_{CC}	Supply voltage	4.5 to 5.5	V
V_I	Input voltage	0 to V_{CC}	V
V_O	Output voltage	0 to V_{CC}	V
T_{OP}	Operating temperature	-55 to 150	°C
dt/dv	Input rise and fall time ⁽¹⁾ $V_{CC} = 3.0, 4.5$ or 5.5	0 to 8	ns/V

1. V_{IN} from 30% to 70% of V_{CC} .

4 Radiations

See "TN1006" technical note on www.st.com

5 Package information

In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK packages, depending on their level of environmental compliance. ECOPACK specifications, grade definitions and product status are available at: www.st.com. ECOPACK is an ST trademark.

5.1 Ceramic Flat-14 package information

Figure 2. Ceramic Flat-14 package outline

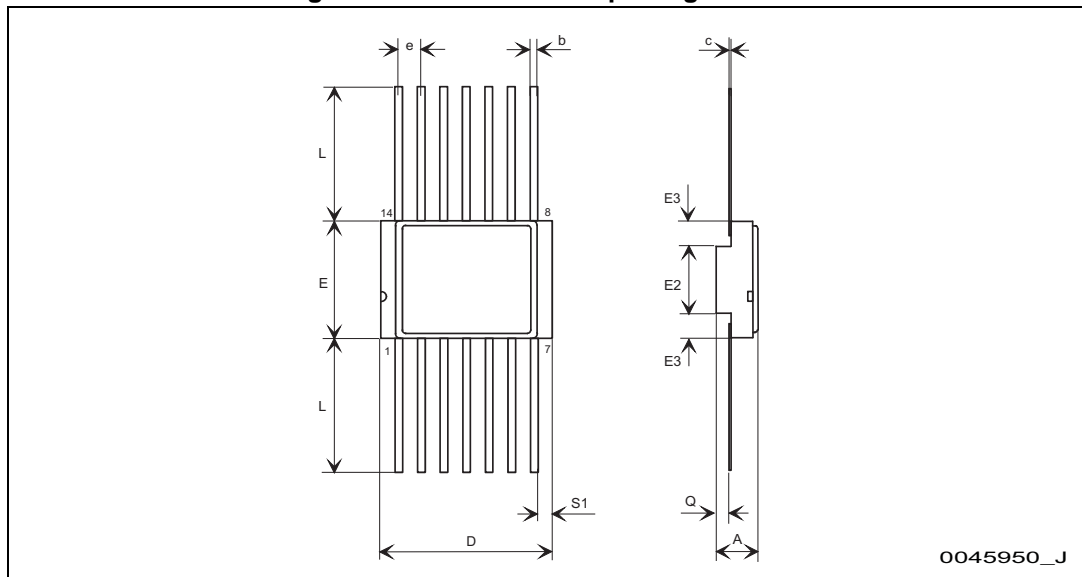


Table 6. Ceramic Flat-14 mechanical data

Symbol	Dimensions (mm)			Dimensions (inches)		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.31		2.72	0.091		0.107
b	0.38		0.48	0.015		0.019
c	0.10		0.18	0.004		0.007
D	9.27		9.73	0.365		0.383
E	6.19		6.50	0.244		0.256
E2		3.68			0.145	
E3	0.76			0.030		
e		1.27			0.050	
L	6.86		7.62	0.250		0.300
Q	0.66		1.14	0.026		0.045
S1	0.13			0.005		

5.2 Ceramic DIL-14 package information

Figure 3. Ceramic DIL-14 package outline

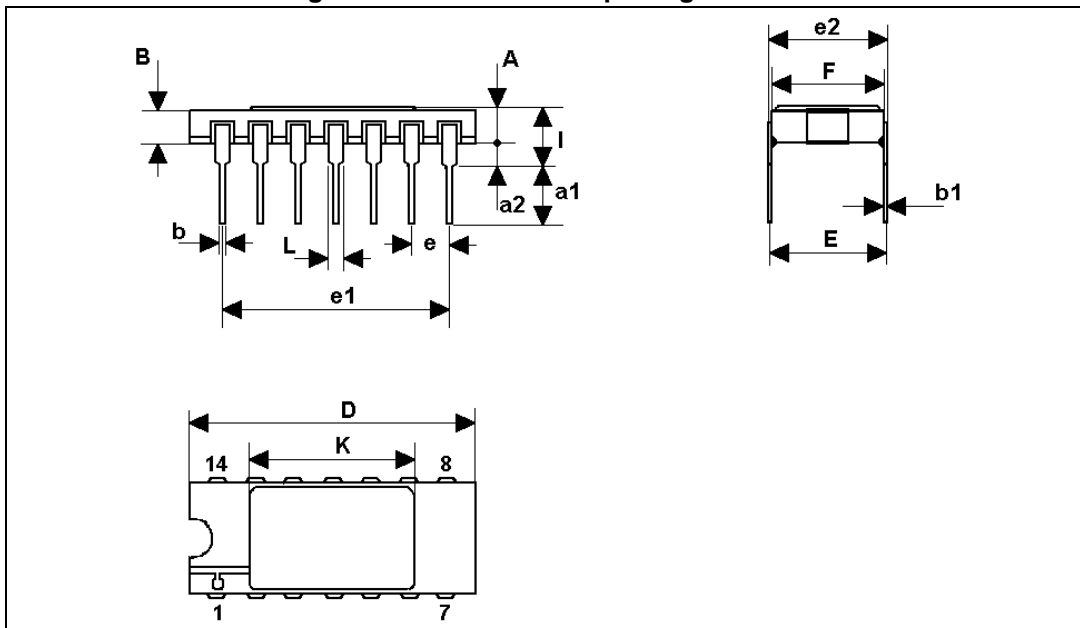
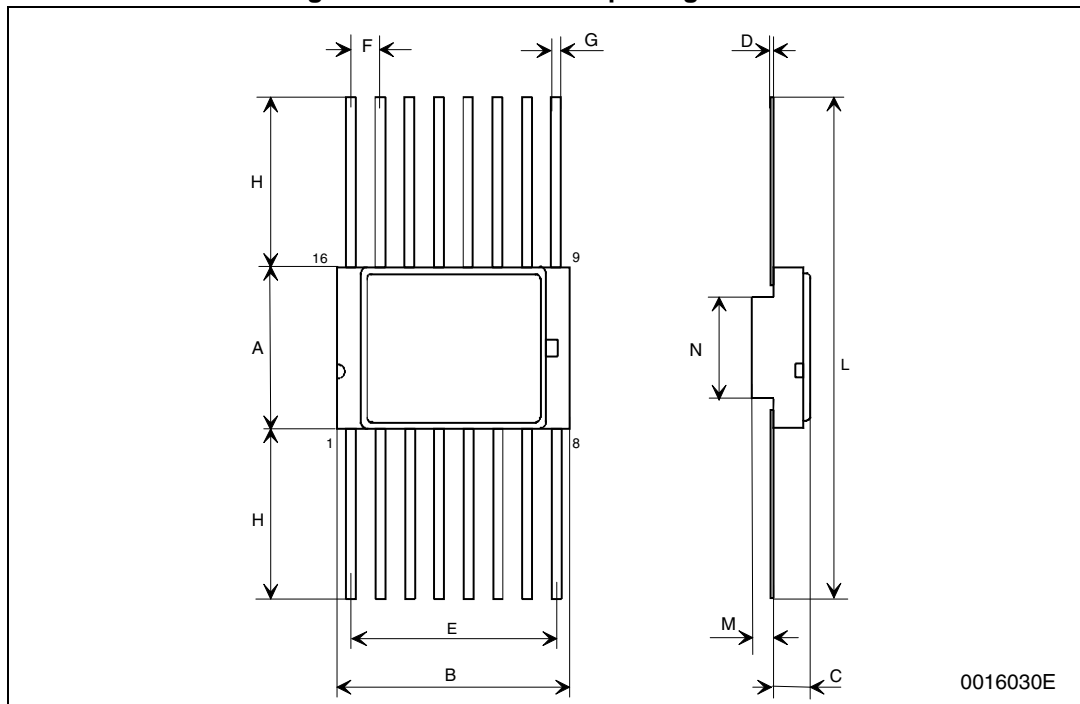


Table 7. Ceramic DIL-14 mechanical data

Symbol	Dimensions (mm)			Dimensions (inches)		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.1		2.54	0.083		0.100
a1	3.00		3.70	0.118		0.146
a2	0.63	0.88	1.14	0.025	0.035	0.045
B	1.82	2.03	2.39	0.072	0.080	0.094
b	0.40	0.45	0.50	0.016	0.018	0.020
b1	0.20	0.254	0.30	0.008	0.010	0.012
D	18.79	19.00	19.20	0.740	0.748	0.756
E	7.36	7.62	7.87	0.290	0.300	0.310
e		2.54			0.100	
e1	15.11	15.24	15.37	0.595	0.600	0.605
e2	7.62	7.87	8.12	0.300	0.310	0.320
F	7.11		7.75	0.280		0.305
l			3.70			0.146
K	10.90		12.1	0.429		0.476
L	1.14	1.27	1.5	0.045	0.050	0.059

5.3 Ceramic Flat-16 package information

Figure 4. Ceramic Flat-16 package outline



0016030E

Table 8. Ceramic Flat-16 mechanical data

Symbol	Dimensions (mm)			Dimensions (inches)		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.75	6.91	7.06	0.266	0.272	0.278
B	9.76	9.94	10.14	0.384	0.391	0.399
C	1.49		1.95	0.059		0.077
D	0.102	0.127	0.152	0.004	0.005	0.006
E	8.76	8.89	9.01	0.345	0.350	0.355
F		1.27			0.050	
G	0.38	0.43	0.48	0.015	0.017	0.019
H	6.0			0.236		
L	18.75		22.0	0.738		0.866
M	0.33	0.38	0.43	0.013	0.015	0.017
N		4.31			0.170	

5.4 Ceramic DIL-16 package information

Figure 5. Ceramic DIL-16 package outline

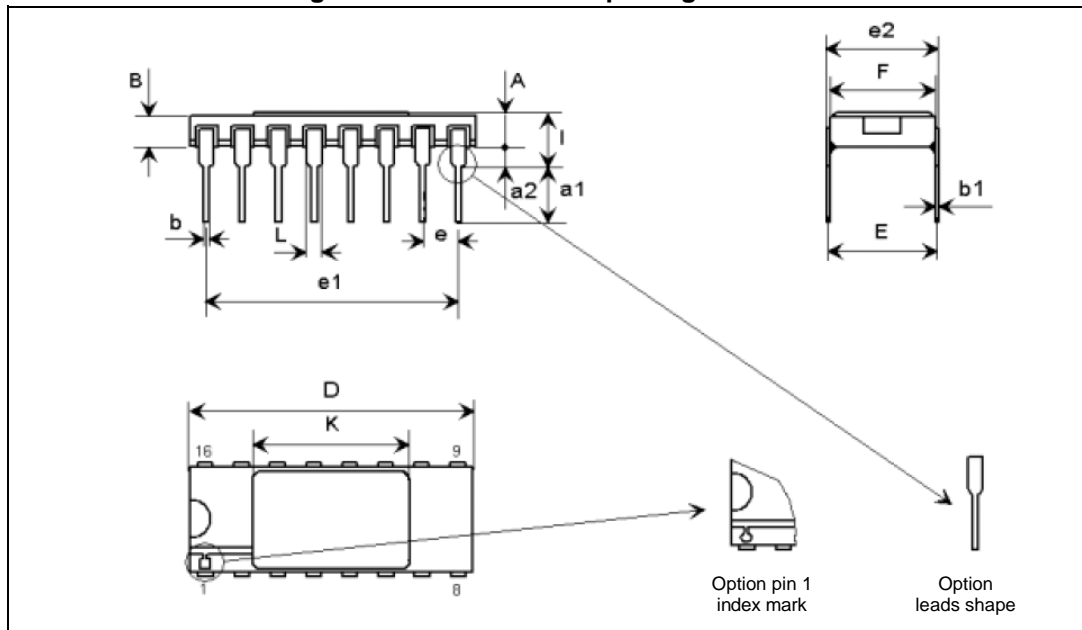


Table 9. Ceramic DIL-16 mechanical data

Symbol	Dimensions (mm)			Dimensions (inches)		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.71	0.083		0.107
a1	3.00		3.70	0.118		0.146
a2	0.63	0.88	1.14	0.025	0.035	0.045
B	1.82		2.39	0.072		0.094
b	0.40	0.45	0.50	0.016	0.018	0.020
b1	0.20	0.254	0.30	0.008	0.010	0.012
D	20.06	20.32	20.58	0.790	0.800	0.810
E	7.36	7.62	7.87	0.290	0.300	0.310
e		2.54			0.100	
e1	17.65	17.78	17.90	0.695	0.700	0.705
e2	7.62	7.87	8.12	0.300	0.310	0.320
F	7.29	7.49	7.70	0.287	0.295	0.303
I			3.83			0.151
K	10.90		12.10	0.429		0.476
L	1.14		1.50	0.045		0.059

5.5 Ceramic Flat-20 package information

Figure 6. Ceramic Flat-20 package outline

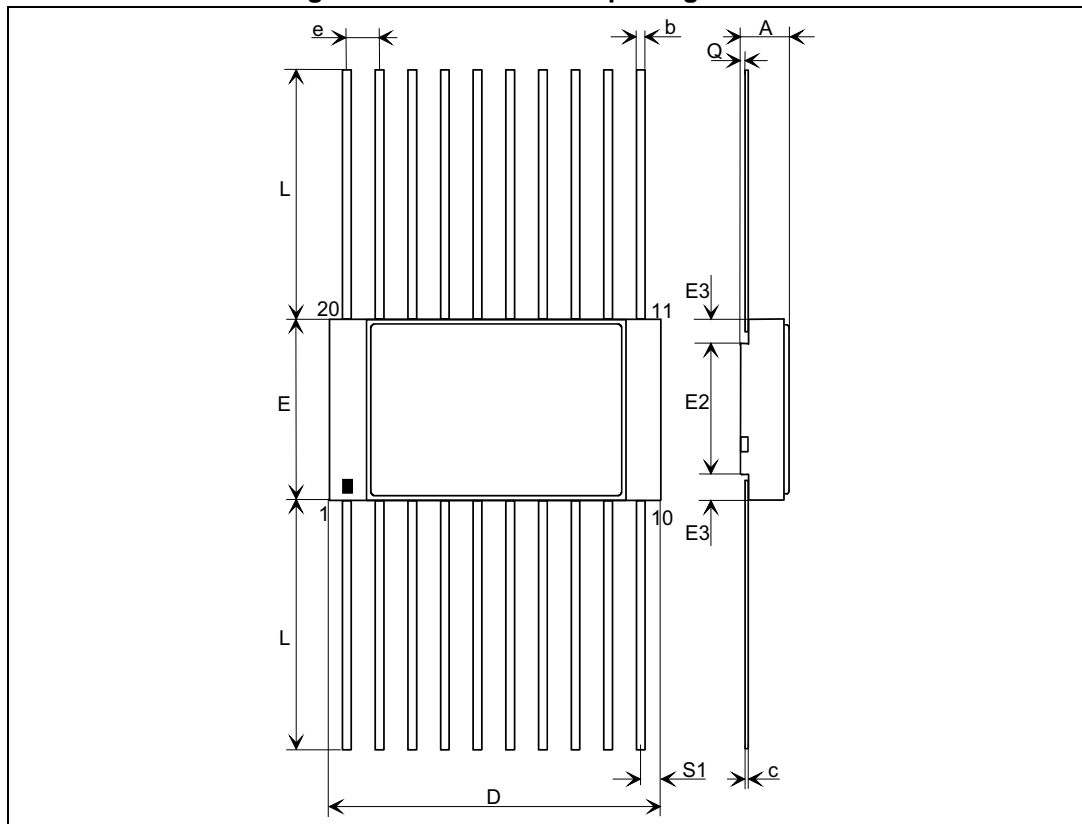


Table 10. Ceramic Flat-20 mechanical data

Symbol	Dimensions (mm)			Dimensions (inches)		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.91		2.21	0.075		0.087
b	0.38		0.48	0.015		0.019
c	0.076		0.152	0.003		0.006
D	12.83		13.08	0.505		0.515
E	6.99		7.24	0.275		0.285
E2	5.05	5.21	5.36	0.199	0.205	0.211
E3		0.95			0.037	
e	1.14		1.40	0.045		0.055
L	6.35		9.39	0.250		0.370
Q	0.25			0.010		
S1		0.55			0.022	

5.6 Ceramic DIL-20 package information

Figure 7. Ceramic DIL-20 package outline

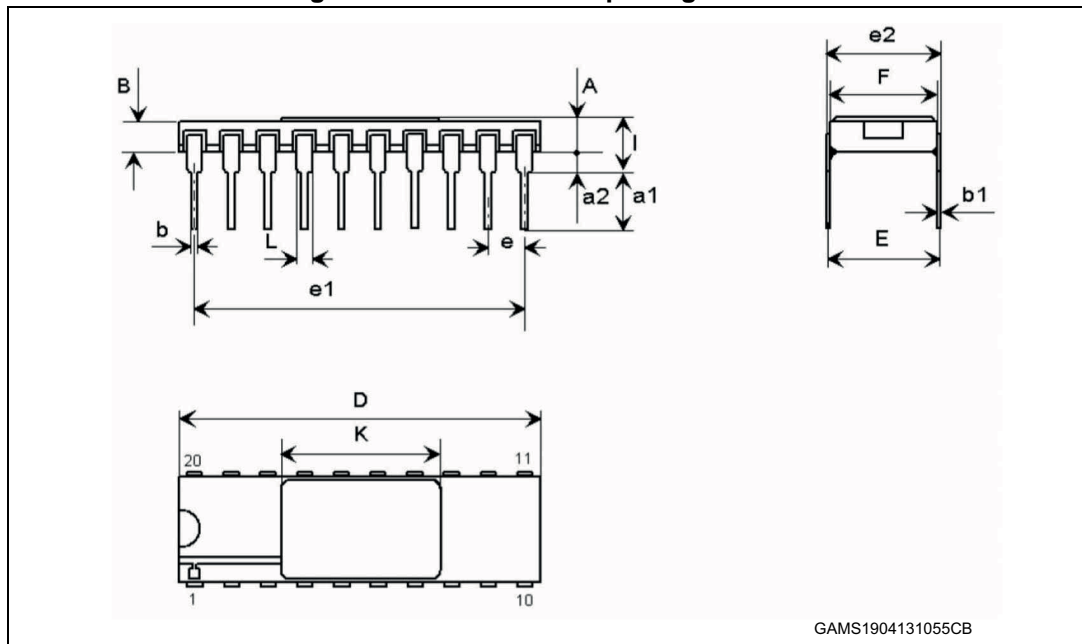
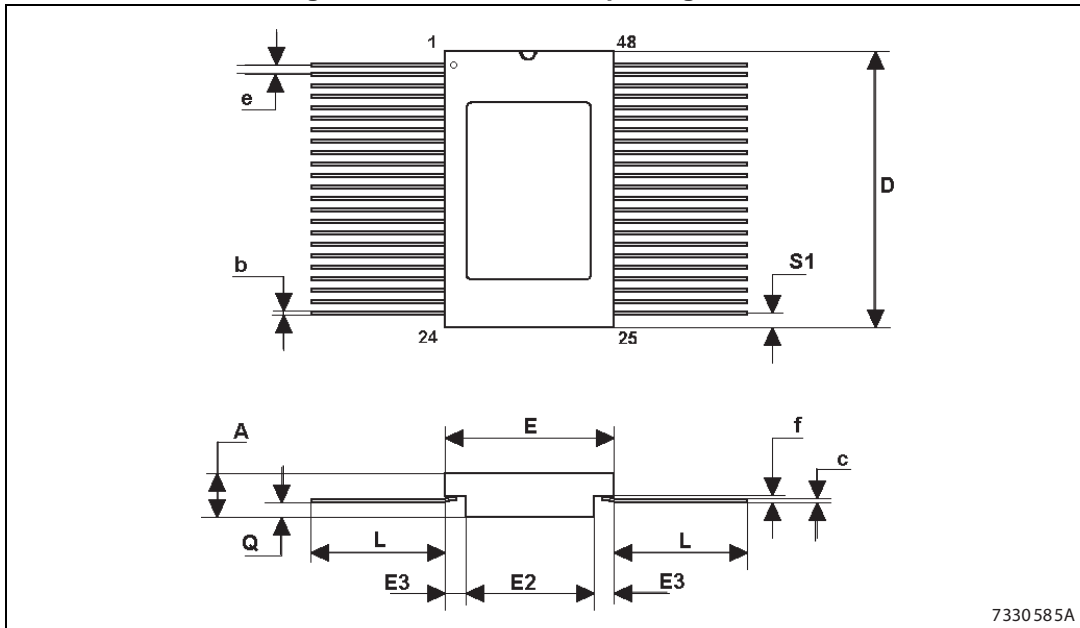


Table 11. Ceramic DIL-20 mechanical data

Symbol	Dimensions (mm)			Dimensions (inches)		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.1		2.72	0.083		0.107
a1	3		3.7	0.118		0.146
a2	0.63	0.88	1.14	0.025	0.035	0.045
B	1.93	2.03	2.23	0.076	0.080	0.088
b	0.4	0.45	0.5	0.016	0.018	0.020
b1	0.2	0.254	0.3	0.008	0.010	0.012
D	25.14	25.4	25.65	0.990	1.000	1.010
E	7.36	7.62	7.87	0.290	0.300	0.310
e		2.54			0.100	
e1	22.73	22.86	22.99	0.895	0.900	0.905
e2	7.62	7.87	8.12	0.300	0.310	0.320
F	7.29	7.49	7.62	0.287	0.295	0.300
I			3.86			0.152
K	11.3		11.56	0.445		0.455
L	1.14	1.27	1.4	0.045	0.050	0.055

5.7 Ceramic Flat-48 package information

Figure 8. Ceramic Flat-48 package outline



7330585A

Table 12. Ceramic Flat-48 mechanical data

Symbol	Dimensions (mm)			Dimensions (inches)		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.18	2.47	2.72	0.086	0.097	0.107
b	0.20	0.254	0.30	0.008	0.010	0.012
c	0.12	0.15	0.18	0.005	0.006	0.007
D	15.57	15.75	15.92	0.613	0.620	0.627
E	9.52	9.65	9.78	0.375	0.380	0.385
E2	6.22	6.35	6.48	0.245	0.250	0.255
E3	1.52	1.65	1.78	0.060	0.065	0.070
e		0.635			0.025	
f		0.20			0.008	
L	6.85	8.38	9.40	0.270	0.330	0.370
Q	0.66	0.79	0.92	0.026	0.031	0.036
S1	0.25	0.43	0.61	0.010	0.017	0.024

6 Ordering information

Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFAC00K1	-	Engineering Model		Flat-14	Gold	RHFAC00K1	0.55	Strip Pack
RHFAC00K01V	5962F8754901VXC	QML-V		Flat-14	Gold	5962F8754901VXC	0.55	Strip Pack
RHFAC00K02V	5962F8754901VXA	QML-V		Flat-14	Solder Dip	5962F8754901VXA	0.55	Strip Pack
RHFAC00K03V	5962F8754901VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8754901VYC	0.55	Strip Pack
RHFAC00K04V	5962F8754901VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8754901VYA	0.55	Strip Pack
RHFAC00D03V	5962F8754901VCC	QML-V		DIL-14	Gold	5962F8754901VCC	2.20	Strip Pack
RHFACT00K1	-	Engineering Model		Flat-14	Gold	RHFACT00K1	0.55	Strip Pack
RHFACT00K01V	5962F8769903VXC	QML-V		Flat-14	Gold	5962F8769903VXC	0.55	Strip Pack
RHFACT00K02V	5962F8769903VXA	QML-V		Flat-14	Solder Dip	5962F8769903VXA	0.55	Strip Pack
RHFACT00K03V	5962F8769903VYC	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8769903VYC	0.55	Strip Pack
RHFACT00K04V	5962F8769903VYA	QML-V	Grounded lid	DIL-14	Gold	5962F8769903VYA	0.55	Strip Pack
RHFACT00D03V	5962F8769903VCC	QML-V		DIL-14	Gold	5962F8769903VCC	2.2	Strip Pack
RHFAC02K1	-	Engineering Model		Flat-14	Gold	RHFAC02K1	0.55	Strip Pack
RHFAC02K01V	5962F8761201VXC	QML-V		Flat-14	Gold	5962F8761201VXC	0.55	Strip Pack
RHFAC02K02V	5962F8761201VXA	QML-V		Flat-14	Solder Dip	5962F8761201VXA	0.55	Strip Pack
RHFAC02K03V	5962F8761201VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8761201VYC	0.55	Strip Pack
RHFAC02K04V	5962F8761201VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8761201VYA	0.55	Strip Pack
RHFAC02D03V	5962F8761201VCC	QML-V		DIL-14	Gold	5962F8761201VCC	2.20	Strip Pack
RHFACT02K1	-	Engineering Model		Flat-14	Gold	RHFACT02K1	0.55	Strip Pack
RHFACT02K01V	5962F8979101VXC	QML-V		Flat-14	Gold	5962F8979101VXC	0.55	Strip Pack
RHFACT02K02V	5962F8979101VXA	QML-V		Flat-14	Solder Dip	5962F8979101VXA	0.55	Strip Pack
RHFACT02K03V	5962F8979101VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8979101VYC	0.55	Strip Pack





Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFACT02K04V	5962F8979101VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8979101VYA	0.55	Strip Pack
RHFAC04K1	-	Engineering Model		Flat-14	Gold	RHFAC04K1	0.55	Strip Pack
RHFAC04K01V	5962F8760901VXC	QML-V		Flat-14	Gold	5962F8760901VXC	0.55	Strip Pack
RHFAC04K02V	5962F8760901VXA	QML-V		Flat-14	Solder Dip	5962F8760901VXA	0.55	Strip Pack
RHFAC04K03V	5962F8760901VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8760901VYC	0.55	Strip Pack
RHFAC04K04V	5962F8760901VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8760901VYA	0.55	Strip Pack
RHFAC04D03V	5962F8760901VCC	QML-V		DIL-14	Gold	5962F8760901VCC	2.20	Strip Pack
RHFACT04K1	-	Engineering Model		Flat-14	Gold	RHFACT04K1	0.55	Strip Pack
RHFACT04K01V	5962F8973403VXC	QML-V		Flat-14	Gold	5962F8973403VXC	0.55	Strip Pack
RHFACT04K02V	5962F8973403VXA	QML-V		Flat-14	Solder Dip	5962F8973403VXA	0.55	Strip Pack
RHFACT04K03V	5962F8973403VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8973403VYC	0.55	Strip Pack
RHFACT04K04V	5962F8973403VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8973403VYA	0.55	Strip Pack
RHFACT04D03V	5962F8973403VCC	QML-V		DIL-14	Gold	5962F8973403VCC	2.20	Strip Pack
RHFAC08K1	-	Engineering Model		Flat-14	Gold	RHFAC08K1	0.55	Strip Pack
RHFAC08K01V	5962F8761501VXC	QML-V		Flat-14	Gold	5962F8761501VXC	0.55	Strip Pack
RHFAC08K02V	5962F8761501VXA	QML-V		Flat-14	Solder Dip	5962F8761501VXA	0.55	Strip Pack
RHFAC08K03V	5962F8761501VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8761501VYC	0.55	Strip Pack
RHFAC08K04V	5962F8761501VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8761501VYA	0.55	Strip Pack
RHFAC08D03V	5962F8761501VCC	QML-V		DIL-14	Gold	5962F8761501VCC	2.20	Strip Pack
RHFACT08K1	-	Engineering Model		Flat-14	Gold	RHFACT08K1	0.55	Strip Pack
RHFACT08K01V	5962F8954703VXC	QML-V		Flat-14	Gold	5962F8954703VXC	0.55	Strip Pack
RHFACT08K02V	5962F8954703VXA	QML-V		Flat-14	Solder Dip	5962F8954703VXA	0.55	Strip Pack
RHFACT08K03V	5962F8954703VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8954703VYC	0.55	Strip Pack
RHFACT08K04V	5962F8954703VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8954703VYA	0.55	Strip Pack
RHFACT08D03V	5962F8954703VCC	QML-V		DIL-14	Gold	5962F8954703VCC	2.20	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFAC10K1	-	Engineering Model		Flat-14	Gold	RHFAC10K1	0.55	Strip Pack
RHFAC10K01V	5962F8761001VXC	QML-V		Flat-14	Gold	5962F8761001VXC	0.55	Strip Pack
RHFAC10K02V	5962F8761001VXA	QML-V		Flat-14	Solder Dip	5962F8761001VXA	0.55	Strip Pack
RHFAC10K03V	5962F8761001VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8761001VYC	0.55	Strip Pack
RHFAC10K04V	5962F8761001VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8761001VYA	0.55	Strip Pack
RHFAC10D03V	5962F8761001VCC	QML-V		DIL-14	Gold	5962F8761001VCC	2.20	Strip Pack
RHFACT10K1	-	Engineering Model		Flat-14	Gold	RHFACT10K1	0.55	Strip Pack
RHFACT10K01V	5962F9218202VXC	QML-V		Flat-14	Gold	5962F9218202VXC	0.55	Strip Pack
RHFACT10K02V	5962F9218202VXA	QML-V		Flat-14	Solder Dip	5962F9218202VXA	0.55	Strip Pack
RHFAC11K1	-	Engineering Model		Flat-14	Gold	RHFAC11K1	0.55	Strip Pack
RHFAC11K01V	5962F8761101VXC	QML-V		Flat-14	Gold	5962F8761101VXC	0.55	Strip Pack
RHFAC11K02V	5962F8761101VXA	QML-V		Flat-14	Solder Dip	5962F8761101VXA	0.55	Strip Pack
RHFAC11K03V	5962F8761101VYC	QML-V	Grounded lid	Flat-14	Gold	962F8761101VYC	0.55	Strip Pack
RHFAC11K04V	5962F8761101VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8761101VYA	0.55	Strip Pack
RHFAC11D03V	5962F8761101VCC	QML-V		DIL-14	Gold	5962F8761101VCC	2.20	Strip Pack
RHFACT11K1	-	Engineering Model		Flat-14	Gold	RHFACT11K1	0.55	Strip Pack
RHFACT11K01V	5962F9077202VXC	QML-V		Flat-14	Gold	5962F9077202VXC	0.55	Strip Pack
RHFACT11K02V	5962F9077202VXA	QML-V		Flat-14	Solder Dip	5962F9077202VXA	0.55	Strip Pack
RHFAC14K1	-	Engineering Model		Flat-14	Gold	RHFAC14K1	0.55	Strip Pack
RHFAC14K01V	5962F8762401VXC	QML-V		Flat-14	Gold	5962F8762401VXC	0.55	Strip Pack
RHFAC14K02V	5962F8762401VXA	QML-V		Flat-14	Solder Dip	5962F8762401VXA	0.55	Strip Pack
RHFAC14K03V	5962F8762401VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8762401VYC	0.55	Strip Pack
RHFAC14K04V	5962F8762401VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8762401VYA	0.55	Strip Pack
RHFAC14D03V	5962F8762401VCC	QML-V		DIL-14	Gold	5962F8762401VCC	2.20	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFAC14AK1	-	Engineering Model	Low transient current	Flat-14	Gold	RHFAC14AK1	0.55	Strip Pack
RHFAC14AK01V	5962F8762403VXC	QML-V	Low transient current	Flat-14	Gold	5962F8762403VXC	0.55	Strip Pack
RHFAC14AK02V	5962F8762403VXA	QML-V	Low transient current	Flat-14	Solder Dip	5962F8762403VXA	0.55	Strip Pack
RHFAC14AK03V	5962F8762403VYA	QML-V	Low transient current	Flat-14	Gold	5962F8762403VYA	0.55	Strip Pack
RHFAC14AK04V	5962F8762403VYC	QML-V	Low transient current	Flat-14	Solder Dip	5962F8762403VYC	0.55	Strip Pack
RHFACT14K1	-	Engineering Model		Flat-14	Gold	RHFACT14K1	0.55	Strip Pack
RHFACT14K01V	5962F9681301VXC	QML-V		Flat-14	Gold	5962F9681301VXC	0.55	Strip Pack
RHFACT14K02V	5962F9681301VXA	QML-V		Flat-14	Solder Dip	5962F9681301VXA	0.55	Strip Pack
RHFACT14K03V	5962F9681301VYC	QML-V	Grounded lid	Flat-14	Gold	5962F9681301VYC	0.55	Strip Pack
RHFACT14K04V	5962F9681301VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F9681301VYA	0.55	Strip Pack
RHFAC32K1	-	Engineering Model		Flat-14	Gold	RHFAC32K1	0.55	Strip Pack
RHFAC32K01V	5962F8761401VXC	QML-V		Flat-14	Gold	5962F8761401VXC	0.55	Strip Pack
RHFAC32K02V	5962F8761401VXA	QML-V		Flat-14	Solder Dip	5962F8761401VXA	0.55	Strip Pack
RHFAC32K03V	5962F8761401VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8761401VYC	0.55	Strip Pack
RHFAC32K04V	5962F8761401VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8761401VYA	0.55	Strip Pack
RHFAC32D03V	5962F8761401VCC	QML-V		DIL-14	Gold	5962F8761401VCC	2.20	Strip Pack
RHFACT32K1	-	Engineering Model		Flat-14	Gold	RHFACT32K1	0.55	Strip Pack
RHFACT32K01V	5962F8973603VXC	QML-V		Flat-14	Gold	5962F8973603VXC	0.55	Strip Pack
RHFACT32K02V	5962F8973603VXA	QML-V		Flat-14	Solder Dip	5962F8973603VXA	0.55	Strip Pack
RHFACT32K03V	5962F8973603VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8973603VYC	0.55	Strip Pack
RHFACT32K04V	5962F8973603VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8973603VYA	0.55	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFACT32D03V	5962F8973603VCC	QML-V		DIL-14	Gold	5962F8973603VCC	2.20	Strip Pack
RHFAC74K1	-	Engineering Model		Flat-14	Gold	RHFAC74K1	0.55	Strip Pack
RHFAC74K01V	5962F8852003VXC	QML-V		Flat-14	Gold	5962F8852003VXC	0.55	Strip Pack
RHFAC74K02V	5962F8852003VXA	QML-V		Flat-14	Solder Dip	5962F8852003VXA	0.55	Strip Pack
RHFAC74K03V	5962F8852003VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8852003VYC	0.55	Strip Pack
RHFAC74K04V	5962F8852003VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8852003VYA	0.55	Strip Pack
RHFAC74D03V	5962F8852003VCC	QML-V		DIL-14	Gold	5962F8852003VCC	2.20	Strip Pack
RHFACT74K1	-	Engineering Model		Flat-14	Gold	RHFACT74K1	0.55	Strip Pack
RHFACT74K01V	5962F8752503VXC	QML-V		Flat-14	Gold	5962F8752503VXC	0.55	Strip Pack
RHFACT74K02V	5962F8752503VXA	QML-V		Flat-14	Solder Dip	5962F8752503VXA	0.55	Strip Pack
RHFACT74K03V	5962F8752503VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8752503VYC	0.55	Strip Pack
RHFACT74K04V	5962F8752503VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8752503VYA	0.55	Strip Pack
RHFACT74D03V	5962F8752503VCC	QML-V		DIL-14	Gold	5962F8752503VCC	2.20	Strip Pack
RHFAC86K1	-	Engineering Model		Flat-14	Gold	RHFAC86K1	0.55	Strip Pack
RHFAC86K01V	5962F8955001VXC	QML-V		Flat-14	Gold	5962F8955001VXC	0.55	Strip Pack
RHFAC86K02V	5962F8955001VXA	QML-V		Flat-14	Solder Dip	5962F8955001VXA	0.55	Strip Pack
RHFAC86K03V	5962F8955001VXC	QML-V	Grounded lid	Flat-14	Gold	5962F8955001VXC	0.55	Strip Pack
RHFAC86K04V	5962F8955001VXA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8955001VXA	0.55	Strip Pack
RHFAC86D03V	5962F8955001VCC	QML-V		DIL-14	Gold	5962F8955001VCC	2.20	Strip Pack
RHFACT86K1	-	Engineering Model		Flat-14	Gold	RHFACT86K1	0.55	Strip Pack
RHFACT86K01V	5962F9068702VXC	QML-V		Flat-14	Gold	5962F9068702VXC	0.55	Strip Pack
RHFACT86K02V	5962F9068702VXA	QML-V		Flat-14	Solder Dip	5962F9068702VXA	0.55	Strip Pack
RHFACT86K03V	5962F9068702VYC	QML-V	Grounded lid	Flat-14	Gold	5962F9068702VYC	0.55	Strip Pack
RHFACT86K04V	5962F9068702VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F9068702VYA	0.55	Strip Pack
RHFAC138K1	-	Engineering Model		Flat-16	Gold	RHFAC138K1	0.65	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFAC138K01V	5962F8762201VXC	QML-V		Flat-16	Gold	5962F8762201VXC	0.65	Strip Pack
RHFAC138K02V	5962F8762201VXA	QML-V		Flat-16	Solder Dip	5962F8762201VXA	0.65	Strip Pack
RHFAC138K03V	5962F8762201VYC	QML-V	Grounded lid	Flat-16	Gold	5962F8762201VYC	0.65	Strip Pack
RHFAC138K04V	5962F8762201VYA	QML-V	Grounded lid	Flat-16	Solder Dip	5962F8762201VYA	0.65	Strip Pack
RHFAC138D03V	5962F8762201VEC	QML-V		DIL-16	Gold	5962F8762201VEC	2.20	Strip Pack
RHFACT138K1	-	Engineering Model		Flat-16	Gold	RHFACT138K1	0.65	Strip Pack
RHFACT138K01V	5962F8755403VXC	QML-V		Flat-16	Gold	5962F8755403VXC	0.65	Strip Pack
RHFACT138K02V	5962F8755403VXA	QML-V		Flat-16	Solder Dip	5962F8755403VXA	0.65	Strip Pack
RHFACT138K03V	5962F8755403VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8755403VYC	0.65	Strip Pack
RHFACT138K04V	5962F8755403VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8755403VYA	0.65	Strip Pack
RHFAC139K1	-	Engineering Model		Flat-16	Gold	RHFAC139K1	0.65	Strip Pack
RHFAC139K01V	5962F8762301VXC	QML-V		Flat-16	Gold	5962F8762301VXC	0.65	Strip Pack
RHFAC139K02V	5962F8762301VXA	QML-V		Flat-16	Solder Dip	5962F8762301VXA	0.65	Strip Pack
RHFAC139K03V	5962F8762301VYC	QML-V	Grounded lid	Flat-16	Gold	5962F8762301VYC	0.65	Strip Pack
RHFAC139K04V	5962F8762301VYA	QML-V	Grounded lid	Flat-16	Solder Dip	5962F8762301VYA	0.65	Strip Pack
RHFACT139K1	-	Engineering Model		Flat-16	Gold	RHFACT139K1	0.65	Strip Pack
RHFACT139K01V	5962F8755302VXC	QML-V		Flat-16	Gold	5962F8755302VXC	0.65	Strip Pack
RHFACT139K02V	5962F8755302VXA	QML-V		Flat-16	Solder Dip	5962F8755302VXA	0.65	Strip Pack
RHFACT139D03V	5962F8755302VEC	QML-V		DIL-16	Gold	5962F8755302VEC	2.20	Strip Pack
RHFAC151K1	-	Engineering Model		Flat-16	Gold	RHFAC151K1	0.65	Strip Pack
RHFAC151K01V	5962F8769102VXC	QML-V		Flat-16	Gold	5962F8769102VXC	0.65	Strip Pack
RHFAC151K02V	5962F8769102VXA	QML-V		Flat-16	Solder Dip	5962F8769102VXA	0.65	Strip Pack
RHFAC151K03V	5962F8769102VYC	QML-V	Grounded lid	Flat-16	Gold	5962F8769102VYC	0.65	Strip Pack
RHFAC151K04V	5962F8769102VYA	QML-V	Grounded lid	Flat-16	Solder Dip	5962F8769102VYA	0.65	Strip Pack
RHFACT151K1	-	Engineering Model		Flat-16	Gold	RHFACT151K1	0.65	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFACT151K01V	5962F8875602VXC	QML-V		Flat-16	Gold	5962F8875602VXC	0.65	Strip Pack
RHFACT151K02V	5962F8875602VXA	QML-V		Flat-16	Solder Dip	5962F8875602VXA	0.65	Strip Pack
RHFAC157K1	-	Engineering Model		Flat-16	Gold	RHFAC157K1	0.65	Strip Pack
RHFAC157K01V	5962F8953901VXC	QML-V		Flat-16	Gold	5962F8953901VXC	0.65	Strip Pack
RHFAC157K02V	5962F8953901VXA	QML-V		Flat-16	Solder Dip	5962F8953901VXA	0.65	Strip Pack
RHFAC157K03V	5962F8953901VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8953901VYC	0.65	Strip Pack
RHFAC157K04V	5962F8953901VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8953901VYA	0.65	Strip Pack
RHFAC157D03V	5962F8953901VEC	QML-V		DIL-16	Gold	5962F8953901VEC	2.20	Strip Pack
RHFACT157K1	-	Engineering Model		Flat-16	Gold	RHFACT157K1	0.65	Strip Pack
RHFACT157K01V	5962F8968802VXC	QML-V		Flat-16	Gold	5962F8968802VXC	0.65	Strip Pack
RHFACT157K02V	5962F8968802VXA	QML-V		Flat-16	Solder Dip	5962F8968802VXA	0.65	Strip Pack
RHFACT157K03V	5962F8968802VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8968802VYC	0.65	Strip Pack
RHFACT157K04V	5962F8968802VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8968802VYA	0.65	Strip Pack
RHFACT157D03V	5962F8968802VEC	QML-V		DIL-16	Gold	5962F8968802VEC	2.20	Strip Pack
RHFAC161K1	-	Engineering Model		Flat-16	Gold	RHFAC161K1	0.65	Strip Pack
RHFAC161K01V	5962F8956101VXC	QML-V		Flat-16	Gold	5962F8956101VXC	0.65	Strip Pack
RHFAC161K02V	5962F8956101VXA	QML-V		Flat-16	Solder Dip	5962F8956101VXA	0.65	Strip Pack
RHFAC161K03V	5962F8956101VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8956101VYC	0.65	Strip Pack
RHFAC161K04V	5962F8956101VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8956101VYA	0.65	Strip Pack
RHFAC161D03V	5962F8956101VEC	QML-V		DIL-16	Gold	5962F8956101VEC	2.20	Strip Pack
RHFACT161K1	-	Engineering Model		Flat-16	Gold	RHFACT161K1	0.65	Strip Pack
RHFACT161K01V	5962F9172202VXC	QML-V		Flat-16	Gold	5962F9172202VXC	0.65	Strip Pack
RHFACT161K02V	5962F9172202VXA	QML-V		Flat-16	Solder Dip	5962F9172202VXA	0.65	Strip Pack
RHFACT161K03V	5962F9172202VYC	QML-V	Grounded lid	Flat-16	Gold	5962F9172202VYC	0.65	Strip Pack
RHFACT161K04V	5962F9172202VYA	QML-V	Grounded lid	Flat-16	Solder Dip	962F9172202VYA	0.65	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFAC174K1	-	Engineering Model		Flat-16	Gold	RHFAC174K1	0.65	Strip Pack
RHFAC174K01V	5962F8762602VXC	QML-V		Flat-16	Gold	5962F8762602VXC	0.65	Strip Pack
RHFAC174K02V	5962F8762602VXA	QML-V		Flat-16	Solder Dip	5962F8762602VXA	0.65	Strip Pack
RHFAC174K03V	5962F8762602VYC	QML-V	Grounded lid	Flat-16	Gold	5962F8762602VYC	0.65	Strip Pack
RHFAC174K04V	5962F8762602VYA	QML-V	Grounded lid	Flat-16	Solder Dip	5962F8762602VYA	0.65	Strip Pack
RHFACT174K1	-	Engineering Model		Flat-16	Gold	RHFACT174K1	0.65	Strip Pack
RHFACT174K01V	5962F8775702VXC	QML-V		Flat-16	Gold	5962F8775702VXC	0.65	Strip Pack
RHFACT174K02V	5962F8775702VXA	QML-V		Flat-16	Solder Dip	5962F8775702VXA	0.65	Strip Pack
RHFACT174K03V	5962F8775702VYC	QML-V	Grounded lid	Flat-16	Gold	5962F8775702VYC	0.65	Strip Pack
RHFACT174K04V	5962F8775702VYA	QML-V	Grounded lid	Flat-16	Solder Dip	5962F8775702VYA	0.65	Strip Pack
RHFAC191K1	-	Engineering Model		Flat-16	Gold	RHFAC191K1	0.65	Strip Pack
RHFAC191K01V	5962F8974902VXC	QML-V		Flat-16	Gold	5962F8974902VXC	0.65	Strip Pack
RHFAC191K02V	5962F8974902VXA	QML-V		Flat-16	Solder Dip	5962F8974902VXA	0.65	Strip Pack
RHFAC191K03V	5962F8974902VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8974902VYC	0.65	Strip Pack
RHFAC191K04V	5962F8974902VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8974902VYA	0.65	Strip Pack
RHFAC191D03V	5962F8974902VEC	QML-V		DIL-16	Gold	5962F8974902VEC	2.20	Strip Pack
RHFACT191K1	-	Engineering Model		Flat-16	Gold	RHFACT191K1	0.65	Strip Pack
RHFACT191K01V	5962F0422801VXC	QML-V		Flat-16	Gold	5962F0422801VXC	0.65	Strip Pack
RHFACT191K02V	5962F0422801VXA	QML-V		Flat-16	Solder Dip	5962F0422801VXA	0.65	Strip Pack
RHFACT191K03V	5962F0422801VYC	QML-V	Grounded lid	Flat-16	Gold	5962F0422801VYC	0.65	Strip Pack
RHFACT191K04V	5962F0422801VYA	QML-V	Grounded lid	Flat-16	Solder Dip	5962F0422801VYA	0.65	Strip Pack
RHFAC240K1	-	Engineering Model		Flat-20	Gold	RHFAC240K1	0.90	Strip Pack
RHFAC240K01V	5962F8755001VXC	QML-V		Flat-20	Gold	5962F8755001VXC	0.90	Strip Pack
RHFAC240K02V	5962F8755001VXA	QML-V		Flat-20	Solder Dip	5962F8755001VXA	0.90	Strip Pack
RHFAC240K03V	5962F8755001VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8755001VYC	0.90	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFAC240K04V	5962F8755001VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8755001VYA	0.90	Strip Pack
RHFACT240K1	-	Engineering Model		Flat-20	Gold	RHFACT240K1	0.90	Strip Pack
RHFACT240K01V	5962F8775903VXC	QML-V		Flat-20	Gold	5962F8775903VXC	0.90	Strip Pack
RHFACT240K02V	5962F8775903VXA	QML-V		Flat-20	Solder Dip	5962F8775903VXA	0.90	Strip Pack
RHFACT240K03V	5962F8775903VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8775903VYC	0.90	Strip Pack
RHFACT240K04V	5962F8775903VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8775903VYA	0.90	Strip Pack
RHFAC244K1	-	Engineering Model		Flat-20	Gold	RHFAC244K1	0.90	Strip Pack
RHFAC244K01V	5962F8755201VXC	QML-V		Flat-20	Gold	5962F8755201VXC	0.90	Strip Pack
RHFAC244K02V	5962F8755201VXA	QML-V		Flat-20	Solder Dip	5962F8755201VXA	0.90	Strip Pack
RHFAC244K03V	5962F8755201VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8755201VYC	0.90	Strip Pack
RHFAC244K04V	5962F8755201VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8755201VYA	0.90	Strip Pack
RHFACT244K1	-	Engineering Model		Flat-20	Gold	RHFACT244K1	0.90	Strip Pack
RHFACT244K01V	5962F8776003VXC	QML-V		Flat-20	Gold	5962F8776003VXC	0.90	Strip Pack
RHFACT244K02V	5962F8776003VXA	QML-V		Flat-20	Solder Dip	5962F8776003VXA	0.90	Strip Pack
RHFACT244K03V	5962F8776003VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8776003VYC	0.90	Strip Pack
RHFACT244K04V	5962F8776003VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8776003VYA	0.90	Strip Pack
RHFAC245K1	-	Engineering Model		Flat-20	Gold	RHFAC245K1	0.90	Strip Pack
RHFAC245K01V	5962F8775802VXC	QML-V		Flat-20	Gold	5962F8775802VXC	0.90	Strip Pack
RHFAC245K02V	5962F8775802VXA	QML-V		Flat-20	Solder Dip	5962F8775802VXA	0.90	Strip Pack
RHFAC245K03V	5962F8775802VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8775802VYC	0.90	Strip Pack
RHFAC245K04V	5962F8775802VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8775802VYA	0.90	Strip Pack
RHFACT245K1	-	Engineering Model		Flat-20	Gold	RHFACT245K1	0.90	Strip Pack
RHFACT245K01V	5962F8766303VXC	QML-V		Flat-20	Gold	5962F8766303VXC	0.90	Strip Pack
RHFACT245K02V	5962F8766303VXA	QML-V		Flat-20	Solder Dip	5962F8766303VXA	0.90	Strip Pack
RHFACT245K03V	5962F8766303VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8766303VYC	0.90	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFACT245K04V	5962F8766303VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8766303VYA	0.90	Strip Pack
RHFAC273K1	-	Engineering Model		Flat-20	Gold	RHFAC273K1	0.90	Strip Pack
RHFAC273K01V	5962F8775601VXC	QML-V		Flat-20	Gold	5962F8775601VXC	0.90	Strip Pack
RHFAC273K02V	5962F8775601VXA	QML-V		Flat-20	Solder Dip	5962F8775601VXA	0.90	Strip Pack
RHFAC273K03V	5962F8775601VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8775601VYC	0.90	Strip Pack
RHFAC273K04V	5962F8775601VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8775601VYA	0.90	Strip Pack
RHFACT273K1	-	Engineering Model		Flat-20	Gold	RHFACT273K1	0.90	Strip Pack
RHFACT273K01V	5962F0152701VXC	QML-V		Flat-20	Gold	5962F0152701VXC	0.90	Strip Pack
RHFACT273K02V	5962F0152701VXA	QML-V		Flat-20	Solder Dip	5962F0152701VXA	0.90	Strip Pack
RHFACT273K03V	5962F0152701VYC	QML-V	Grounded lid	Flat-14	Gold	5962F0152701VYC	0.90	Strip Pack
RHFACT273K04V	5962F0152701VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F0152701VYA	0.90	Strip Pack
RHFAC373K1	-	Engineering Model		Flat-20	Gold	RHFAC373K1	0.90	Strip Pack
RHFAC373K01V	5962F8755501VXC	QML-V		Flat-20	Gold	5962F8755501VXC	0.90	Strip Pack
RHFAC373K02V	5962F8755501VXA	QML-V		Flat-20	Solder Dip	5962F8755501VXA	0.90	Strip Pack
RHFAC373K03V	5962F8755501VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8755501VYC	0.90	Strip Pack
RHFAC373K04V	5962F8755501VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8755501VYA	0.90	Strip Pack
RHFACT373K1	-	Engineering Model		Flat-20	Gold	RHFACT373K1	0.90	Strip Pack
RHFACT373K01V	5962F8755603VXC	QML-V		Flat-20	Gold	5962F8755603VXC	0.90	Strip Pack
RHFACT373K02V	5962F8755603VXA	QML-V		Flat-20	Solder Dip	5962F8755603VXA	0.90	Strip Pack
RHFAC374K1	-	Engineering Model		Flat-20	Gold	RHFAC374K1	0.90	Strip Pack
RHFAC374K01V	5962F8769401VXC	QML-V		Flat-20	Gold	5962F8769401VXC	0.90	Strip Pack
RHFAC374K02V	5962F8769401VXA	QML-V		Flat-20	Solder Dip	5962F8769401VXA	0.90	Strip Pack
RHFAC374K03V	5962F8769401VYC	QML-V	Grounded lid	Flat-14	Gold	5962F8769401VYC	0.90	Strip Pack
RHFAC374K04V	5962F8769401VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F8769401VYA	0.90	Strip Pack
RHFACT374K1	-	Engineering Model		Flat-20	Gold	RHFACT374K1	0.90	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFACT374K01V	5962F8763103VXC	QML-V		Flat-20	Gold	5962F8763103VXC	0.90	Strip Pack
RHFACT374K02V	5962F8763103VXA	QML-V		Flat-20	Solder Dip	5962F8763103VXA	0.90	Strip Pack
RHFACT374K03V	5962F8763103VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8763103VYC	0.90	Strip Pack
RHFACT374K04V	5962F8763103VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8763103VYA	0.90	Strip Pack
RHFAC521K1	-	Engineering Model		Flat-20	Gold	RHFAC521K1	0.90	Strip Pack
RHFAC521K01V	5962F9098503VXC	QML-V		Flat-20	Gold	5962F9098503VXC	0.90	Strip Pack
RHFAC521K02V	5962F9098503VXA	QML-V		Flat-20	Solder Dip		0.90	Strip Pack
RHFAC521K03V	5962F9098503VYC	QML-V	Grounded lid	Flat-20	Gold		0.90	Strip Pack
RHFAC521K04V	5962F9098503VYA	QML-V	Grounded lid	Flat-20	Solder Dip		0.90	Strip Pack
RHFAC540K1	-	Engineering Model		Flat-20	Gold	RHFAC540K1	0.90	Strip Pack
RHFAC540K01V	5962F8769502VXC	QML-V		Flat-20	Gold	5962F8769502VXC	0.90	Strip Pack
RHFAC540K02V	5962F8769502VXA	QML-V		Flat-20	Solder Dip	5962F8769502VXA	0.90	Strip Pack
RHFAC541K1	-	Engineering Model		Flat-20	Gold	RHFAC541K1	0.90	Strip Pack
RHFAC541K01V	5962F8870601VXC	QML-V		Flat-20	Gold	5962F8870601VXC	0.90	Strip Pack
RHFAC541K02V	5962F8870601VXA	QML-V		Flat-20	Solder Dip	5962F8870601VXA	0.90	Strip Pack
RHFAC541K03V	5962F8870601VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8870601VYC	0.90	Strip Pack
RHFAC541K04V	5962F8870601VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8870601VYA	0.90	Strip Pack
RHFACT541K1	-	Engineering Model		Flat-20	Gold	RHFACT541K1	0.90	Strip Pack
RHFACT541K01V	5962F8979502VXC	QML-V		Flat-20	Gold	5962F8979502VXC	0.90	Strip Pack
RHFACT541K02V	5962F8979502VXA	QML-V		Flat-20	Solder Dip	5962F8979502VXA	0.90	Strip Pack
RHFACT541K03V	5962F8979502VYC	QML-V	Grounded lid	Flat-20	Gold	5962F8979502VYC	0.90	Strip Pack
RHFACT541K04V	5962F8979502VYA	QML-V	Grounded lid	Flat-20	Solder Dip	5962F8979502VYA	0.90	Strip Pack
RHFAC574K1	-	Engineering Model		Flat-20	Gold	RHFAC574K1	0.90	Strip Pack
RHFAC574K01V	5962F9677302VXC	QML-V		Flat-20	Gold	5962F9677302VXC	0.90	Strip Pack
RHFAC574K02V	5962F9677302VXA	QML-V		Flat-20	Solder Dip	5962F9677302VXA	0.90	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFAC574K03V	5962F9677302VYC	QML-V	Grounded lid	Flat-14	Gold	5962F9677302VYC	0.90	Strip Pack
RHFAC574K04V	5962F9677302VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F9677302VYA	0.90	Strip Pack
RHFACT574K1	-	Engineering Model		Flat-20	Gold	RHFACT574K1	0.90	Strip Pack
RHFACT574K01V	5962F8960102VXC	QML-V		Flat-20	Gold	5962F8960102VXC	0.90	Strip Pack
RHFACT574K02V	5962F8960102VXA	QML-V		Flat-20	Solder Dip	5962F8960102VXA	0.90	Strip Pack
RHFAC2525K1	-	Engineering Model		Flat-14	Gold	RHFAC2525K1	1.5	Strip Pack
RHFAC2525K01V	5962F9217402VXC	QML-V		Flat-14	Gold	5962F9217402VXC	1.5	Strip Pack
RHFAC2525K02V	5962F9217402VXA	QML-V		Flat-14	Solder Dip	5962F9217402VXA	1.5	Strip Pack
RHFAC2525K03V	5962F9217402VYC	QML-V	Grounded lid	Flat-14	Gold	5962F9217402VYC	1.5	Strip Pack
RHFAC2525K04V	5962F9217402VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F9217402VYA	1.5	Strip Pack
RHFAC16244K1	-	Engineering Model		Flat-48	Gold	RHFAC16244K1	2	Strip Pack
RHFAC16244K01V	5962F0421001VXC	QML-V		Flat-48	Gold	5962F0421001VXC	2	Strip Pack
RHFAC16244K02V	5962F0421001VXA	QML-V		Flat-48	Solder Dip	5962F0421001VXA	2	Strip Pack
RHFAC16244K03V	5962F0421001VYC	QML-V	Grounded lid	Flat-14	Gold	5962F0421001VYC	2	Strip Pack
RHFAC16244K04V	5962F0421001VYA	QML-V	Grounded lid	Flat-14	Solder Dip	5962F0421001VYA	2	Strip Pack
RHFACT16244K1	-	Engineering Model		Flat-48	Gold	RHFACT16244K1	2	Strip Pack
RHFACT16244K01V	5962F9202202VYC	QML-V		Flat-48	Gold	5962F9202202VYC	2	Strip Pack
RHFACT16244K02V	5962F9202202VYA	QML-V		Flat-48	Solder Dip	5962F9202202VYA	2	Strip Pack
RHFACT16244K03V	5962F9202202VZC		Grounded lid	Flat-48	Gold	5962F9202202VZC	2	Strip Pack
RHFACT16244K04V	5962F9202202VZA		Grounded lid	Flat-48	Solder Dip	5962F9202202VZA	2	Strip Pack
RHFAC16245K1	-	Engineering Model		Flat-48	Gold	RHFAC16245K1	2	Strip Pack
RHFAC16245K01V	5962F0421101VXC	QML-V		Flat-48	Gold	5962F0421101VXC	2	Strip Pack
RHFAC16245K02V	5962F0421101VXA	QML-V		Flat-48	Solder Dip	5962F0421101VXA	2	Strip Pack
RHFAC16245K03V	5962F0421101VYC	QML-V	Grounded lid	Flat-48	Gold	5962F0421101VYC	2	Strip Pack
RHFAC16245K04V	5962F0421101VYA	QML-V	Grounded lid	Flat-48	Solder Dip	5962F0421101VYA	2	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHFACT16245K1	-	Engineering Model		Flat-48	Gold	RHFACT16245K1	1.50	Strip Pack
RHFACT16245K01V	5962F9202302VYC	QML-V		Flat-48	Gold	5962F9202302VYC	1.50	Strip Pack
RHFACT16245K02V	5962F9202302VYA	QML-V		Flat-48	Solder Dip	5962F9202302VYA	1.50	Strip Pack
RHFACT16245K03V	5962F9202302VZC	QML-V	Grounded lid	Flat-48	Gold	5962F9202302VZC	1.50	Strip Pack
RHFACT16245K04V	5962F9202302VZA	QML-V	Grounded lid	Flat-48	Solder Dip	5962F9202302VZA	1.50	Strip Pack
RHFAC16373K1	-	Engineering Model		Flat-48	Gold	RHFAC16373K1	1.50	Strip Pack
RHFAC16373K01V	5962F0421201VXC	QML-V		Flat-48	Gold	5962F0421201VXC	1.50	Strip Pack
RHFAC16373K02V	5962F0421201VXA	QML-V		Flat-48	Solder Dip	5962F0421201VXA	1.50	Strip Pack
RHFAC16373K03V	5962F0421201VYC	QML-V	Grounded lid	Flat-48	Gold	5962F0421201VYC	1.50	Strip Pack
RHFAC16373K04V	5962F0421201VYA	QML-V	Grounded lid	Flat-48	Solder Dip	5962F0421201VYA	1.50	Strip Pack
RHFACT16373K1	-	Engineering Model		Flat-48	Gold	RHFACT16373K1	1.50	Strip Pack
RHFACT16373K01V	5962F9202402VYC	QML-V		Flat-48	Gold	5962F9202402VYC	1.50	Strip Pack
RHFACT16373K02V	5962F9202402VYA	QML-V		Flat-48	Solder Dip	5962F9202402VYA	1.50	Strip Pack
RHFACT16373K03V	5962F9202402VZC	QML-V	Grounded lid	Flat-48	Gold	5962F9202402VZC	1.50	Strip Pack
RHFACT16373K04V	5962F9202402VZA	QML-V	Grounded lid	Flat-48	Solder Dip	5962F9202402VZA	1.50	Strip Pack
RHFAC16374K1	-	Engineering Model		Flat-48	Gold	RHFAC16374K1	1.50	Strip Pack
RHFAC16374K01V	5962F0421301VXC	QML-V		Flat-48	Gold	5962F0421301VXC	1.50	Strip Pack
RHFAC16374K02V	5962F0421301VXA	QML-V		Flat-48	Solder Dip	5962F0421301VXA	1.50	Strip Pack
RHFAC16374K03V	5962F0421301VYC	QML-V	Grounded lid	Flat-48	Gold	5962F0421301VYC	1.50	Strip Pack
RHFAC16374K04V	5962F0421301VYA	QML-V	Grounded lid	Flat-48	Solder Dip	5962F0421301VYA	1.50	Strip Pack
RHFACT16374K1	-	Engineering Model		Flat-48	Gold	RHFACT16374K1	1.50	Strip Pack
RHFACT16374K01V	5962F9202502VYC	QML-V		Flat-48	Gold	5962F9202502VYC	1.50	Strip Pack
RHFACT16374K02V	5962F9202502VYA	QML-V		Flat-48	Solder Dip	5962F9202502VYA	1.50	Strip Pack
RHFACT16374K03V	5962F9202502VZC	QML-V	Grounded lid	Flat-48	Gold	5962F9202502VZC	1.50	Strip Pack
RHFACT16374K04V	5962F9202502VZA	QML-V	Grounded lid	Flat-48	Solder Dip	5962F9202502VZA	1.50	Strip Pack



Table 13. Ordering information

ST part number	SMD pin ⁽¹⁾	Quality Level	Other features	Package	Finishing	Marking ⁽²⁾	Mass (g)	Packing
RHRAC164245K1 ⁽³⁾	-	Engineering Model		Flat-48	Gold	RHRAC164245K1	2	Strip Pack
RHRAC164245K01V ⁽³⁾	5962R9858008VYC	QML-V	100 krad	Flat-48	Gold	5962R9858008VYC	2	Strip Pack
RHRAC164245K03V ⁽³⁾	5962R9858008VZC	QML-V	100 krad - Grounded lid	Flat-48	Gold	5962R9858008VZC	2	Strip Pack

1. SMD standard microcircuit drawing.
2. Specific marking only. Complete marking includes the following:
 - SMD pin (as indicated in above table)
 - ST logo
 - Date 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 exists for this part.

7 Other information

Date code

The date code is structured as engineering model: EM xyywwz

Where:

x = 3 (EM only), assembly location Rennes (France)

yy = last two digits of the year ww = week digits

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 14. Product documentation

Quality level	Documentation
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

Table 14. Product documentation (continued)

Quality level	Documentation
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

8 Revision history

Table 15. Document revision history

Date	Revision	Changes
06-Apr-2010	1	Initial release. The information in this data brief was previously published in a datasheet (document ID 17145).
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 V_I parameter. Table 3: Absolute maximum ratings - 54ACT series: added footnote 1; updated values of V_{CC} and V_I 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 <i>Table 2: Absolute maximum ratings - 54AC series</i> , <i>Table 3: Absolute maximum ratings - 54ACT series</i> and new <i>Section 4: Radiations</i> . Updated: Description on the cover page, <i>Table 13: Ordering information</i> and <i>Section 7: Other information</i> .
18-Apr-2019	8	Updated Table 13: Ordering information .

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, please refer to www.st.com/trademarks. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2019 STMicroelectronics – All rights reserved

