SPECIFICATIONS

	IC-F51 ATEX	IC-F61 ATEX / IC-F61-L ATEX
GENERAL		
Frequency coverage	136–174 MHz	400–470 MHz / 350–400 MHz (Non-RTTE)
Number of channels	Max. 128 channels/ 8 zones	
Type of emission	16K0F3E, 14K0F3E, 8K50F3E	
Channel spacing	12.5/20/25 kHz	12.5/20/25 kHz / 12.5/25 kHz (IC-F61-L)
PLL channel step	2.5/3.125 kHz	5/6.25 kHz
Power supply requirement	7.2 V DC nominal	
Current drain (approx.)		
Tx High (at 1 W)	0.7 A	0.8 A
Rx Max. audio	300 mA	300 mA
Standby	85 mA	85 mA
Antenna impedance	50 Ω (SMA type)	
Operating temperature range	−20°C to +55°C	
Dimensions (W × H × D) (Projections not included)	56 × 97 × 36.4 mm (With BP-227AXD)	
Weight (approx.)	290 g (With BP-227AXD)	
TRANSMITTER		
Output power (at 7.2 V DC)	1 W	
Max. frequency deviation	±5.0 kHz/±4.0 kHz/±2.5 kHz (W/M/N)	
Frequency stability	±2.5 ppm	
Spurious emissions	0.25 μW (≤ 1 GHz) / 1.0 μW (> 1 GHz)	
Modulation limiting	60–100% of Max. deviation	
Audio harmonic distortion	3% typ. (AF 1 kHz 40% deviation)	
Ext. microphone connector	9-pin multi connector/2.2 kΩ	
RECEIVER		
Sensitivity (at 20 dB SINAD)	−4 dBμV typ. (emf)	
Adjacent channel selectivity	75/73/65 dB min. (W/M/N)	
Spurious response	70 dB	
Intermodulation rejection	67 dB typ.	
Hum and noise	55/53/50 dB typ. (W/M/N)	
Audio output power	500 mW typ. (at 5% distortion with 8 Ω load)	
Ext. speaker connector	9-pin multi connector/8 Ω	

Measurements made in accordance with EN 300-086.
All stated specifications are subject to change without notice or obligation.

Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810 F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Rain Blowing/Drip	506.4	I, III
Humidity	507.4	−
Salt Fog	509.4	−
Dust Blowing	510.4	I
Vibration	514.5	I
Shock	516.5	I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

Ingress Protection Standard	
Dust & Water	IP67 (Dust-protection and waterproof protection)

ATEX INTRINSICALLY SAFE TYPE APPROVAL

The approved rating is
Gas: II2G Ex ib IIA T3 Gb
Dust: II2D Ex tb IIIC T160°C Db IP67
      (Tamb= −20°C to +55°C)
Special conditions for use: Must be used with **BP-227AXD**
When the transceiver is used in hazardous areas, either the jack cover or HM-138 must be attached to the connector.

* Note for IC-F51/F61 ATEX Non-Dust (II2G) version users, please use only the **BP-227AX** battery pack with the IC-F51/F61 ATEX Non-Dust version.

OPTIONS

Some options may not be available in some countries. Please ask your dealer for details.

BATTERY PACK
BP-227AXD
Rechargeable Li-ion 7.4 V 1850 mAh (min.) 1950 mAh (typ.)

BATTERY CHARGER[*2]
BC-147S[*1]   **BC-152N**
Charges the BP-227AXD in 9–10 hours. (approx.)

RAPID CHARGER[*2]
BC-145S[*1]   **BC-119N+AD-100**
Rapidly charges the BP-227AXD in 2–3 hours. (approx.)

MULTI-CHARGER[*2]
BC-157S
BC-121N+AD-100 (6 pcs.)
Rapid charges up to 6 battery packs in 2–2.5 hours.

SPEAKER-MICROPHONE HM-138
IPX7

*1 BC-145SA/BC-147SA for 120 V AC. SE for 230 V AC. SV for 240 V AC. BC-145SUK for 230 V AC.
*2 These chargers are not approved as intrinsically safe. **Do not charge** the BP-227AXD in an explosive atmosphere.

BELT CLIPS
MB-98 Alligator type   **MB-86** Swivel type

LEATHER BELT HANGER MB-96F

ANTENNAS
FA-S24V: 136–150 MHz (Blue)
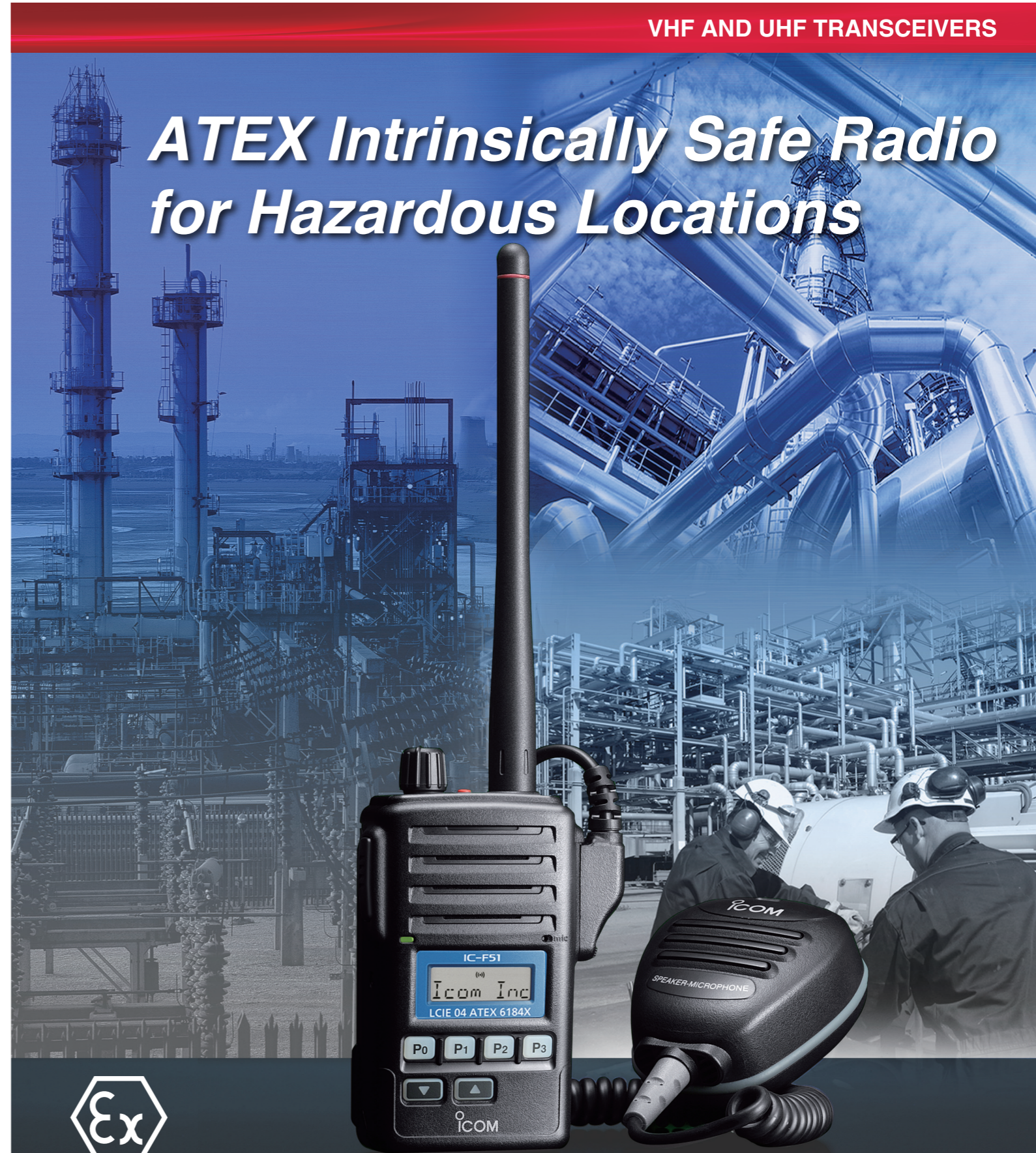FA-S59V: 150–174 MHz (Red)
FA-S27U: 400–470 MHz (Green)

STUBBY ANTENNAS
FA-S62VS: 150–162 MHz (Red)
FA-S63VS: 160–174 MHz (Green)
FA-S57US: 450–490 MHz (Red)

Supplied accessories: (May differ according to version)
• Battery pack, BP-227AXD   • Belt clip, MB-98   • Antenna

iCOM

ATEX Intrinsically Safe Radio for Hazardous Locations

IC-F51
Icom Inc.
LCIE 04 ATEX 6184X

SPEAKER-MICROPHONE

Photo includes optional speaker-microphone, HM-138.

Superior Waterproof Protection Supports Demanding Communication

Firefighters, Police, Security and Public utilities. Each profession has its own unique challenges, but all have one thing in common: the need for reliable communications. Icom's IC-F51/F61 offers a compact waterproof, MIL STD package, that's easy to use. Rain or shine, this radio keeps you in contact in nearly any environment.

Dust and Waterproof Protection Equivalent to IP67

The gasket sealed waterproof housing provides superior dust and waterproof* protection, equivalent to IP67.
Reliable and dependable use in harsh conditions under water or dust, make the IC-F51 / IC-F61 the radio for all situations.
* 1 m depth of water for 30 minutes.

Built-in Tone Signaling

Use the built-in CTCSS, DTCS, 2-Tone and 5-Tone capability to set up your own talk groups and quiet stand-by when other groups are talking. You can also set up selective calls to individuals or control a repeater.

Multiple 5-Tone

Up to 8 5-Tone codes can be decoded on a single memory channel. This is perfect for professionals who require multiple district paging on one channel. When a matched tone is received, the following items are programmable for each code.
- Bell icon
- Answer back
- Stun
- Beep sound
- Auto transmit
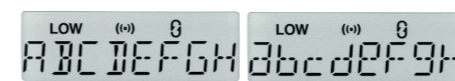- Scan
- ID decode
- Emergency cancel

Up to 7 Programmable Buttons

The [P0]–[P3], [Red] and [Up], [Down] buttons are programmable to meet specific needs. The [Red] button on the top panel can be assigned as an emergency trigger.

Alphanumeric Display

The 8-character alphanumeric display shows channel, bank, tone code and scanning channel names on the display. 7 operational icons on the sub-line show various status at a glance.

Upper and lower case characters available.

Built-in Voice Scrambler

The IC-F51/F61 has a built-in rolling type voice scrambler equivalent to the UT-110.

Wide Range Coverage and Large Channel Capacity

The IC-F51 covers 136–174 MHz and the IC-F61 covers 400–470 MHz in one version. The 128 memory channels with 8 memory banks allows you to divide and store a variety of channels from local to wide area network channels. Wide, middle and narrow* channel bandwidth is programmable to each channel.
(* Programmable 25/12.5 kHz or 20/12.5 kHz Ch.)

Li-ion Battery Pack

The large capacity 1950 mAh (typ.) rechargeable Lithium-ion (Li-ion) battery pack, BP-227AXD provides a practical 10 hours* of operating time. Li-ion batteries allow flexible charging and have almost no memory effect.
* Typical operation Tx:Rx:Stand-by=5:5:90

Compact Body

56 (W) × 97 (H) × 36.4 (D) mm compact body with durable, dependable construction, has been tested to MIL standard specifications. The compact design fits comfortably in your palm, and is easy to carry around.

BIIS 1200 Compatible

The following selective calling and data features are available with the BIIS system.
- 32 abbreviated call memories
- 7 group IDs
- 24-status Messages
- 8-character SDM (Short Data Message)

Other Features

- Built-in audio compander • 8 DTMF autodial memories • Normal and priority scans • 2 step power saver • Busy, repeater lockout functions • Power ON password, and more...

ATEX Intrinsically Safe

The IC-F51/F61 ATEX version and designated options are certified to the ATEX Protection Class II 2G Ex ib IIA T3 Gb, II 2D Ex tb IIIC T160˚C Db IP67 (Tamb= −20˚C to +55˚C) as interpreted in the following table. It is suitable for use in hazardous areas where flammable gasses, liquids or conductive dusts are used.

ATEX Gas Protection

II	2	G	Ex	ib	IIA	T3	Gb	
							Gb	Gb = GAS equipment protection level: High protection
						T3		T3 = Device surface temperature will not exceed 200°C
					IIA			IIA = Protection in GAS group
				ib				ib = Intrinsically safety according to EN60079-0 and EN60079-11
			Ex					Ex = Explosion proof equipment
		G						G = Gas, vapour and mist
	2							2 = High level protection for use in zone 1 (gas)
II								II = Group II, other (non-mining) environments

ATEX Dust Protection

II	2	D	Ex	tb	IIIC	T160°C	Db	IP67	
								IP67	IP67 = IP67 dust and waterproof protection
							Db		Db = Dust equipment protection level: High protection
						T160°C			T160°C = Maximum temperature of device surface
					IIIC				IIIC = Dust group: Conductive dust
				tb					tb = Enclosure protection according to EN60079-0 and EN60079-31
			Ex						Ex = Explosion proof equipment
		D							D = Dust
	2								2 = High level protection for use in zone 21 (dust)
II									II = Group II, other (non-mining) environments

ATEX Gas Group Classification

	T1: 450°C	T2: 300°C	T3: 200°C
I	Methane		
	Acetone	Ethyl alcohol	Benzine
	Ethane	I-amyl acetate	Diesel fuel
	Ethyl acetate	n-butane	Aircraft fuel
	Ammonia	n-butyl alcohol	Heating oil
IIA	Benzene (pure)		n-hexane
	Acetic acid		
	Carbon Monoxide		
	Methanol		
	Propane		
	Toluene		

VHF AND UHF TRANSCEIVERS

IC–F51 ATEX
VHF Transceiver

IC–F61 ATEX
UHF Transceiver

▼ IC-F51 ATEX

▼ IC-F61 ATEX

LCIE 04 ATEX 6184X

LCIE 05 ATEX 6046X

* Please ensure the IC-F51/F61 rating is acceptable for the intended place of use.