

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	Additions and corrections.	7 April 88	David E. Moore
B	Added suggested source of supply, additions and corrections.	5 August 88	Edward H. Back
C	Added "J" style leads and suggested sources of supply.	3 March 89	David E. Moore
D	Added suggested sources of supply, new column to table I and made corrections.	6 December 89	David E. Moore
E	Added suggested source of supply, modified tolerance on "D" dimensions. Editorial changes throughout.	6 May 91	David E. Moore
F	Deleted and added suggested sources of supply, updated a manufacturer's part numbers, modified "D" dimensions. Editorial changes throughout.	10 March 92	David E. Moore
G	Added a precautionary note to page 1, updated manufacturer's part numbers.	20 August 92	David E. Moore
H	Deleted and added suggested sources of supply. Added dimension F to figure 1. Corrections to manufacturer's PIN's. Editorial changes throughout.	4 March 94	David E. Moore
J	Changes in accordance with NOR 5910-R003-96	23 May 96	David E. Moore
K	Changes in accordance with NOR 5910-R001-97	24 Mar 97	David E. Moore
L	Changes in accordance with NOR 5910-R002-97	29 May 97	David E. Moore
M	Updated to reference MIL-PRF-49470. Deleted suggested source of supply.	9 September 98	David E. Moore
N	Added suggested source of supply, Corrected case code error for -029 part. Corrected lead style for -089 through -094 parts. Added -097 part number to table IV for vendor B.	15 July 99	Kendall A. Cottongim
P	Inactivated various parts for new design. Corrected PIN error for -274. Changes in table II and III to reflect MIL-PRF-49470 changes. Adjusted suggested sources of supply.	29 February 2000	Kendall A. Cottongim
R	Removed suggested source of supply.	16 November 00	Kendall A. Cottongim
T	Inactivated all 200 V parts, added cross reference to MIL-PRF-49470, and added suggested source.	1 October 2002	Kendall A. Cottongim
U	Updated name and address of vendor B.	4 November 2002	Kendall A. Cottongim
V	Added PINs for vendor D and corrected references in tables II and III.	9 July 2003	William E. Sindelar
W	Inactivate document for new design. Notify that cancellation is planned for January 1, 2005.	20 July 2004	Kendall A. Cottongim
X	Cancel document.	3 January 2005	Kendall A. Cottongim

CURRENT DESIGN ACTIVITY CAGE CODE 037Z3
DEFENSE SUPPLY CENTER COLUMBUS, COLUMBUS, OHIO 43218-3990

Notice of Cancellation DSCC Drawing 87106 is hereby canceled.
MIL-PRF-49470 parts are direct replacements. See the substitution table and explanation on page 2.

Prepared in accordance with ASME Y14.100

Selected item drawing

REV STATUS OF PAGES	REV	X	X	X	X														
	PAGES	1	2	3	4														
PMIC N/A	PREPARED BY ROBERT E. GRILLOT								DESIGN ACTIVITY DEFENSE ELECTRONIC SUPPLY CENTER DAYTON, OH 45444-5000										
Original date of drawing 3 February 1988	CHECKED BY HERALDINE JOHNSON								TITLE CAPACITOR, CERAMIC, SWITCH MODE POWER SUPPLY										
	APPROVED BY DAVID E. MOORE								DWG NO. 87106										
	SIZE A	CODE IDENT. NO. 14933																	
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MIL-PRF-49470 capacitors are preferred over DSCC 87106 capacitors. The MIL-PRF-49470 specification was developed as part of a cooperative effort between the US Military, NASA and the switch mode power supply capacitor manufacturers to produce a robust direct replacement for the DSCC drawing. The military specification product provides additional quality assurance provisions that are NOT required by the DSCC drawing. Two product levels are offered in MIL-PRF-49470: the standard "B" level and the high reliability "T" level. Some of the benefits of the MIL-PRF-49470 product over the 87106 product include: Formal qualification process (QPL established); MIL-STD-790 compliance; DSCC audits; routine qualification maintenance testing (ie. life testing); group A percent defective allowed (PDA) specified; prohibits mixing of chips from different production lots within a single SMPS capacitor stack lot.

MIL-PRF-49470 "T" Level product is recommended for all high reliability applications. MIL-PRF-49470 "T" level product requires in-process inspections and additional group A and B screening inspections that are not part of the normal "B" level flow: In-process screening that includes non-destructive internal examination (chip level) and destructive physical analysis (chip level); group A destructive physical analysis (finished stack level); group B lot specific humidity, steady-state, low voltage (lot sample test); and group B lot specific thermal shock & life test (lot sample test).

MIL-PRF-49470 VS 87106 Cross Reference Table.

87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1
001	M49470X01105KAN	040	M49470X01476MAN	079	M49470X01685KBN	118	M49470R01684MCN
002	M49470X01105MAN	041	M49470X01686KAN	080	M49470X01685MBN	119	M49470R01824KCN
003	M49470X01125KAN	042	M49470X01686MAN	081	M49470X01825KBN	120	M49470R01824MCN
004	M49470X01125MAN	043	M49470X01826KAN	082	M49470X01825MBN	121	M49470R01105KCN
005	M49470X01155KAN	044	M49470X01826MAN	083	M49470X01126KBN	122	M49470R01105MCN
006	M49470X01155MAN	045	M49470X01107KAN	084	M49470X01126MBN	123	M49470R01125KCN
007	M49470X01185KAN	046	M49470X01107MAN	085	M49470X01156KBN	124	M49470R01125MCN
008	M49470X01185MAN	047	M49470X01157KAN	086	M49470X01156MBN	125	M49470R01155KCN
009	M49470X01225KAN	048	M49470X01157MAN	087	M49470X01186KBN	126	M49470R01155MCN
010	M49470X01225MAN	049	M49470X01187KAN	088	M49470X01186MBN	127	M49470R01185KCN
011	M49470X01275KAN	050	M49470X01187MAN	089	M49470X01226KBN	128	M49470R01185MCN
012	M49470X01275MAN	051	M49470X01227KAN	090	M49470X01226MBN	129	M49470R01225KCN
013	M49470X01335KAN	052	M49470X01227MAN	091	M49470X01276KBN	130	M49470R01225MCN
014	M49470X01335MAN	053	M49470X01277KAN	092	M49470X01276MBN	131	M49470R01275KCN
015	M49470X01395KAN	054	M49470X01277MAN	093	M49470X01336KBN	132	M49470R01275MCN
016	M49470X01395MAN	055	M49470X01684KBN	094	M49470X01336MBN	133	M49470R01335KCN
017	M49470X01475KAN	056	M49470X01684MBN	095	M49470X01396KBN	134	M49470R01335MCN
018	M49470X01475MAN	057	M49470X01824KBN	096	M49470X01396MBN	135	M49470R01395KCN
019	M49470X01565KAN	058	M49470X01824MBN	097	M49470X01476KBN	136	M49470R01395MCN
020	M49470X01565MAN	059	M49470X01105KBN	098	M49470X01476MBN	137	M49470R01475KCN
021	M49470X01825KAN	060	M49470X01105MBN	099	M49470X01566KBN	138	M49470R01475MCN
022	M49470X01825MAN	061	M49470X01125KBN	100	M49470X01566MBN	139	M49470R01565KCN
023	M49470X01106KAN	062	M49470X01125MBN	101	M49470X01686KBN	140	M49470R01565MCN
024	M49470X01106MAN	063	M49470X01155KBN	102	M49470X01686MBN	141	M49470R01685KCN
025	M49470X01126KAN	064	M49470X01155MBN	103	M49470X01826KBN	142	M49470R01685MCN
026	M49470X01126MAN	065	M49470X01185KBN	104	M49470X01826MBN	143	M49470R01825KCN
027	M49470X01156KAN	066	M49470X01185MBN	105	M49470X01107KBN	144	M49470R01825MCN
028	M49470X01156MAN	067	M49470X01225KBN	106	M49470X01107MBN	145	M49470R01106KCN
029	M49470X01186KAN	068	M49470X01225MBN	107	M49470X01127KBN	146	M49470R01106MCN
030	M49470X01186MAN	069	M49470X01275KBN	108	M49470X01127MBN	147	M49470R01126KCN
031	M49470X01226KAN	070	M49470X01275MBN	109	M49470X01157KBN	148	M49470R01126MCN
032	M49470X01226MAN	071	M49470X01335KBN	110	M49470X01157MBN	149	M49470R01156KCN
033	M49470X01276KAN	072	M49470X01335MBN	111	M49470X01187KBN	150	M49470R01156MCN
034	M49470X01276MAN	073	M49470X01395KBN	112	M49470X01187MBN	151	M49470R01186KCN
035	M49470X01336KAN	074	M49470X01395MBN	113	M49470R01474KCN	152	M49470R01186MCN
036	M49470X01336MAN	075	M49470X01475KBN	114	M49470R01474MCN	153	M49470R01226KCN
037	M49470X01396KAN	076	M49470X01475MBN	115	M49470R01564KCN	154	M49470R01226MCN
038	M49470X01396MAN	077	M49470X01565KBN	116	M49470R01564MCN	155	M49470R01276KCN
039	M49470X01476KAN	078	M49470X01565MBN	117	M49470R01684KCN	156	M49470R01276MCN

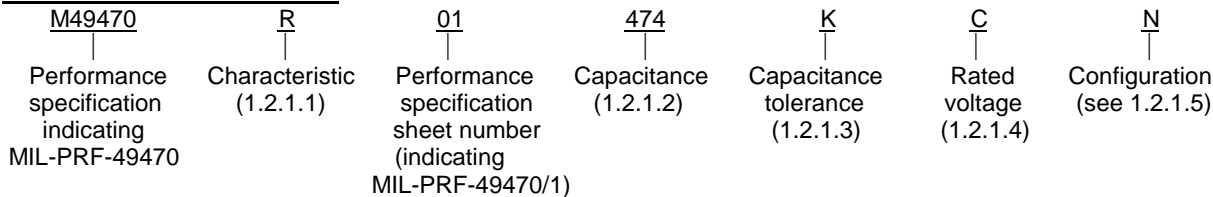
DEFENSE ELECTRONIC SUPPLY CENTER DAYTON, OHIO	SIZE	CODE IDENT NO.	DWG NO.
	A	14933	87106
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87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1
157	M49470R01336KCN	211	M49470Q01106KEN	265	M49470X01106KAJ	319	M49470X01395KBJ
158	M49470R01336MCN	212	M49470Q01106MEN	266	M49470X01106MAJ	320	M49470X01395MBJ
159	M49470R01396KCN	213	M49470Q01126KEN	267	M49470X01126KAJ	321	M49470X01475KBJ
160	M49470R01396MCN	214	M49470Q01126MEN	268	M49470X01126MAJ	322	M49470X01475MBJ
161	M49470R01476KCN	215	M49470Q01186KEN	269	M49470X01156KAJ	323	M49470X01565KBJ
162	M49470R01476MCN	216	M49470Q01186MEN	270	M49470X01156MAJ	324	M49470X01565MBJ
163	M49470R01566KCN	217	M49470Q01276KEN	271	M49470X01186KAJ	325	M49470X01685KBJ
164	M49470R01566MCN	218	M49470Q01276MEN	272	M49470X01186MAJ	326	M49470X01685MBJ
165	M49470R01686KCN	219	M49470Q01336KEN	273	M49470X01226KAJ	327	M49470X01825KBJ
166	M49470R01686MCN	220	M49470Q01336MEN	274	M49470X01226MAJ	328	M49470X01825MBJ
167	M49470R01826KCN	221	M49470Q01396KEN	275	M49470X01276KAJ	329	M49470X01106KBJ
168	M49470R01826MCN	222	M49470Q01396MEN	276	M49470X01276MAJ	330	M49470X01106MBJ
169	M49470R01107KCN	223	M49470X01685KAN	277	M49470X01336KAJ	331	M49470X01126KBJ
170	M49470R01107MCN	224	M49470X01685KAN	278	M49470X01336MAJ	332	M49470X01126MBJ
171	M49470R01127KCN	225	M49470X01566KAN	279	M49470X01396KAJ	333	M49470X01156KBJ
172	M49470R01127MCN	226	M49470X01566KAN	280	M49470X01396MAJ	334	M49470X01156MBJ
173	M49470Q01154KEN	227	M49470X01127KAN	281	M49470X01476KAJ	335	M49470X01186KBJ
174	M49470Q01154MEN	228	M49470X01127KAN	282	M49470X01476MAJ	336	M49470X01186MBJ
175	M49470Q01184KEN	229	M49470X01106KBN	283	M49470X01566KAJ	337	M49470X01226KBJ
176	M49470Q01184MEN	230	M49470X01106MBN	284	M49470X01566MAJ	338	M49470X01226MBJ
177	M49470Q01224KEN	231	M49470Q01824KEN	285	M49470X01686KAJ	339	M49470X01276KBJ
178	M49470Q01224MEN	232	M49470Q01824MEN	286	M49470X01686MAJ	340	M49470X01276MBJ
179	M49470Q01274KEN	233	M49470Q01225KEN	287	M49470X01826KAJ	341	M49470X01336KBJ
180	M49470Q01274MEN	234	M49470Q01225MEN	288	M49470X01826MAJ	342	M49470X01336MBJ
181	M49470Q01334KEN	235	M49470Q01685KEN	289	M49470X01107KAJ	343	M49470X01396KBJ
182	M49470Q01334MEN	236	M49470Q01685MEN	290	M49470X01107MAJ	344	M49470X01396MBJ
183	M49470Q01394KEN	237	M49470Q01156KEN	291	M49470X01127KAJ	345	M49470X01476KBJ
184	M49470Q01394MEN	238	M49470Q01156MEN	292	M49470X01127MAJ	346	M49470X01476MBJ
185	M49470Q01474KEN	239	M49470Q01226KEN	293	M49470X01157KAJ	347	M49470X01566KBJ
186	M49470Q01474MEN	240	M49470Q01226MEN	294	M49470X01157MAJ	348	M49470X01566MBJ
187	M49470Q01564KEN	241	M49470X01105KAJ	295	M49470X01187KAJ	349	M49470X01686KBJ
188	M49470Q01564MEN	242	M49470X01105MAJ	296	M49470X01187MAJ	350	M49470X01686MBJ
189	M49470Q01684KEN	243	M49470X01125KAJ	297	M49470X01227KAJ	351	M49470X01826KBJ
190	M49470Q01684MEN	244	M49470X01125MAJ	298	M49470X01227MAJ	352	M49470X01826MBJ
191	M49470Q01105KEN	245	M49470X01155KAJ	299	M49470X01277KAJ	353	M49470X01107KBJ
192	M49470Q01105MEN	246	M49470X01155MAJ	300	M49470X01277MAJ	354	M49470X01107MBJ
193	M49470Q01125KEN	247	M49470X01185KAJ	301	M49470X01684KBJ	355	M49470X01127KBJ
194	M49470Q01125MEN	248	M49470X01185MAJ	302	M49470X01684MBJ	356	M49470X01127MBJ
195	M49470Q01155KEN	249	M49470X01225KAJ	303	M49470X01824KBJ	357	M49470X01157KBJ
196	M49470Q01155MEN	250	M49470X01225MAJ	304	M49470X01824MBJ	358	M49470X01157MBJ
197	M49470Q01185KEN	251	M49470X01275KAJ	305	M49470X01105KBJ	359	M49470X01187KBJ
198	M49470Q01185MEN	252	M49470X01275MAJ	306	M49470X01105MBJ	360	M49470X01187MBJ
199	M49470Q01275KEN	253	M49470X01335KAJ	307	M49470X01125KBJ	361	M49470R01474KCJ
200	M49470Q01275MEN	254	M49470X01335MAJ	308	M49470X01125MBJ	362	M49470R01474MCJ
201	M49470Q01335KEN	255	M49470X01395KAJ	309	M49470X01155KBJ	363	M49470R01564KCJ
202	M49470Q01335MEN	256	M49470X01395MAJ	310	M49470X01155MBJ	364	M49470R01564MCJ
203	M49470Q01395KEN	257	M49470X01475KAJ	311	M49470X01185KBJ	365	M49470R01684KCJ
204	M49470Q01395MEN	258	M49470X01475MAJ	312	M49470X01185MBJ	366	M49470R01684MCJ
205	M49470Q01475KEN	259	M49470X01565KAJ	313	M49470X01225KBJ	367	M49470R01824KCJ
206	M49470Q01475MEN	260	M49470X01565MAJ	314	M49470X01225MBJ	368	M49470R01824MCJ
207	M49470Q01565KEN	261	M49470X01685KAJ	315	M49470X01275KBJ	369	M49470R01105KCJ
208	M49470Q01565MEN	262	M49470X01685MAJ	316	M49470X01275MBJ	370	M49470R01105MCJ
209	M49470Q01825KEN	263	M49470X01825KAJ	317	M49470X01335KBJ	371	M49470R01125KCJ
210	M49470Q01825MEN	264	M49470X01825MAJ	318	M49470X01335MBJ	372	M49470R01125MCJ

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87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1	87106-	MIL-PRF-49470/1
373	M49470R01155KCJ	400	M49470R01186MCJ	427	M49470Q01274KEJ	454	M49470Q01335MEJ
374	M49470R01155MCJ	401	M49470R01226KCJ	428	M49470Q01274MEJ	455	M49470Q01395KEJ
375	M49470R01185KCJ	402	M49470R01226MCJ	429	M49470Q01334KEJ	456	M49470Q01395MEJ
376	M49470R01185MCJ	403	M49470R01276KCJ	430	M49470Q01334MEJ	457	M49470Q01475KEJ
377	M49470R01225KCJ	404	M49470R01276MCJ	431	M49470Q01394KEJ	458	M49470Q01475MEJ
378	M49470R01225MCJ	405	M49470R01336KCJ	432	M49470Q01394MEJ	459	M49470Q01565KEJ
379	M49470R01275KCJ	406	M49470R01336MCJ	433	M49470Q01474KEJ	460	M49470Q01565MEJ
380	M49470R01275MCJ	407	M49470R01396KCJ	434	M49470Q01474MEJ	461	M49470Q01685KEJ
381	M49470R01335KCJ	408	M49470R01396MCJ	435	M49470Q01564KEJ	462	M49470Q01685MEJ
382	M49470R01335MCJ	409	M49470R01476KCJ	436	M49470Q01564MEJ	463	M49470Q01825KEJ
383	M49470R01395KCJ	410	M49470R01476MCJ	437	M49470Q01684KEJ	464	M49470Q01825MEJ
384	M49470R01395MCJ	411	M49470R01566KCJ	438	M49470Q01684MEJ	465	M49470Q01106KEJ
385	M49470R01475KCJ	412	M49470R01566MCJ	439	M49470Q01824KEJ	466	M49470Q01106MEJ
386	M49470R01475MCJ	413	M49470R01686KCJ	440	M49470Q01824MEJ	467	M49470Q01126KEJ
387	M49470R01565KCJ	414	M49470R01686MCJ	441	M49470Q01105KEJ	468	M49470Q01126MEJ
388	M49470R01565MCJ	415	M49470R01826KCJ	442	M49470Q01105MEJ	469	M49470Q01156KEJ
389	M49470R01685KCJ	416	M49470R01826MCJ	443	M49470Q01125KEJ	470	M49470Q01156MEJ
390	M49470R01685MCJ	417	M49470R01107KCJ	444	M49470Q01125MEJ	471	M49470Q01186KEJ
391	M49470R01825KCJ	418	M49470R01107MCJ	445	M49470Q01155KEJ	472	M49470Q01186MEJ
392	M49470R01825MCJ	419	M49470R01127KCJ	446	M49470Q01155MEJ	473	M49470Q01226KEJ
393	M49470R01106KCJ	420	M49470R01127MCJ	447	M49470Q01185KEJ	474	M49470Q01226MEJ
394	M49470R01106MCJ	421	M49470Q01154KEJ	448	M49470Q01185MEJ	475	M49470Q01276KEJ
395	M49470R01126KCJ	422	M49470Q01154MEJ	449	M49470Q01225KEJ	476	M49470Q01276MEJ
396	M49470R01126MCJ	423	M49470Q01184KEJ	450	M49470Q01225MEJ	477	M49470Q01336KEJ
397	M49470R01156KCJ	424	M49470Q01184MEJ	451	M49470Q01275KEJ	478	M49470Q01336MEJ
398	M49470R01156MCJ	425	M49470Q01224KEJ	452	M49470Q01275MEJ	479	M49470Q01396KEJ
399	M49470R01186KCJ	426	M49470Q01224MEJ	453	M49470Q01335KEJ	480	M49470Q01396MEJ

MIL-PRF-49470 PIN



Notes:

1. MIL-PRF-49470 also contains the following additional capacitors that were never available in 87106:
 - a. "L" lead configuration parts.
 - b. Lower profile parts (larger footprint with fewer chips stacked).
 - c. 88011 CG (BP) dielectric capacitors.
2. For T level (high reliability) product, replace the "M" in PIN with "T".
(M49470R01474KCN becomes T49470R01474KCN).
3. Questions may be sent by E-mail to capacitorfilter@dla.mil.

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