

KU-BAND	Application													Small diameter, On-The-Move Terminals, Atypical Construction, Advanced Technology				
	Item	Unit	Comment	Fixed, central station (high powered)	VSAT			SNG			Maritime			NA	NA	non-parabolic, non-maritime		
Diameter	(m)			D >= 3.8	3.8-10 >= 4.8	3.8-10 >= 1.5	1.5 > D >= 1.0	D < 1.0	3.8-10 >= 1.5	1.5 > D >= 1.0	D < 1.0	3.8-10 >= 1.5	1.5-10 >= 0.8	D < 1.0	NA	NA		
Diameter equivalent to				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	D >= 0.6 m	D >= 0.6 m	The corresponding A shape equivalent diameter with reference to antenna gain in the direction towards the satellite can be used for link analysis. For low profile and flat antennas, D is the smaller dimension of the aperture as it is projected to the satellite direction.	
GHz			Reference frequency 34.250 GHz	Q >= 1.8E5	1.8E5 > Q >= 45.0	1.8E5 Q >= 71.5	71.5 > Q >= 475	Q < 475	1.8E5 Q >= 71.5	71.5 > Q >= 475	Q < 475	1.8E5 Q >= 71.5	71.5 > Q >= 475	Q < 475	Q >= 28.53	Q >= 28.53		
Antenna absolute characteristics (aligned to geostationary)			Range and +/- 5 deg. for each of the two off-axis gain elements, 10% of the side lobes are permitted to exceed the indicated mask by a maximum of 3 dB. Please indicate mask with channel specification (F CC, F U, ETSI etc.)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	29 -25 log (B)	32 -25 log (B)	40 -25 log (B)	Per meter evaluation on a Case-By-Case basis by individual satellite operators, based on the ITU Table adjacent satellite coordination process as defined in Article 9 of the Radio Regulations (RR), and the 5% delta T/T threshold for non-conformal antennas.	
Measured Co-polar pattern - with radome if applicable (low-mid and high frequency band). At least one frequency in the operational band			Antenna Gain pattern	AZ/EL plot	AZ/EL plot	AZ/EL plot	AZ/EL plot	AZ/EL plot	AZ/EL plot	AZ/EL plot	AZ/EL plot	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	
Starts at a	(deg)		Definition of starting point	a > greater (1.0, 100%/D)			a > greater (1.0, 100%/D)			a > greater (1.0, 100%/D)			a > greater (1.0, 100%/D)			Per meter evaluation on a Case-By-Case basis by individual satellite operators, dependent on application and operational environment		
X-polarization within 1 dB contour - linear polarization	(dB)		Individual satellite operator could implement lower values in exceptional circumstances with E.I.R.P. restriction	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
X-polarization within 1 dB contour - circular polarization	(dB)		Individual satellite operator could implement lower values in exceptional circumstances with E.I.R.P. restriction	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
Measured Cross-polar pattern			Antenna pattern to be provided with radome if applicable - transmit and receive	within 1 dB contour (linear polarization, only for height at Circular polarization)	within 1 dB contour (linear polarization, only for height at Circular polarization)	within 1 dB contour (linear polarization, only for height at Circular polarization)	within 1 dB contour (linear polarization, only for height at Circular polarization)	within 1 dB contour (linear polarization, only for height at Circular polarization)	within 1 dB contour (linear polarization, only for height at Circular polarization)	within 1 dB contour (linear polarization, only for height at Circular polarization)	within 1 dB contour (linear polarization, only for height at Circular polarization)	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	Mandatory, for their explained in section "Mandatory Test Data"	
Polarization Alignment Accuracy				within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	within 1'	
Azimuth / Elevation fine adjustment mechanism			Min pointing must cause less than 1 dB reduction of carrier EIRP towards satellite	NA	yes	to reduce mispointing to 0.5 deg	to reduce mispointing to 0.5 deg	to reduce mispointing to 0.5 deg	to reduce mispointing to 0.5 deg	to reduce mispointing to 0.5 deg	to reduce mispointing to 0.5 deg	NA	NA	NA	NA	NA	NA	
Tracking (mandatory)				yes	NA	NA	NA	NA	NA	NA	NA	yes	yes	yes	yes	yes	yes	
Structural Stability			Wind speed for maximum 3 dB reduction of carrier EIRP towards satellite	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Windload operational	(km/h)			55 km/h	55 km/h	55 km/h	55 km/h	55 km/h	55 km/h	55 km/h	55 km/h	NA	NA	NA	NA	NA	NA	
Min/max temp	(deg C)		Unit/radiator should be able to sustain these temperatures for multiple hours	-30 to 50 deg C	-30 to 50 deg C	-30 to 50 deg C	-30 to 50 deg C	-30 to 50 deg C	-30 to 50 deg C	-30 to 50 deg C	-30 to 50 deg C	NA	NA	NA	NA	NA	NA	
Integrate the position influence on the antenna pattern introduced by the de-icing			Highly recommended	yes	yes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Installation of an Antenna Control Unit			Mandatory	Highly recommended	NA	NA	NA	Highly recommended	Highly recommended	Highly recommended	Highly recommended	Mandatory in antenna system	Mandatory in antenna system	Mandatory in antenna system	Mandatory in antenna system	Mandatory in antenna system	Mandatory in antenna system	
To have a look-up table for polarization / view angle off set to the antenna operator			Special antenna types	NA	NA	NA	NA	NA	NA	NA	NA	yes	yes	yes	yes	yes	yes	
Maximum deviation from direct to satellite	(deg)		Angle determined by maximum 3 dB reduction of carrier EIRP towards satellite	NA	NA	NA	NA	NA	NA	NA	NA	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable, only 1 dB carrier reduction	
Software may not be modifiable by operator			SNG and mobile, auto-acquiring On-The-Move systems only. This includes data for the tracking mechanism, the acquisition, for mis-pointing and power levels to the antenna Range etc. It includes any unit where software is installed, like BUC, modem and ACS, or other components	NA	NA	NA	NA	NA	NA	NA	NA	yes	yes	yes	yes	yes	yes	
Radome in production must be identical to the radome with which the antenna system has been tested				NA	NA	NA	NA	NA	NA	NA	NA	yes	yes	yes	yes - NA for airborne antennas	yes - NA for airborne antennas	yes - NA for airborne antennas	
Antenna Tx Gain at mid band frequency	(dB)		For information only	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
Antenna Tx frequency range	(GHz)		For information only	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
Spurious Emission Carrier Off			Shall not exceed 40dB/40Hz	applicable	applicable	applicable	applicable	applicable	applicable	applicable	applicable	applicable	applicable	applicable	applicable	applicable	applicable	
Transmit E.I.R.P. indicator	(dB)		At discretion of individual satellite operator	yes	yes	NA	NA	yes	yes	recommended	recommended	NA	NA	NA	NA	NA	NA	
Maximum E.I.R.P. rating	(dBW)		Reported value from every manufacturer	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
E.I.R.P. Adj at max Elevation in the Full Range of MPA Power	(dB)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
E.I.R.P. stability	(dB)		Integrated into antenna system/mobile/maritime	NA	NA	NA	NA	NA	NA	NA	NA	1	1	1	1	1	1	
Automatic carrier mode, mandatory if mispointing occurs	(deg)		mobile, auto-acquiring On-The-Move systems only	NA	NA	NA	NA	NA	NA	NA	NA	+/-0.5'	+/-0.5'	+/-0.5'	+/-0.5'	+/-0.5'	+/-0.5'	
Time within which the automatic carrier mode will have to take place	(ms)		mobile, auto-acquiring On-The-Move systems only	NA	NA	NA	NA	NA	NA	NA	NA	100 ms	100 ms	100 ms	100 ms	100 ms	100 ms	
Transmission to resume at (or less than) angle	(deg)		mobile, auto-acquiring On-The-Move systems only	NA	NA	NA	NA	NA	NA	NA	NA	± 0.2 within 1 sec	± 0.2 within 1 sec	± 0.2 within 1 sec	± 0.2 within 1 sec	± 0.2 within 1 sec	± 0.2 within 1 sec	
Transmit earth stations must be equipped with a receive chain which allows pointing optimization and tracking prior to and during transmission				yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
Antenna RX gain at mid band frequency	(dB)		For information only	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
Antenna RX frequency range	(GHz)		For information only	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
Add G/T values	(dB/K)		G/T referred to 100K input at 29° Elevation at 22° C (additional testing required at 10° and 40° C ambient temperature) - MMS. Band Data figure to be used. Measurements include OMT/Polarizer losses, for reference only	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
General Remark	The individual satellite companies participating in this certification process are subject to the control and sanctions laws that may restrict their ability to review and approve equipment prepared by certain vendors.																	