



COAXIAL CONNECTORS AND TRANSITIONS C30 SERIES

DATA
SHEET
No. T100
1 OF 2

- LOW VSWR
- HIGH POWER
- FLEXIBLE SPECS
- CUSTOM CONFIGURATIONS

DESCRIPTION

This data sheet describes the most commonly used 50Ω coaxial connectors. The C30 series are well matched transitions between any two of these connectors optimized for the given frequency, power level and other requirements. These are commonly used for precise RF testing and in high power applications.

Besides transitions, MEC supplies these connectors on other components described elsewhere in this catalog such as waveguide to coax adapters, coupler, mismatches and terminations.

The salient characteristics of these connectors are tabulized below. Column 1 gives the common designation for the connector. Column 2 gives the external coupling thread size or the diameter of the standard flange for rough size information.

Column 3 & 4 give the MEC designation for the Female (Jack) and the Male (Plug) configurations.

Column 5 shows the normal upper frequency of operation above which higher order modes may propagate causing spikes in the transmission and reflection. In some cases operation above this limit is possible using special mode suppression techniques in coordination with the customer.

Column 6 & 7 give the maximum continuous or average power and the maximum peak power through the connector at standard temperature and sea level pressure. These figures are approximate and for reference only. Exact power specifications depend on environment, mounting, cooling and configuration and must be analyzed individually.

Column 8 gives connector VSWR versus frequency (in GHz) from DC to the upper limit in column 5.

Since MEC designs and manufactures these connectors and transitions directly into the end-item, we offer our customers flexibility to optimize frequency band, VSWR, loss, power handling, or pressurizability without being limited by a set of fixed configurations.



Data subject to change without notice



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COAXIAL CONNECTOR	SIZE QR THREAD	INTERNAL COAX SIZE		OUTSIDE LENGTH MIN.	MEC DESIGNATION		UPPER FREQ. (GHz)	POWER (KW) (*1)		VSWR
		OD	ID		Female Jack	Male Plug		AVERAGE OR CW	PEAK	
3 1/8 EIA	5.19 dia	3.03	1.32	2.2	-3.13	-3.125M	1.5	12	200	<1.08
1 5/8 EIA	3.50 dia.	1.527	.664	1.5	-1.63	-1.625M	3	3	74	<1.08
7/8 EIA	2.25dia.	.785	.341	1.3	-0.88	-.875M	4	1.5	20	<1.08
7-16 DIN	M29X1.5 (1.14" dia)	.630	.276	1.2	-716	-716M	8	2	40	<1.10
LC	#1.250-18	.630	.276	1.2	-LC	-LCM	5	1.5	20	<1.10
LT	#1.250-18	.625	.190	1.0	-LT	-LTM	5	1.5	20	<1.10
MLT	#1.250-18	.625	.190	1.0	-MLT	-MLTM	5	1.5	20	<1.10
SC	#.687-24	.276	.120	0.6	-SC	-SCM	8	1	14	1.05+.006f
N	#.625-24	.276	.120	0.5	-N	-NM	18.2	0.4	5	1.04+.006f
TNC	#.437-28	.250	.109	0.45	-T	-TM	18.2	0.4	6	1.05+.007f
APC-7 mm fixed (*2)	#.687-24	.276	.120	0.3	-7	-	18.2	2W	1	1.003+.002f
APC-7 mm sexless	#.687-24	.276	.120	0.6	-7S	-7S	18.2	2W	1	1.003+.002f
SMA (3mm)	#.250-36	.166	.050	0.38	-3	-3M	26	50W	3	1.02+.005f
K (2.9mm)	#.250-36	.115	.036	0.35	-K	-KM	45	10W	1	1.04+.012f
2.4 mm	M7.0 x .75 (.28 dia.)	.094	.041	0.3	-2.4	-2.4M	50	10W	1	1.05+.005f
SSMA (1.7mm)	#.190-32	.098	.036	0.35	-1.7	-1.7M	40	20W	1.2	1.06+.010f

(1) Includes fixed center conductor bullet. (2) Standard interface but without external coupling shell. (3) Trademark of Wiltron.

ORDERING INFORMATION

COAX-TO-COAX TRANSITIONS: Use C30-X-Y where C30 is the coaxial transition series, X and Y are the suffix as of the larger and smaller connectors respectively. Example a C30-7-T is a transition for APC-7mm to TNC-Jack.

OTHER COMPONENTS: Use the series number of the components required and add the suffix for the connector required. For example, an R40-3 is a WRD750 to SMA-Jack adapter, see R40 Series.

When placing an order other requirements such as frequency band, power handling, VSWR etc. should also be given. MEC will then issue a unique 3-digit suffix to the model number to encompass all customer specifications.

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