## **SPECIFICATIONS - ORDERING - WARRANTY**



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# SPECIFICATIONS







INPUT

Vcci

Vee

V<sub>CC2</sub>

OUTPUT
 GND

PIN: (1) INPUT (2) V<sub>CC1</sub> (3) V<sub>CC2</sub> (4) OUTPUT (5) GND

H2







Die Chart for Crimp Kit 1505 (see page 104)								
HT-NO.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	PIN	SQ.PIN	FOR CRIMPING RG TYPE CABLE	
236A		.255" 6.5	.213" 5.41	.187" 4.75	.068" 1.72		55, 58, 59, 62, 140, 142, 210, 223, 174, 303, 400, BELDEN 8279, LMR-195,	
336C DIE	.319" 8.1	.256" 6.5	.213" 5.41		.068" 1.72		6, 59, 62, 140, 210, BELDEN 8279, 55, 58, 141, 142, 223, 303, 400	
336G DIE	.255" 6.48	.213" 5.41	.137" 3.48	.100" 2.54	.068" 1.72	.043" 1.09	59, 62, 8X, 470, 210, BELDEN 8279, 55, 58, 141, 142, 174, 223, 303, 400, LMR-240, RFP-240	
336J DIE	.178" 4.52	.151" 3.84	.128" 3.25	.078" 1.98	.068" 1.72	.042" 1.07	122, 174, 179, 180, 187, 188, 195, Fiber Optic 178, 316, BELDEN 8218	
336K DIE	.429" 10.9		.128" 3.25	.100" 2.54			8, 9, 11, 213, 214, 174, 179, 188, 316, LMR-100, BELDEN 9913, LMR-400, RFP-400 LMR-400UF	
206	6 1/2" CABLE CUTTER FOR CUTTING CABLE MAX .41"φ (10.5mmφ)							
332	4" L COAX STRIPPER FOR STRUPPING RG58/59/62/6/3C2V							

## **Antenna Switching Pin Diodes**

## for 50-500 MHz Applications

Part #	MHz	IF mAr	fs max	C <sub>t</sub> pF	Application		
MI301	470	20	1.2W	3.0	Low power in/out		
MI308	470	50	0.7W	1.6	10w		
MI402	470	50	0.7W	3.0	25w		
MI407	470	50	0.7W	1.8	25w-40w		
Technical Data Package of listed PIN diodes: \$1.75/set							

Part #	MHz	PD	r <sub>fs</sub> max 100 MHz/50 ma	C @ Ov	P max W 25°C
UM9401	40-1000	5.5w	1.0	1.5	170@I <sub>f</sub> =.2A
UM9415	40-1000	10w	1.0	4.0	1200@I <sub>f</sub> =1A

## **Transistor Specifications HF Transistors**

1.5-30	MHz, H	F/SSB	}	
Device	Pout Watts	Pin Watts	GpE (N dB @ 3	1in) Pkg/ 30 MHz Style
VCC=12	2.5 or 13	3.6 Vol	ts	<b></b>
MRF476	3	0.1	15	221A-04/1
MRF475	12	1.2	10	221A-04/1
MRF433	12.5	0.125	20	211-07
2SC3133	13	0.5	14	221A-04/2
MRF406	20	1.25	12	211-07
SD1285	30	0.8	15	211-07
MRF477	40	1.25	15	221A-04/2
MRF460	60	4	11	211-11
MRF412	70	1.6	16	211-11
2502097	75 75	4	13	316-01
2503241	15	4	12	211-11
2302290 MDE/58	80	4	12	211-11
2502901	100	4 7	12	211-11
2502504	100	7	12	211-11
2503240	100	7	12	316-01
SD1487	100	8	12	211-11
SD1405	100	5	13	211-11
MRF421	100	10	10	211-11
SRF3662	110	10	11	211-11
2SC2879	120	7	15	211-11
1.5-30	MHz, H	F/SSB	}	
VCC=28	<b>Volts</b>			
MRF485	15	1.5	10	211A-04/1
MRF426	25	.16	22	211-07
MRF426A	25	.10	22	145A-09
MRF401	25	1.25	13	145A-09
MRF466	40	1.25	15	211-07
MRF496	40	1.25	15	221A-04/2
MRF464	80	2.53	15	211-11
SD1407	100	2.5	16	211-11
SD1726	150	6	14	211-11
MRF422	150	15	10	211-11
2502510A	150 (MRF42	/ 2 equiva	12 lent)	211-11
VCC=50	) Volte	cquiva	ioncj	
MRF427	25	0.4	18	211-11
MRF428	150	7.5	13	211-11

<b>14-30</b>	MHz,	<b>CB/AMATEUR</b>
VCC_1	2 5 or	12 6 Volte

V66=12.3	D OF	13.0 VO	แร	
MRF476	3	0.1	15	221A-04/1
MRF475	4	0.4	10	221A-04/1
MRF449	30	1.5	13	211-07
MRF449A	30	1.5	13	145A-09
MRF453	60	4	11	211-11
MRF455	60	3	13	211-07
SRF2072	65	3	14	211-07
SRF7000-90	70	3	14	211-07
SRF3775	70	3	14	211-07
MRF458	80	3	13	211-11
MRF454	80	5	12	211-11
MRF492	90	4	13	211-11
SD1446	90	5	13	211-07
SRF3749	85	5	13	211-11
SRF3795	90	5	13	211-11
SRF3800	100	4	14	211-11

## 27-50 MHz. LOW FM BAND

	,				
<b>Device</b>	Pout <u>Watts</u>	Pin <u>Watts</u>	GpE (N <u>dB @</u> !	lin) 50 MHz	Pkg/ <u>Style</u>
VCC=12.	5 or 13	3.6 Vol	ts		
MRF475	4	0.4	10	221/	A-04/1
MRF497	40	4	10	221/	4-04/2
SD1446	70	7	۵	2	211-07
MRF492	70	5.6	11	21:	1-11/1
MRF492A	70	5.6	11	1	L45-10
SRF3800	80	5.6	12	2	211-11
SD1405	100	20	7	2	211-11

#### **66-88 MHz BAND** VCC=12.5 Volts

		-		
MRF229	1.5	0.15	10/90	79-05/5
MRF232	7.5	0.8	9/90	145A-09
MRF233	15	1.5	10/90	145A-09
MRF234	25	2.8	9.5/90	145A-09/1

## 88-108 MHz FM BROADCAST

211-11 211-11	Device	Pout <u>Watts</u>	Pin <u>Watts</u>	GpE (Min)/ Freq. <u>dB/MHz</u>	Pkg/ <u>Style</u>
211-11 211-11	VCC=28 SD1460	Volts 150	18	9.2/108 MHz	211-11

## **30-200 MHz BAND** VCC=28 Volts

MRF475	4	0.4	10	221A-04/1
2N3553	2.5	0.25	10/175	79-04/1
2N5641	7	1	8.4/175	144B-05/1
MRF340	8	0.4	13/136	221A-04/2
2N5642	20	3	8.2/175	145A-09/1
MRF314	30	3	10/150	211-07/1
MRF314A	30	3	10/150	145A-09/1
2N5643	40	6.9	7.6/175	145A-09/1
MRF315	45	5.7	9/150	211-07/1
MRF315A	45	5.7	9/150	145A-09/1
MRF316	80	8	10/150	316-01/1
MRF317	100	12.5	9/150	316-01/1

## 100-500 MHz BAND VCC=28 Volts

MRF313	1	0.03	15/400	305A-01/1
MRF321	10	0.62	12/400	244-04/1
MRF323	20	2	10/400	244-04/1
MRF338	80	12	7.3/470	333-03
MRF393(6)	100	18	7.5/500	744A-01/1
2N6986(6)	100	18	7.5/500	382-01/1
(6)=Internal	Impedan	ce Matche	ed	
Push-Pull Tra	nsistors			

### 806-960 MHz BAND VCC-12 5 Volte-Class C

V66=12.	<b>J VOIC</b>	5–6185	56	
MRF559	0.5	0.08	8/870	317-01/2
MRF581	0.6	0.06	10/870	317-01/2
MRF837	0.75	0.11	8/870	317-01/1
MRF557	1.5	0.23	8/870	317D-02/2
MRF839	3	0.46	8	305A-01
MRF839F	3	0.46	8/870	319-06/2
MRF841	5	0.7	8.5	244-04
MRF840	10	2.5	6	319-06
MRF846	40	15	4.3/870	319-06/1
MRF847	45	16	4.5/870	319-06/1
VCC=50	Volts-	-Class	C	
MRF1035M	3 35	3.5	10	332A-03/1
MRF1091M/	90	9	10	332-04/1
MRF1090M	3 90	9	10	332A-03/1
MRF1150M/	A 150	25	7.8	332-04/1
MRF1150M	3 150	25	7.8	332A-03/1
		(mc	ore specs or	n page 208)

150

250

7.5

15.7

13

12

MRF429

MRF448

# **SPECIFICATIONS**

# Transistor Specifications

100-400		UANU			
<u>Device</u>	Pout <u>Watts</u>	Pin <u>Watts</u>	GpE (Min) <u>dB @ 400</u>	Pkg/ MHz Style	
VCC=28	Volts				
2N3866	1	0.1	10	79-04/1	
MRF5174	2	0.125	12	244-04/1	
2SC3375	3	1	4.8/400	36-03	
MRF5175	5	0.4	11	244-04/1	
MRF325	30	4.3	8.5	316-01/1	
MRF326	40	8	9	316-01/1	
J02015A	50	5	10	316A-01/1	
MRF309	50	21	7	316-01/1	
MRF327	80	14.9	7.3	316-01/1	
MRF329	100	20	7	333-04/1	
MRF392	125	19.8	8	744A-01/1	
2N6985(6)	125	19.8	8	382-01/1	

## 136-174 MHz HIGH BAND

Device	Pout Watts	Pin Watts	dB @ 175	) PKg/ 5 MHz Stvle	Devic
VCC=12.	5 Volts				
VCC=12.1 MRF234 2N4427 2SC1970 MRF607 2N5589 2N6255 MRF220 MRF237 2N6080 MRF260 2SC1971 2SC2237 2N5590 MRF261 MRF261 MRF261 MRF261 MRF262 MRF262 MRF2628 2SC1972 2SC2094 2SC2539 2SC2549 2SC2549 2SC2549 2SC2549 2SC2549 2SC2549 2SC2549 2SC2549 2SC2549 2SC2549 2N6082 MRF238 SD1274 MRF238 SD1274 MRF239 MRF264 MRF1946A 2SC1946A 2SC1946A 2SC1946A SD1273 SD1275 SD1275-01 2N6084 MRF240 MRF240 MRF240 MRF240 MRF240 2SC2630 2SC2630 2SC2630 2SC2630 2SC2630 2SC2634 MRF245 2SC2782 SD1477 SD1441	$\begin{array}{c} \textbf{mars}\\ \textbf{5 Volts}\\ 25\\ 1\\ 1.3\\ 1.75\\ 3\\ 4\\ 4\\ 4\\ 5\\ 7\\ 7.5\\ 10\\ 10\\ 10\\ 15\\ 15\\ 15\\ 15\\ 15\\ 15\\ 15\\ 15\\ 15\\ 15$	2.8 0.1 0.12 0.32 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.2	$\begin{array}{c} \textbf{B} \in 17,\\ \textbf{9}, \textbf{5}/90\\ 10\\ 10\\ 11.5\\ \textbf{9}\\ \textbf{7}, \textbf{8}\\ 12\\ 12\\ 12\\ 12\\ 12\\ 10\\ 10\\ 13.8\\ \textbf{5}.2\\ \textbf{5}.2\\ \textbf{9}\\ 10\\ \textbf{6}.3\\ \textbf{7}.5\\ \textbf{6}.3\\ \textbf{6}.3\\ 12\\ 10\\ \textbf{6}.3\\ \textbf{7}.5\\ \textbf{6}.3\\ \textbf{6}.3\\ 12\\ 10\\ \textbf{8}.8\\ \textbf{14}.5\\ \textbf{4}.4\\ \textbf{6}.2\\ \textbf{6}.2\\ \textbf{5}.7\\ \textbf{9}\\ \textbf{10}\\ \textbf{5}.2\\ 10\\ 10\\ \textbf{6}.7\\ \textbf{6}\\ \textbf{4}\\ \textbf{6}\\ \textbf{5}\\ \textbf{5}.5\\ \textbf{8}.2\\ \textbf{4}.4\\ \textbf{7}\\ \textbf{6}.7\\ \textbf{6}.4\\ \textbf{6}.5\\ \textbf{5}.5\\ \textbf{5}.5\\ \textbf{6}.5\\ \textbf{6}.5\\ \textbf{6}.5\\ \textbf{6}.5\\ \textbf{6}.5\\ \textbf{6}.5\\ \textbf{6}.5\\ \textbf{6}.5\\ \textbf{5}.5\\ \textbf{6}.5\\ \textbf$	Intz         Style           145A-09/1         79-04/1           221A-04/2         79-04/1           144-805         19-02           211-07/1         79-05/5           145A-09         221A-04/2           221-04/2         T31E           145A-09         145A-09           145A-09         145A-09           145A-09         145A-09           145A-09         145A-09           21A-04/2         211-07           221A-04/2         211-07           221A-04/2         211-07           145A-09         145A-09           211-07         145A-09           145A-09         145A-09           211-07         145A-09           145A-09         145A-09           211-07         145A-09           145A-09         211-07           145A-09         211-07 <td>TO S WRE2 MRE2 MRE2 MRE2 MRE3 MRE3 MRE3 MRE3 MRE3 MRE3 MRE3 MRE3</td>	TO S WRE2 MRE2 MRE2 MRE2 MRE3 MRE3 MRE3 MRE3 MRE3 MRE3 MRE3 MRE3
VCC=28	Volts				
SRF3841H	40	7	7.6	145A-09	MRF:
Minimum Gai	in & powe	r ratings	are at 175	MHz.	

## (continued from page 207)

## 225 MHz, ULTRA HIGH BAND

<u>Device</u>	Pout <u>Watts</u>	Pin <u>Watts</u>	GpE (Min dB @ 225	) 5 MHz	Pkg/ <u>Style</u>
VCC=12.5	<b>i</b> Volts				
MRF207	1	0.15	8.2	79	-04/1
MRF227*	3	0.13	13.5	79	-05/5
MRF208	10	1	10	145A-0	)9/10
MRF226	13	1.6	9	145A	-09/1
VCC=28 \	<b>loits</b>				
2SC2133	34	4.5	8.2	3	11-11
2SC2134	60	12	7	3	11-11
2N6439	60	10	7.8	3	16-11

\*Grounded Emitter TO-39 package.

## **RF Power MOSFETS**

-N Chan Device	<b>NCI</b> Pout <u>Watts</u>	Pin <u>Watts</u>	Gps/Freq. <u>dB/MHz</u>	Package Style
To 54 M	Hz HF/	SSB		
<b>VDD=12.</b> MRF255	5 Volts	1.2	16/54	211-11
To 150 M	/U7 UI	c/eep		
	Volte	7330		
VDD=20 MRF138	<b>VUILS</b> 30	0.6	17	211-07/2
MRF140	150	4.7	15	211-11/2
VDD=50	Volts			
MRF148	30	0.5	18	211-07/2
MRF150	150	2.9	17	211-11/2
MRF154	600	12	17	368-02/2
MRF157	600	6	20	368-02/2
To 225 N	AH7 VI	HF AM	/FM	
	Volts			
MRF134	5	0.2	14/150	211-07/2
MRF136	15	0.38	16/150	211-07/2
MRF166	20	0.5	16/150	211-07/2
MRF137	30	0.75	16/150	211-07/2
MRF171	45	1.4	15/150	211-07/2
MRF172				
MRF173	80	4	13/150	211-11/2
	2611	/1	1 4 / 10/1	< ID [] / .

173CQ 80 13/150316-01/2 174 125 8.3 11.8/150 211-11/2 142 150 10 10/175 211-11/2 175GV 200 8 14/225 375-03/2 10/175 375-03/2 141G 300 13 D=50 Volts 151 150 7.5 13/175 211-11/2 176GV 200 4 17/225 375-03/2 7.5 16/175 375-03/2 151G 300

#### To 500 MHz UHF AM/FM VDD=28 Volts

316-01	MRF158	2	.02	20/400	
316-01	MRF161	5	0.4	13.5/400	244-04/3
211-11	MRF162	15	0.65	13.6/400	244-04/3
316-01	MRF166C	20	0.4	17/400	319-06/3
316-01	MRF164W	20	0.4	17/400	412-01/1
316-01	MRF163	25	1.6	12/400	244-04/3
316-01	MRF166	40	4	10/400	211-11
316-01	MRF175GU	150	9.5	12/400	375-03/2
316-01	MRF177	100	6.4	12/400 7	44A-021/2
	MRF177M	100	6.4	12/400	390A-01/1
	VDD=50	Volts			
145A-09	MRF176GU	150	6	14/400	375-03/2

## UHF Transistors 400-512 MHz BAND

Device	Pout Watts Volts	Pin Watts	GpE (Min) /Freq. dB/MHz	Pkg/ Style
WRF750 WRF752 WRF754	0.5 2.5 8	0.05 0.4 2	10/470 8/470 6/470	305A-01/1 249-05/1 249-05/1
VCC=12.1 WRF627 WRF750 WRF551 WRF555 WRF629 2N5944 WRF630 22N5945 WRF630 22N5945 WRF652 WRF652 WRF652 WRF652 WRF653 SD1429 WRF653 SD1429 WRF641 WRF654 SD1429-03 I03020 SD1422 WRF641 WRF654 SD1429-03 I03020 SD1422 WRF644 WRF654 SD1429 SD1422 WRF644 WRF654 SD1429 SD1422 WRF646 SD1428 WRF654 SD1488	$\begin{array}{c} \textbf{5 Volts} \\ \textbf{0.5} \\ \textbf{0.6} \\ \textbf{0.75} \\ \textbf{1.5} \\ \textbf{2} \\ \textbf{2} \\ \textbf{3} \\ \textbf{3} \\ \textbf{4} \\ \textbf{5} \\ \textbf{5} \\ \textbf{7} \\ \textbf{10} \\ \textbf{10} \\ \textbf{10} \\ \textbf{12} \\ \textbf{15} \\ \textbf{15} \\ \textbf{20} \\ \textbf{25} \\ \textbf{25} \\ \textbf{40} \\ \textbf{45} \\ \textbf{50} \\ \textbf{50}$	$\begin{array}{c} 0.05\\ 0.05\\ 0.03\\ 0.15\\ 0.3\\ 0.18\\ 0.33\\ 0.3\\ 0.6\\ 0.5\\ 2\\ 1\\ 2\\ 2\\ 1.2\\ 4\\ 2.5\\ 5\\ 7.5\\ 6\\ 5.9\\ 13.3\\ 14\\ 13\\ 11.7\\ 15\\ 22\\ 5\end{array}$	10/470 10 13/500 8/470 9/470 9/470 9.5/470 10/512 10/512 10/512 5.4/470 6/470 7/512 8 7.8 7.8 7.8 7.8 7.8/470 7.5 7.6/470 6 6.2/470 6.3/470 6.3/470 6.3/470 4.8/512 4.4/470	305A-01/1 305A-01 317-01/2 79-04 317D-02/2 79-05/5 244-04 249-05/1 249-05/1 244-04 249-05/1 244-04/1 249-05/1 244-04/1 249-05/1 244-04/1 311-11 316-01/1 316-01/1 316-01/1 316-01/1 316-01/1
VCC=28 V MRF340	Volts 8	0.4	13	221A-04
MRF338 Note: Transist frequer	80 tor gain pe icy of oper	15 erforman ration. Ex	7.3 ce improves ample: 430	333-04 at lower -450 MHz
			40.000/	

gain & power will increase 10-20%.

## **RF TAB Transistors** FOR CB & HAM EQUIPMENT

Transis.	Input W. CW	Outp CW I	ut GPI PEP	E dB	lc cont.	1	Pin 2	Con 3	fig. Tab
MRF260*	.05	5	5	23	1	B	E	c	E
MRF261*	.1	15	15	20	2	В	Е	С	Е
MRF262*	.2	20	30	22	2.5	В	Е	С	Е
MRF264*	.7	40	60	19	6	В	Е	С	Е
MRF475	.8	12	12	12	4	В	С	Е	С
MRF476	.1	3	3	15	1	В	С	Е	С
MRF477	1.2	40	40	15	5	В	Е	С	Е
MRF497*	1.0	50	60	16	6	В	Е	С	Е
2SC1306 (s	ub 2S	C216	66)		3	В	С	Е	С
2SC1307 (s	ub 2S	0231	.2C)		4	В	С	Е	С
2SC1945	.5	14	18	15	6	В	Е	С	Е
2SC1969	1.0	16	22	12	6	В	С	Е	С
2SC2075	.3	4	16	12	4	В	С	Е	С
2SC2166	.2	5	7.5	14	4	В	С	Е	С
2SC2312C	1.2	20	30	12	7	В	С	Е	С
2SC2509	0.4	-	10	14	5	В	Е	С	Е
2SC3133	.5	13	18	15	6	В	Е	С	Е

Ratings based on 21-30 MHz use. \*=30 MHz values extrapolated from VHF specs.

Operation at 146 MHz will be higher by 10-20%.

# **SPECIFICATIONS**

<u>Jaylor</u> IUBES	Eimac



opular Triodo	opular Triodes											
	Fila	ment		Maximum R	atings			l Operat	ion	Max. Freg.		
				Plate Diss.	Pg.	Eb.	lb.	Eb.	lb.	Po.	Gain	for Full
Type Number	Volts	Amps	μ	kW	W	kV	A	kV	IA	kW	dB	Ratings
8873	6.3	3.0	240	0.2	5	2.2	0.4	2.0	0.3	0.3	15.3	500
3CX400A7/8874	6.3	3.0	240	0.4	5	2.2	0.4	2.0	0.3	0.3	15.3	500
3CX800A7	13.5	1.5	200	0.8	4	2.3	0.6	2.2	0.5	0.8	15.1	350
3CPX800A7	13.5	1.5	200	0.8	4	3.5	0.6	3.2	0.4	0.9	15.9	500
3CX1200A7	7.5	21.0	200	1.2	50	5.0	0.8	3.6	0.7	1.5	12.5	110
3CX1200D7/YU-121	6.3	25.0	200	1.2	50	5.5	0.8	4.0	0.6	1.6	14.8	110
3CX1200Z7/YU-181	6.3	25.0	200	1.2	50	5.5	0.8	4.0	0.6	1.6	14.8	110
YC-236	5.0	10.5	200	1.5	20	4.0	1.0	4.0	0.9	2.0	16.0	250
3CX1000A7/8283	5.0	30.5	200	1	45	3.5	1.0	3.5	0.9	2.1	13.1	220
3CX1500A7/8877	5.0	10.5	200	1.5	20	4.0	1.0	3.5	1.0	2.1	15.1	250
3CX5000A7	10.0	17.5	200	5	35	6.5	2.5	6.0	1.6	5.0	14.2	110
3CX3000A1/8238	7.5	51.5	5	4	50	6.0	2.5	5.5	1.1	5.1	14.5	110
3CX3000F1/8239	7.5	51.5	5	4	50	6.0	2.5	5.5	1.1	5.1	14.5	75
3CX3000A7	7.5	51.5	160	4	225	5.0	2.5	4.8	2.0	7.2	11.0	110
3CX3000F7	7.5	50.5	160	4	225	5.0	2.5	4.8	2.0	7.2	11.0	75
3CX2500F3/8251	7.5	51.5	20	4	150	6.0	2.5	6.0	2.1	10.0	-	75
3CX6000A7/YU-148	7.0	78.0	200	6	225	7.0	3.5	5.7	2.5	10.0	12.2	110
3CX10,000A3/8159	7.5	99.0	20	10	250	7.0	5.0	7.0	4.0	22.4	15.3	160
3CX10,000A7/8160	7.5	100.0	200	10	500	9.0	4.0	7.6	3.7	22.5	11.7	160
3CX15,000A7	6.3	160.0	200	15	500	10.0	5.0	7.0	4.6	25.5	9.9	110
3CX20,000A7	6.3	160.0	200	20	500	10.0	5.0	7.8	4.2	27.5	10.8	110
3-500Z	5.0	14.6	130	0.5	20	4.0	0.4	3.0	0.4	0.74	14.0	110
3-1000Z	7.5	20.0	200	1	50	6.0	0.7	6.0	0.7	3.2	13.2	110
811A	6.3	4.0	160	60 watts	8	1.5	0.175	1.5	0.16	0.16	13.0	30
572B	6.3	4.0	170	160 watts	50	2.7	0.275	2.4	0.25	0.30	7.5	30

Tetrodes												
	Fila	ment		Maximum Ratings			Typical Operation					Max.Freq.
			Plate Diss.	Pg.	Pg.	Eb.	lb.	Eb.	lb.	Po.	Gain.	for Full
Type Number	Volts	Amps	kW	W	W	kV	A	kV	A	kW	dB	Ratings
		-										
8122	13.5	1.3	0.4	_	8	2.2	0.3	2.0	0.3	0.4	_	500
8930	6.0	2.6	0.4	2	12	2.4	0.3	2.0	0.3	0.4	21.0	500
4CX250B/7203	6.0	2.6	0.3	2	12	2.0	0.3	2.0	0.3	0.4	21.3	500
4CX250BC/8957	6.0	2.4	0.3	2	12	2.0	0.3	2.0	0.3	0.4	21.3	500
4CX250FG/8621	26.5	0.5	0.3	2	12	2.0	0.3	2.0	0.3	0.4	21.3	500
4CX250R/7580W	6.0	2.6	0.3	2	12	2.0	0.3	2.0	0.3	0.4	21.3	500
4CX300A/8167	6.0	2.9	0.3	2	12	2.0	0.3	2.0	0.3	0.4	21.3	500
4CX350A/8321	6.0	2.9	0.4	0	8	2.5	0.3	2.2	0.3	0.4	20.5	110
4CX350AC/8321A	6.0	2.9	0.4	0	8	2.5	0.3	2.2	0.3	0.4	20.5	110
4CX350F/8322	26.5	0.7	0.4	0	8	2.5	0.3	2.2	0.3	0.4	20.5	110
4CX350FJ/8904	26.5	0.7	0.4	0	8	2.5	0.3	2.2	0.3	0.4	20.5	110
4X150A/7034	6.0	2.6	0.3	2	12	2.0	0.3	2.0	0.3	0.4	21.3	150
8560AS	6.3	2.6	0.3	2	12	2.0	0.3	2.0	0.3	0.4	21.3	500
4CX300Y/8561	6.0	3.5	0.4	1	8	2.0	0.4	2.0	0.4	0.6	21.9	110
4CX400A	6.3	3.2	0.4	2	8	2.5	0.4	2.5	0.27	0.4	_	500
4CX600JB	6.0	5.4	0.6	1	15	3.0	0.6	2.8	0.6	1.0	20.0	30
4CX800A / GU-74B	12.6	3.6	0.8	2	15	2.5	0.8	3.2	0.63	0.8	_	150
GU-84B / 4CX2500F	27.0	3.7	2.5	1	30	2.2	2.0	2.0	1.25	1.5	_	75
4CX1500B/8660	6.0	10.0	1.5	1	12	3.0	0.9	2.9	0.7	1.1	28.6	110
4CX1000A/8168	6.0	9.0	1.0	1	12	3.0	1.0	3.0	0.9	1.6	20.0	110
4CX1500A	5.0	38.5	1.5	25	75	5.0	1.0	4.0	0.8	2.5	28.4	150
4CX1600B	12.6	4.4	1.6	_	-	3.3	1.4	2.4	0.87	2.1		250
4CX3500A	5.0	90.0	3.5	50	165	5.5	2.0	5.0	1.3	5.3	23.2	220
4CX3000A/8169	9.0	41.5	3.5	50	175	7.0	2.0	6.0	1.5	7.1	23.1	150
4CX5000A/8170	7.5	75.0	5.0	75	250	7.5	3.0	7.0	2.2	12.5	20.7	110
4CX5000R/8170W	7.5	75.0	5.0	75	250	7.5	3.0	7.0	2.2	12.5	20.7	110
4CX7500A	7.0	110.0	7.5	50	165	7.5	3.0	7.0	2.4	13.0	20.1	220
4CX10 000D/8171	75	75.0	10.0	75	250	75	3.0	75	2.8	16.0	20.3	110
4CX12 000A/8989	6.5	105.0	12.0	150	300	10.0	3.5	10.0	2.0	22.5	19.1	220
4CX15 000A/8281	6.3	160.0	15.0	200	450	10.0	6.0	10.0	4.6	36.5	22.2	110
40X20 0004/8990	10.0	140.0	20.0	200	450	10.0	5.0	9.0	4.1	28.8	19.5	110
9010/YC-130	75	160.0	18.0	200	450	10.0	5.0	10.0	4.6	36.5	22.2	110
4-2504	5.0	14 5	25	10	35	4.0	0.35	3.0	0.31	1.0		110
4-4004	5.0	14.5	.25	10	35	4.0	0.35	3.0	0.31	1.0	_	110
4-4000	75	21.2	1.4	25	75	4.0	0.35	6.0	0.35	3.1	_	110
4-1000A	1.5	∠⊥.⊃	1 I.U	20	15	0.0	0.7	0.0	0.7	5.4	-	I TTO

## **Tube Applications & Suggestions**

#### **RECEIVING AND SPECIAL PURPOSE TUBES**

The familiar tube manufacturers, Sylvania, ECG, RCA, General Electric, Raytheon, etc., ceased U.S. production of small TV and receiving type tubes in the early 1980's. Tubes you see offered today are either existing shelf stock or foreign imports.

We have found it necessary to fully test most receiving tubes to weed out the weak, gassy, or otherwise defective. RF PARTS selects the best audio, power and sweep tubes for matched sets. Matched tubes will operate in a balanced manner, yielding lower distortion, equal power dissipation, less tendency for parasitic oscillations, and improved tube life. "Out of spec" and marginal tubes are discarded. TV SWEEP TUBES are suited for SSB use, but caution must be used in AM use. High level compression, use of "Modulators", etc., cause excessive strain on final tubes in general. When operated in linear amplifiers, plate dissipation and cathode current are easily exceeded, which in turn will drastically reduce tube life. Approach high peak power with care. Reduced tube life due to "out of spec" operation, is not a reflection of tube quality, but of tube abuse.

SWEEP TUBE ratings – carrier level of 50w AM, 75w SSB output per tube willassure reasonable tube life for 6LQ6, 6LF6, 6JE6, 6HF5, 6JS6C, 6KG6/EL509, etc. Fan cooling is mandatory. Some amplifier model numbers are chosen for sales reasons and do not reflect the amplifier's true power capability. As with semiconductors, manufacturers of sweep tubes do not warrant their tubes after installation, as there is no way of knowing if there are problems in the equipment, method of operation, etc. If your equipment uses sweep tubes, it is best to reduce power and input level to lengthen tube life.

Kenwood/Heathkit/Yaesu/Etc: use only matched 6146B or 6146W. (Our Sylvania 6146W is a ruggedized premium grade 6146B which pass military quality specifications.) US manufactured 6JS6C in Yaesu requires simple neutral modification. This tube is in extremely short supply.

Swan Transceivers require special tube selection for ease of neutralization. You may call our Technical Department at (760) 744-0750 for details.

#### **POWER HANDLING CAPABILITY**

Our tests have shown that Graphite plate 3-500Z tubes safely handle up to 10-20% higher power levels over metal plate tubes. Graphite tubes will not "burn through" or melt at temperatures which destroy regular metal plate tubes.Additional air flow may be required for AM & RTTY.

#### **TUBE BURN IN**

Transmitting tubes generally require a "burn in" time to increase emission to its nominal value. In broadcast stations, 1-3 hours at rated filament voltage is allowed for burn in. This initial operation allows the getters,

**Sweep Tube Comparison** 

materials which absorb and hold residual gas, to finish the vacuum of the tube in its final operating environment. In an Amateur Radio amplifier, tubes will sometimes require 50-200 hours of accumulated "key down" transmit time to fully remove the residual gas and condition the filament for full emission. It is well advised to allow tubes to operate in standby mode (filaments on, no transmit) for 30 minutes before tune-uo.

The 811A, 572B, 3-500Z, 4-400, etc.utilize a thoriated tungsten filament, which is highly dependent upon sufficient filament temperature to provide adequate electron emission for normal operation. Emission increases as the thorium migrates towards the surface of the filament wire. This is why it is recommended to "burn in" these tubes before operation. 572B, 811A, & 3-500ZG tubes are assembled using the best U.S. filament wire to assure long tube life. Records show our 3-500ZG tubes returned for warranty from 1993-2009 to be less than 2%. This figure ranks up with the best of U.S. and European tubes, and allow RF PARTS to offer a full One Year Limited Warranty for TAYLOR against manufacturing defects in material and workmanship. The RFP (RF PARTS) brand carries our TWO YEAR limited warranty against manufacturing defects in material and workmanship.

#### **TUBE LIFE**

A number of factors can aid maximum tube life in your transmitter. Are the maximum ratings given on the tube manufacturer's data sheet being exceeded? Is there adequate forced air cooling? Is the final power tube capable of delivering power in excess of the desired operating level? 3-5002, 4-400A, 3CX3000A7, and similar tubes of directly heated cathode design have thoriated tungsten filaments. During operation, the thorium migrates to the surface of the filament and increases emission (electron flow capability) of tungsten.

#### **FILAMENT VOLTAGE**

Proper filament voltage has a radical affect on filament life. When a tube is new, there is plenty of emission available to sustain rated operating current. Normally the tubes of broadcast stations will be run for a short period of time at the rated filament voltage. Then filament voltage is reduced to a point just above that which allows necessary emission. It is checked from time to time and readjusted as required. Operating at the lower filament voltage and adjusting in the manner noted improves tube life substantially. Note that the above guideline should be used for tungsten emitters only, and does not apply to oxide cathode-type tubes. Additional information on this subject will be found in CPI/Eimac technical bulletin EXTENDING TRANSMITTER TUBE LIFE. A reprint is available from RFP for \$1.00.

	on Watts	tion Watts	ance Mi- os	Heater	Capacitances RF Operation (Up to 30 MHz)											
TUBE	Plate Dissipati	Screen Dissipa	Transconduct cromho	(6.3V) Am- peres	Cin pF	Cgp pF	Cout pF	Class of Service	Plate Voltage	Screen Voltage	Grid Volt- age	Plate Current mA	Screen Current mA	Grid Current mA	Approximate Driving Power Watts	Approximate Output Power Watts
6DQ5	24	3.2	10.5k	2.5	23	0.5	11	С	400	200	-40	100	12	1.5	0.1	25
6DQ6B	18	3.6	7.3k	1.2	15	0.5	7	С	400	200	-40	100	12	1.5	0.1	25
6FH6	17	3.6	6k	1.2	33	0.4	8	С	400	200	-40	100	12	1.5	0.1	25
6GC6	17.5	4.5	6.6k	1.2	15	0.55	7	С	400	200	-40	100	12	1.5	0.1	25
6GJ5	17.5	3.5	7.1k	1.2	15	0.26	6.5	С	500	200	-75	180	15	5	0.43	63
"	17.5	3.5	7.1k	1.2	15	0.26	6.5	AB1	500	200	-43	85	4			35
6HF5	28	5.5	11.3k	2.25	24	0.56	10	С	500	140	-85	232	12.5	8	0.76	77
"	28	5.5	11.3k	2.25	24	0.56	10	AB1	500	140	-46	133	4.5			58
6JB6	17.5	3.5	7.1k	1.2	15	0.2	6	С	500	200	-75	180	13.3	5	0.43	63
"	17.5	3.5	7.1k	1.2	15	0.2	6	AB1	500	200	-42	85	4.2			35
6JE6	30	5	10.5k	2.5	24.3		14.5	С	500	125	-85	222	17	8	0.82	76
27	30	5	10.5k	2.5	24.3		14.5	AB1	500	125	-44	110	3.9			47
6JG6A	17	3.5	10k	1.6	22	0.7	9	С	450	150	-80	202	20	8	0.75	63
"	17	3.5	10k	1.6	22	0.7	9	AB1	450	150	-35	98	4.5			38
6JM6	17.5	3.5	7.3k	1.2	16	0.6	7	С	500	200	-75	190	13.7	4	0.32	61
"	17.5	3.5	7.3k	1.2	16	0.6	7	AB1	500	200	-42	85	4.4			37
6JN6	17.5	3.5	7.3k	1.2	16	0.34	7									
6JS6C	30	5.5		2.25	24	0.7	10									
6KD6	33	5	14k	2.85	40	0.8	16	GG	800	0	-11	150			12.5	82
6LB6	30	5	13.4k	2.25	33	0.4	18									
6LG6	28	5	11.5k	2	25	0.8	13									
6LQ6	30	5	9.6k	2.5	22	0.46	11									
6MH6	38.5	7	14k	2.65	40	1.0	20									

## **Tube Warranty & Return Policy**

## Limited Warranty on Receiving & Special Purpose Tubes

Receiving and Special Purpose Tubes carry a 30-day limited warranty on material and workmanship. However, TV SWEEP TYPE receiving tubes are not designed, rated, guaranteed or warranted by the manufacturer or RF Parts Co., for use in linear amplifiers. Please be sure the tubes you received are correct for your equipment. We do not warranty or guarantee suitability or reliability of any sweep tube used as an RF amplifier. 6146B, 6146W, 6JB6, 6JS6C carry 90 day limited warranty when used in transceivers.

RF Parts Co. inspects all tubes before shipment to assure quality. Tubes returned for possible warranty are subject to our failure analysis to determine if claim can be covered by the factory's limited warranty. Tubes which, in our opinion, show evidence of excessive dissipation, low emission, wear, or other damage indicating improper operation or use, will likely not be accepted for warranty or exchange. Any tube not accepted for warranty or exchange will not be returned unless requested by customer who shall pay shipping charges to return same.

#### **Return Policy**

#### PRODUCT RETURNS

Products are not sold for evaluation. Under some circumstances (at the discretion of RFP) and with its prior approval, RFP will accept an item for return. Under most circumstances a 15% restocking fee and all freight charges will be assessed.

#### DAMAGED ITEMS

At time of delivery, if the box is obviously damaged, note this with the driver and refuse shipment. This item will be returned to RFP and another will be sent at no additional charge.

If hidden damage is noted, contact UPS as soon as possible. Save box and all packing. They will pickup. Once the item is received by RFP, a replacement will be sent.

#### **Limited Warranty on Transmitting Tubes**

New Eimac, Taylor, Svetlana, RFP (RF Parts Co.) and similar power grid transmitting tubes carry the manufacturer's limited warranty against defective material and workmanship. RFP 3-500ZG carries a 2 year limited warranty (2nd year prorated) in Amateur service. The RFP/Svetlana 811A-MP, etc., and RFP/Svetlana 572B-MP, etc. carry 1 year limited warranty. Extended RFP warranty valid in U.S. only. NO TUBE MANUFACTURER OFFERS A WARRANTY AGAINST WEAROUT OR FAILURE RESULTING FROM EXCESSIVE OPERATING TEMPERATURE AND/OR OTHER OPERATING CONDITIONS WHICH EXCEED MANUFACTURER'S SPECIFICATIONS.

Metal-ceramic tube warranty varies depending on tube type and manufacturer. Contact us regarding limited warranty.

- (#) and -NOS (New, Old Stock) denote new tubes with older date codes, guarantee new condition and carry a minimum 30 day limited warranty against manufacturing defects.
- (P) denotes tubes removed from working equipment. Most tubes are from military transmitters and look & test as new. We test all tubes and include a 30 day limited warranty against manufacturing defects.

## Warranty Terms for Metal Ceramic Transmitting Tubes & Sockets

Code	Taylor	Svetlana
А	11,000 hours or 24 months	6,000 hours or 24 months
В	5,500 hours or 12 months	3,000 hours or 12 months
С	3,300 hours or 12 months	12 months
D	2,200 hours or 12 months	12 months
Е	N/A	90 days

#### Code Eimac

- T 10,000 hours or 24 months
- V 7,000 hours or 24 months
- R 5,000 hours or 12 months
- P 4,000 hours or 12 months
- N 3,000 hours or 12 months
- K 1,000 hours or 12 months
- 12 Hardware and accessories only, 12 months

#### Warranty and Disclaimer

Since the vendor, RF Parts Co., does not control the use of its products, there are no express warranties which extend beyond the description on the face hereof. SELLER DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE. Since Seller cannot control the manner of use of its products after their sale, Seller will not be responsible for any consequential or indirect damages. Concerning products for which Seller is acting as only a distributor of products manufactured by other companies, Seller expressly limits its liabilities to any guarantees extended by the manufacturer, which guarantees Seller will pass through to the original customer. Further, Seller will at its option, either replace the goods sold or refund the purchase price. No warranties will apply if the goods are in any way altered or modified after delivery by Seller. See additional information regarding warranty of semiconductors and vacuum tubes. Warranties are granted to the original customer and are non-transferable.

Note: When returning merchandise, please place the original package inside of a shipping carton. Do not use the original container as a shipping carton.

## **PRIOR TO RETURN:**

You must first obtain a return tracking number by contacting us at (760) 744-0750 between the hours of 10:00 a.m. and 4:00 p.m. Pacific Time. This number is valid for 14 days. Items returned for inspection must include original purchase receipt and detailed failure report. Returning tubes without proper Report and Invoice will delay processing. Pack the box well and mark the outside with the tracking number. Insure contents. Upon our receipt, it usually takes two to three weeks to test & process the return. Unused items returned for refund are subject to restocking fee.

For technical assistance or warranty information, please call our Customer Service Department at (760) 744-0750, hours: 10:00 a.m.- 4:00 p.m. PST / 1:00 p.m.-7:00 p.m. EST.

## Hour Rating:

Based on filament or heater on-time hours for factory authorized warranty.

If a product fails during the first 10% of the operational hours due to faulty workmanship or material, it will be replaced or credited at 100% of original purchase price. If failure occurs during the remaining 90% of the warranty hours, a prorated adjustment will be calculated, and a credit will be issued towards the price of a new tube.

Failures as the result of improper use or operation may not qualify for warranty coverage.

Tubes returned to RFP for Warranty Claim: Customer is responsible for shipping charges.

# ORDERING

## **Business Hours**

Monday through Friday, 7:00 a.m. - 4:30 p.m. (Pacific Time), with the exception of holidays. Orders received by 2:30 p.m. Pacific Time (5:30 p.m. Eastern Time) will usually be shipped the same day.

## **Ordering Information**

Phone	USA (contiguous 48 states): 760-744-0700 800-737-2787
	Worldwide: 760-744-0700
Mail	RF Parts Company 435 South Pacific Street San Marcos, CA 92078 USA
Fax	760-744-1943 888-744-1943 toll-free
<b>E-mail</b>	To Order: orders@rfparts.com U.S. Price Quotes, etc.: joe@rfparts.com International Price Quotes: john@rfparts.com
Internet	www.rfparts.com
Shippin	g Methods

### **United States**

RF Parts recommends United Parcel Service (UPS). Federal Express is also available for an additional cost. Please see page 213 for shipping information.

## Foreign

Shipping by all major express services are available, including Postal. We recommend shipping by UPS & FedEx for reliability, lost packages occur more often with postal delivery. Please refer to the Foreign Order Information on page 215.

## Payment Method

Credit Card We accept Visa, Mastercard and American Express.

- Paypal We accept Paypal for most transactions. Contact us for price and shipping information. Our Paypal I.D. is order@rfparts.biz
- **C.O.D.** (Cash on Delivery) COD is available upon approval from RF Parts Company, when we ship by UPS only, and must be paid by money order. No personal checks. Company checks are accepted only with prior approval by the RF Parts Company Credit Department. COD is not available outside lower 48 states. RF Parts will give customer exact total prior to shipping (UPS will NOT accept Cash).

COD packages that return to us unpaid require customer to clear all shipping & COD charges before further orders will be accepted.

Note: There is a \$20.00 Service Charge on checks returned from bank, plus any and all costs of legal expenses if action is taken. A one-time Non-Sufficient Funds (NSF) check automatically places the customer on credit hold, and requires payment by COD (money order), Credit Card or pre-pay.

**Open Account** Open Account status is available to rated firms which expect to do continuous business with RF Parts. Please contact our sales department in advance of placing an order.

## **Pricing Policy**

This Catalog supersedes prior catalogs from RF Parts Co. RF Parts believes prices and descriptions of merchandise to be accurate at time of printing, and is not responsible for typographical errors. The RF Parts Company On-line Catalog **www.rfparts.com** is more current on product and pricing information.

Price and availability subject to change without notice.

# Call us for Fast Delivery

Orders placed by 3:00 p.m. Pacific Time will normally be shipped the

same day. Next Day Delivery is available.

800-737-2787 • 760-744-0700

fax 760-744-1943 · orders@rfparts.com

RF Parts Company exports internationally via United Parcel Service, Federal Express, Postal EMS, and major express companies.

## **U.S. ORDER INFORMATION**

Minimum Order: \$25.00 (Shipping & COD charges Not Included)

Fill out Order Form Completely. Orders without all information cannot be processed. Please type or print clearly. If possible, include a fax number, as this is the best method of communication. (If a fax or phone number is included, make sure to include your Country Code. Order cannot be processed without it.)

### **Processing:**

Orders received by end of business day Tuesday will normally be shipped on Friday of same week. Delivery time after order has been processed depends on the method of shipping, and your country's Customs.

## **Pricing:**

Component pricing is based on price in effect at time of sale. Price and availability subject to change without notice. Quantity orders may qualify for discount. FOB San Marcos.

### Minimum Export Order:

\$25.00, SHIPPING CHARGES ARE ADDITIONAL.

## **CUSTOMS**

Customs regulations require actual value of merchandise be stated on Invoicing and paperwork.

## **SHIPPING METHODS**

Actual delivery time depends on shipping method. The cost varies greatly with shipping company. Some orders will require a custom shipping quote. Please advise how you wish parcels shipped, and if you wish insurance or registration. *If you do not specify exactly how your order should be shipped, RF Parts Co. will use it's best judgement in selecting shipping method.* 

UPS & FedEX IS THE BEST WAY TO SHIP

#### **United Parcel & Federal Express Shipments:**

Will be given priority. However, 2-5 working days before shipping may be required due to extra shipping documentation or incomplete information from customer.

#### **Priority Mail:**

Will be given priority. However, 2-5 working days before shipping may be required due to extra shipping documentation or incomplete information from customer. Flat rate boxes will be used where applicable. Contact sales desk for rate quote.

#### **Lost Parcels:**

FedEx and UPS process their claims immediately, with rapid resolution. Postal claims may take up to 3 months to be resolved. Please keep in mind the customer owns the package after it leaves our dock, and we have no control over the shipping while in transit.

SHIPPING METHODS & CHARGES\* (in the 48 contig. states): BEST WAY: <u>UPS</u>. UNITED PARCEL SERVICE ORDERS RECEIVED BEFORE 2:30 p.m. PST (5:30 p.m. EST) SHIP SAME DAY.

Federal Express or Priority Mail are available.

(12:00 p.m. PST deadline).

**Note:** UPS and Fed Ex do not deliver to P.O. Boxes. If you have a P.O. Box, we recommend shipping by Priority Mail.

## RF Parts Company does not ship freight collect.

Fractions of a pound go to next higher weight.

**Dimensional Weight** ("DW") charges may apply to Orange, Blue & Red Labels.

**Delivery Area Surcharge** applies to each package UPS delivers to certain zip codes. Go to www.ups.com for a listing of applicable zip codes. UPS charge of \$1.95 per package delivered to a commercial destination, \$2.75 per package delivered to a residential destination.

HAWAII, PUERTO RICO, ALASKA: Standard UPS rates apply. No C.O.D.

**CALIFORNIA:** Residents add appropriate sales tax.

**RURAL ROUTE ADDRESS FEE:** With the advent of 911 emergency systems, nearly all RFD addresses were converted to street numbers and names. If you don't give us your assigned "911" street address, UPS will charge an additional \$14 fee.

**ADDRESS CORRECTION FEE:** UPS and FedEx charge \$14 for address correction. RF Parts must pass this charge along to the customer. Be sure you give us your complete and correct address (including Street, Drive, Pkwy, Apartment or Unit #, Zip Code, etc. if it applies).

## **PAYMENT METHOD:**

PREPAID: check or money order. Personal checks must have preprinted address and are limited to \$40.00 (for immediate shipment). Checks over \$40.00 may be held for bank clearance before shipping goods. Any overpayment will be held as a credit for use on your next order.



**VISA, MASTERCARD & AMEX** accepted. Minimum \$25.00 parts order applies (before Shipping charges). Discover

may be used for payments processed through the RF Parts Company Paypal account (order@rfparts.biz).

**PAYPAL** accepted. Minimum \$25.00 parts order applies (before Shipping charges). Our PayPal I.D. is order@rfparts.biz.

**C.O.D.:** Pre-approval required (see following info). Add \$10.50 COD fee payable by U.S. Postal or Western Union Money Order or Bank Issued Check. Travelers Checks, store-issued money orders and personal checks NOT accepted.

**Note:** UPS no longer accepts Cash. No C.O.D. to Alaska / Hawaii / Puerto Rico / Canada. Minimum C.O.D. order \$25 before shipping and handling charges.

**SHIPPING & HANDLING CHARGE:** On large or heavy items, please verify cost with us.

**OPEN ACCOUNT:** Is available to rated commercial accounts that have been approved in advance.

## **RF PARTS MAILING ADDRESS:**

435 South Pacific Street • San Marcos, CA 92078

# ORDERING

## FAX & MAIL-IN ORDER FORM Please type or print clearly. Minimum order: \$25.00

Sold To:	Date:
Attention:	Ship To:
Address:	Attention:
City: State: Zip:	Address:
Country:	City: State: Zip:
Daytime Phone:	Country:
Daytime Fax:	Daytime Phone:
Email:	Purchase Order:

Call Sign: \_

ORDERING: Fax & Mail-In Order Form

Quantity	Part Number	Description	Page	Unit Cost	<b>Total Price</b>
Select S	hipping Method:			Sub-Total	
		Foreign Delivery Ontions		(Minimum \$25.00)	
	Ground	Postal      FCMI		Tax (CA only)	
	l 3-Day (orange)	□ Express Mail (EMS)		(U.S.) C.O.D.	
	2-Day (blue)	International Priority		Shipping	
	Next Day Air (red)	(Not available in all areas.)		Rural Rt. Fee	
	Mall				
□ Please	choose the best shipping for me.	□ Please choose the best shipping for me.		TOTAL	

## **Payment Information:**

(We do not accept Discover or Diners Club.)
C.O.D. (Must be pre-approved by RF Parts Co.)
VISA
MasserCard

□ Check or Money Order

□ Open Account

□ Paypal Your E-mail Address to send invoice to:

Visa, MasterCard or American Express Number:

Exp.	Dat	e (N	IM/Y	Y):					Se	curit	y Co	de:		
Carc	lholo	ler I	Nam	e: _									 	
lssu	ing E	Banl	<:										 	
Sign	atur	e:												
Ban	k cu	stor four	ner s nd or	ervi the	ce t ba	elep ck o	hon f the	e nu e car	mbe d)	er				

## **Contact Us:**

**Orders** 1-800-RF-PARTS (no technical)

Main Order Line & Delivery Info 760-744-0700

Customer Service, Warranty, Technical & Applications 760-744-0750 (10 a.m. - 4 p.m. only)

Fax: 760-744-1943 or 888-744-1943

E-Mail: orders@rfparts.com

Mailing Address: 435 South Pacific St., San Marcos, CA 92078

## FOREIGN ORDER INFORMATION

Minimum Order: \$25.00 (Shipping charges Not Included)

### SHIPPING METHODS & CHARGES:

UPS/Express, Federal Express, Express Mail Service, International Priority, and FCMI.

**Note:** UPS and FedEx do not deliver to P.O. Boxes. If you have a P.O. Box we recommend Express Mail Service or International Priority.

### RF Parts Company does not ship freight collect.

Fractions of a pound go to next higher weight.

**Dimensional Weight** ("DW") charges may apply to all oversize packages.

**Delivery Area Surcharge** applies to packages delivered outside normal delivery area. Go to www.ups.com or www.fedex.com for a listing of applicable zip codes within your country. UPS and FedEx apply a \$25.00 fee for addresses outside their normal delivery.

**ADDRESS CORRECTION FEE:** UPS and FedEx charge \$14 for address correction. RF Parts must pass this charge along to the customer. Be sure you give us your complete and correct address (including Street, Drive, Pkwy, Apartment or Unit #, Zip Code, etc. if it applies).

## **PAYMENT METHOD:**

PREPAID: International money order in U.S. dollars only. Wire transfer in advance (\$25.00 bank fee will be applied).



## VISA, MASTERCARD & AMERICAN EXPRESS

accepted. Minimum \$25.00 parts order applies (before Shipping charges). Discover cards may be used for payments processed through the RF Parts Company Paypal account (order@rfparts.biz). Maximum \$1500 U.S. dollars.

AVDAL accorted Minimum \$25.00 parts order and

**PAYPAL** accepted. Minimum \$25.00 parts order applies (before Shipping charges). Our PayPal I.D. is order@rfparts.biz.

**WIRE TRANSFER:** Orders exceeding \$1500.00 must be paid by wire transfer (\$25.00 bank fee will be applied).

**SHIPPING & HANDLING CHARGE:** On large or heavy items, please contact us for freight quote.

#### **RF PARTS MAILING ADDRESS:**

435 South Pacific Street • San Marcos, CA 92078



## **Processing:**

Orders received by end of business day Tuesday will normally be shipped on Friday of same week. Delivery time after order has been processed depends on the method of shipping, and your country's Customs.

## **Pricing:**

Component pricing is based on price in effect at time of sale. Price and availability subject to change without notice. Quantity orders may qualify for discount. FOB San Marcos.

## Minimum Export Order:

\$25.00, SHIPPING CHARGES ARE ADDITIONAL.

## CUSTOMS

Customs regulations require actual value of merchandise be stated on Invoicing and paperwork.

## **SHIPPING METHODS**

Actual delivery time depends on shipping method. The cost varies greatly with shipping company. Some orders will require a custom shipping quote. Please advise how you wish parcels shipped, and if you wish insurance or registration. *If you do not specify exactly how your order should be shipped, RF Parts Co. will use it's best judgement in selecting shipping method.* 

## UPS & FedEX IS THE BEST WAY TO SHIP

## **United Parcel & Federal Express Shipments:**

Will be given priority. However, 2-5 working days before shipping may be required due to extra shipping documentation or incomplete information from customer.

## **Express Mail International Service:**

Orders can be shipped by "EMS" (Express Mail International Serivce), if offered in your country, insured for \$1.35 per \$100.00 valuation, up to \$5000.00.

## First Class Mail International (FCMI):

Letter Post FCMI is the least expensive. FCMI may be "Registered" for additional fee of \$11.50. Minimum Shipping and Handling Charge for FCMI mail up to 16 ounces is \$14.50 (Canada/Mexico US\$9.50). Maximum of 4 pounds to most countries; 1 to 2 pounds to some countries.

Note: No insurance available on FCMI - shipped at customer risk.

## Lost Parcels:

FedEx and UPS process their claims immediately, with rapid resolution. Postal claims may take up to 3 months to be resolved. Please keep in mind the customer owns the package after it leaves our dock, and we have no control over the shipping while in transit.

# ORDERING

## FAX & MAIL-IN ORDER FORM Please type or print clearly. Minimum order: \$25.00

Sold To:	Date:
Attention:	Ship To:
Address:	Attention:
City: State: Zip:	Address:
Country:	City: State: Zip:
Daytime Phone:	Country:
Daytime Fax:	Daytime Phone:
Email:	Purchase Order:

Call Sign: \_

ORDERING: Fax & Mail-In Order Form

Quantity	Part Number	Description	Page	Unit Cost	Total Price
Select S	hipping Method:			Sub-Total	
	ivery Options	Foreign Delivery Options		(Minimum \$25.00)	
	Ground			Tax (CA only)	
	l 3-Day (orange)	□ Express Mail (EMS)		(U.S.) C.O.D.	
	2-Day (blue)	International Priority		Shipping	
	l Next Day Air (red)	(Not available in all areas.)		Rural Rt. Fee	
Phoney     Federal	Finess	LIPS Air			
□ Please	choose the best shipping for me.	□ Please choose the best shipping for me.		TOTAL	

## **Payment Information:**

(We do not accept Discover or Diners Club.)
C.O.D. (Must be pre-approved by RF Parts Co.)
VISA
Assertand
Check or Money Order
Open Account
Paypal Your E-mail Address to send invoice to:

Visa, MasterCard or American Express Number:

Exp. Date (MM	/YY):			Secu	urity Co	de:	
Cardholder Na	me:						 
Issuing Bank:							 
Signature:							 
Bank customer	r service t on the ba	elephon ck of the	e num e card	nber			

## **Contact Us:**

**Orders** 1-800-RF-PARTS (no technical)

Main Order Line & Delivery Info 760-744-0700

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