

# Tape & Reel Packaging For Surface Mount Devices

Automation of surface-mount assembly by the use of pick-and-place equipment to handle tiny components has been enhanced by evolutionary improvements in tape-and-reel systems which can accommodate as many as 4000 parts on a 13-inch reel. This results in less frequent component reloading and less downtime of the assembly equipment. Other advantages of tape feeders include versatility or the ability to handle a variety of parts.

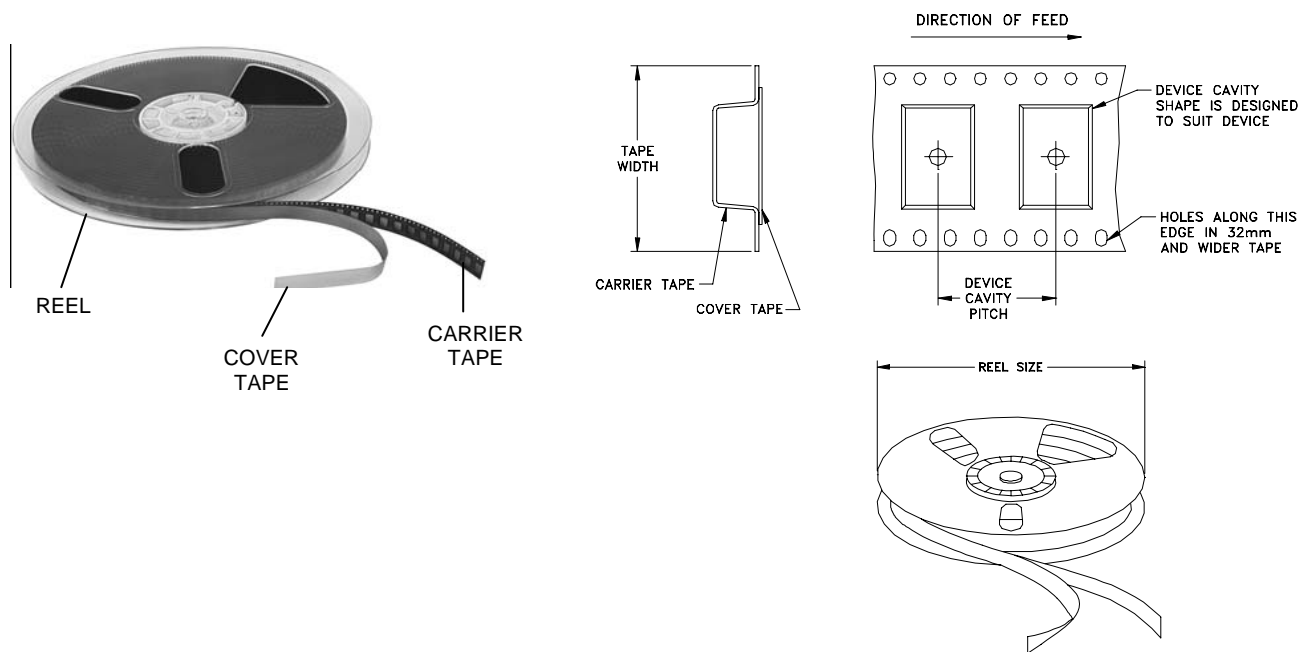
Mini-Circuits has kept pace with the trend towards automated assembly and offers RF/Microwave signal-processing components in tape-and-reel format, in accordance with the specifications in the table at right. However, there are many situations where requirements are for smaller quantities. In these cases, Mini-Circuits can supply partial reels in accordance with your request at a nominal cost.

## ESD Protection:

Mini-Circuits uses industry recognized materials to ensure that all products are protected from ESD (Electro-Static Discharge) damage during handling and shipping. Carrier tapes meet or exceed requirements defined in EIA-481 and EIA-541 and are static dissipative.

Properties	Method	Performance
Surface Resistivity	ASTM D257 at 50% RH	$\geq 10^4$ Ohms per square $< 10^{12}$ Ohms per square
Electrostatic Discharge	FTMS 101, Method 4046	<.02 seconds

## tape illustration



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 Mini-Circuits ISO 9001 & ISO 14001 Certified

## T & R Codes and Information (D4-D041)

T&R Code	Case Style	Tape Width	Device Cavity Pitch (mm)	Reel Size (inch)	QTY per Reel
F1	KK81	24	12	13	900
F2	TT100	16	12	13	500
	TT240, TT1224, TT1423				
F4	WW107, WW107-1	12	8	7	1000
				13	2000, 4000
F5	YY101	32	16	13	500
	YY161				
	BK276				
	BK343				
	QQQ569				
	BJ360				
	DT855				
	HF1138, HF1139				
	HF1317, HF1392 HF1458, HF1485				
F6	HZ1198	32	16	13	500
F8	MMM168	8	8	7	3000
F9	NNN150	24	16	13	500
F10	QQQ130	24	16	13	500
	QQQ1358				
	BJ937, BJ937-1				
	BJ1051				
	BJ293, BJ293-1				
	CJ608				
	CJ725				
	JQ1382 SM34				
F11	RRR137, RRR137-1	12	8	7	500
F12	TTT166, TTT166-1	24	12	13	500, 800
	TTT167, TTT167-1 TTT881, TTT1289				
F14	AF190, AF190-1	12	8	7	500, 1000
F15	AT790	12	8	13	2000
F16	HA1069	12	8	7	1000, 2500, see note 1
	XX211, XX211-1 XX746				
F17	AT224	12	8	13	2000
	AT224-1				
	AT224-2				
	AT224-3 AT790-1				
F18	AN213	24	16	13	500
F19	XX112	16	8	7	500
F20	VV105	12	12	13	1000, 2000
F21	BG291 HU1186, HU1374	32	32	13	200

<b>T&amp;R Code</b>	<b>Case Style</b>	<b>Tape Width</b>	<b>Device Cavity Pitch (mm)</b>	<b>Reel Size (inch)</b>	<b>QTY per Reel</b>
F24	BH292	16	12	13	500
	CB518				
	CB539				
F25	BG419	44	32	13	125
	BL301				
F26	AF320	12	8	7	1000
F27	JF1258	44	32	13	125
F28	BK377	32	20	13	500
	HD1131				
	DK801				
	DK1042				
	DK1171				
F29	BJ398	24	12	13	500
F31	CA531, CA531-1	8	4	7	1000
F34	CD541	16	12	13	1000
	CD542				
	CM624				
	CD636				
	SM1				
	SM2				
	SM1L				
	SM33				
	SM31				
	DZ885				
	DZ885-2				
	DZ943				
	DZ943-G1				
	DZ943-GC1				
	DZ943-GC2				
	DZ944				
	DZ944-G1				
	DZ944-GC1				
	DZ944-2				
	DZ944-GC2				
DZ883					
DZ1034					
DZ1383-2					
F36	CG581	24	12	13	500
F37	CH513	24	16	13	500
	CH549				
	CK605				
	CK605-1				
	CK1113				
	CK829				
	DV874				
	DV897				
	HE1135				
	HE1354				
F43	CL620	16	8	7	500

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F46	CD637	16	12	13	900
F47	DB714, DB714-1	12	8	13	2000
F48	SM18	24	12	13	1000
F50	TT241	24	12	13	500
F53	SM20A	32	16	13	500
F55	DF782	12	8	7	1000
F56	BJ850	32	16	13	1000
F57	QQQ828	24	12	13	1000
F58	DL805	12	8	7	1000
				13	2000, 4000
F59	DH820	12	8	7	1000
F60	CZ682	24	16	13	1000
F61	AH202, AH202-1, AH202-2	24	12	13	200
F66	DQ849, DQ1225	8	4	7	2000
F68	FR933	12	8	7	1000
	FG873				
	DL1020				
	GF981, GF995			13	
	DG983				
	DG984				
F69	DU674	44	32	13	125
F70	DG1293	12	8	7	1000
F71	FV1206, FV1206-4	8	4	13	2000
				7	3000
F72	FW856	12	8	13	2000, 4000
F73	AT577	12	8	7	500
F74	GE0805C-1, GE0805C-2	8	4	7	2000
	JV1210C, JV1210C-1				
F75	FV1206-1, FV1206-3	8	4	7	3000
F76	AT1029	12	8	13	2000
F77	AT1030	12	8	13	2000
	GU1041				
F78	FZ802	16	12	13	1000
F79	FZ990	24	16	13	500
	GP731				
	GP1212				
	GQ1018				
	AN1102				
F80	HR1176	44	40	13	100
F81	HS1181, CA1389	8	4	7	3000
F82	HV1195	12	8	7	500
F83	HQ1157	56	16	13	100
F84	JB1233	32	12	13	500

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F85	HV1278	12	8	TBD	TBD
F86	JH1286	44	20	13	250
	JR1384				
F87	DG983-1	12	8	13	3000
	DG1235				
F88	JK1226	44	24	13	100
F89	HP1156	56	32	13	100
F90	MMM1362	8	4	7	3000
F91	JS1370	16	12	13	2000
F92	JM1360	16	8	7	1000
F93	JZ1436	12	4	7	1000
				13	3000
F94	KA1444	12	8	7	1000
				13	3000
F95	KJ1367	24	24	13	500
F96	KJ796	32	24	13	500
F97	KL942	44	32	13	200
	KL1294				
F98	DK1251	32	24	13	250
F99	JG1228	44	32	13	125
F100	KM1479	24	24	13	500
F101	CA1389	8	4	7	50, 100, 200, 500, 1000, 2000
F102	GU1414	12	8	13	1500

**Notes:**

1. BP models available in 7" reel only, MSW. MSWA models available in 13" reel only.