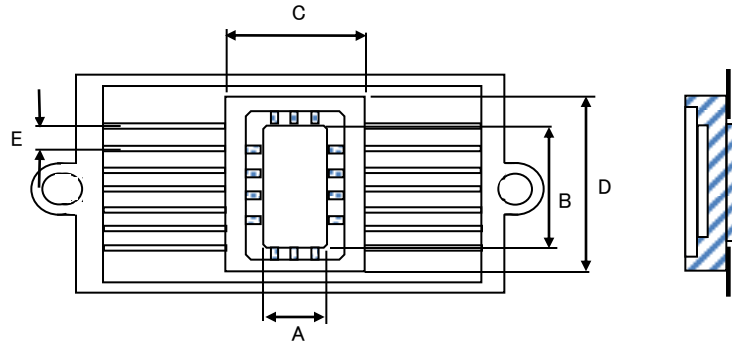
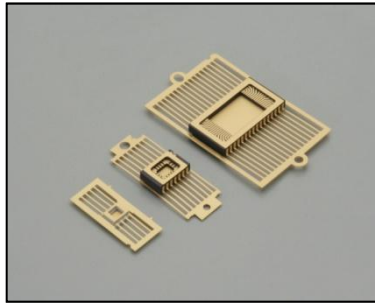


NTK CSOP (Ceramic – Small Outline Packages)



UNIT: inch

LEAD COUNT	CAVITY			OVERALL			LAYER THICKNESS				LEAD		NTK MATERIAL CODE B:Black W:White	CONNECTION (0:NON-Connect)		DRAWING NO.	
	DIE CAV.		UP(U) DOWN(D)				1st	2nd	3rd	TOTAL	PITCH	STAND OFF HEIGHT		SEAL RING	DIE ATTACH		
	A	X		B	C	X							D				
8	0.134	x	0.134	U	0.255	x	0.255	0.020	0.020	0.010	0.050	0.050	0.035	B	-	-	IF - 2162B
10	0.106	x	0.087	U	0.255	x	0.255	0.019	0.019	0.010	0.083	0.050	0.035	B	0	0	IF - 2996A
10	0.150	x	0.150	U	0.255	x	0.255	0.020	0.020	0.010	0.050	0.050	0.035	B	0	0	IF - 2276A-MO
10	0.195	x	0.195	U	0.255	x	0.255	0.030	0.018	-	0.048	0.050	-	B	0	No.5	IF - 2977A-MO
10	0.200	x	0.090	U	0.255	x	0.143	0.020	0.015	-	0.070	0.050	0.035	B	0	SEE DWG	IF - 2417A
10	0.220	x	0.150	U	0.285	x	0.255	0.020	0.020	0.010	0.050	0.050	0.035	B	0	0	IF - 2903A
14	0.135	x	0.095	U	0.374	x	0.250	0.015	0.024	0.015	0.090	0.050	0.036	B	0	0	IF - 2119B-MO
14	0.150	x	0.120	U	0.374	x	0.250	0.015	0.025	0.015	0.090	0.050	0.035	B	PAD C	PAD A, B	IF - 2144D-MO
14	0.150	x	0.150	U	0.350	x	0.255	0.020	0.020	0.010	0.050	0.050	0.035	B	0	0	IF - 2055A
14	0.161	x	0.147	U	0.340	x	0.255	0.016	0.020	0.060	0.078	0.050	0.036	B	VSS	VSS	IF - 2958A-MO
14	0.165	x	0.130	U	0.392	x	0.272	0.010	0.025	0.010	0.045	0.050	0.015	B	0	0	IF - 2416AA
14	0.180	x	0.133	U	0.383	x	0.255	0.020	0.025	0.010	0.070	0.050	0.015	B	0	0	IF - 2669A-MO

NTK CSOP (Ceramic – Small Outline Packages)

UNIT: inch

LEAD COUNT	CAVITY			OVERALL	LAYER THICKNESS				LEAD		NTK MATERIAL CODE B:Black W:White	CONNECTION (0:NON-Connect)		DRAWING NO.			
	DIE CAV.				UP(U) DOWN(D)	1st	2nd	3rd	TOTAL	PITCH		STAND OFF HEIGHT	SEAL RING		DIE ATTACH		
	A	X	B													C	X
14	0.200	x	0.125	U	0.340	x	0.255	0.023	0.018	0.008	0.084	0.050	0.035	B	0	0	IF - 2418A-MO
14	0.260	x	0.161	U	0.383	x	0.255	0.020	0.025	0.010	0.090	0.050	0.035	B	0	0	IF - 2545A-MO
14	0.313	x	0.201	U	0.383	x	0.265	0.040	0.010	0.010	0.060	0.050	0.015	B	0	No.2,3,5,6,10,12	IF - 2488A
14	0.370	x	0.285	U	0.470	x	0.450	0.020	0.020	0.020	0.095	0.050	0.035	B	0	-	IF - 2527A-MO
14	0.370	x	0.285	U	0.470	x	0.450	0.020	0.050	0.020	0.125	0.050	0.035	B	0	-	IF - 2906A-MO
16	0.160	x	0.135	U	0.410	x	0.270	0.010	0.020	0.100	0.130	0.050	0.035	B	PAD C	PAD A,B	IF - 2146A
16	0.165	x	0.150	U	0.392	x	0.272	0.010	0.020	0.010	0.040	0.050	0.015	W	0	0	IF - 2036D
16	0.220	x	0.140	U	0.400	x	0.270	0.020	0.020	0.010	0.050	0.050	0.019	B	0	0	IF - 327AA-MO
16	0.226	x	0.144	U	0.400	x	0.270	0.019	0.019	0.010	0.083	0.050	0.035	B	0	0	IF - 2998A-MO
16	0.226	x	0.144	U	0.400	x	0.270	0.030	0.030	0.010	0.105	0.050	0.035	B	0	No.10	IF - 2297A-MO
16	0.275	x	0.195	U	0.420	x	0.310	0.020	0.030	0.010	0.089	0.050	0.039	B	0	0	IF - 2491-MO
16	0.284	x	0.171	U	0.411	x	0.293	0.015	0.025	0.015	0.085	0.050	0.022	B	0	0	IF - 2449B-MO
16	0.300	x	0.171	U	0.415	x	0.280	0.017	0.019	0.015	0.086	0.050	0.035	B	0	0	IF - 2278B
18	0.240	x	0.240	U	0.355	x	0.355	0.020	0.020	0.008	0.068	0.050	0.020	B	0	0	IF - 2910A-MO
20	0.210	x	0.210	U	0.400	x	0.400	0.020	0.020	0.010	0.050	0.050	0.020	B	0	0	IF - 2522A
20	0.250	x	0.140	U	0.485	x	0.295	0.015	0.025	0.010	0.086	0.050	0.036	B	0	0	IF - 2246B-MO
20	0.283	x	0.170	U	0.504	x	0.293	0.015	0.025	0.015	0.085	0.050	0.022	B	0	0	IF - 2450A-MO
20	0.320	x	0.165	U	0.480	x	0.295	0.015	0.025	0.010	0.086	0.050	0.036	B	0	0	IF - 2187A
20	0.850	x	0.170	U	1.000	x	0.295	0.020	0.040	0.030	0.090	0.100	-	B	0	No.5, 10	IF - 2334A-MO
24	0.270	x	0.220	U	0.596	x	0.400	0.025	0.025	0.010	0.095	0.050	0.035	B	0	No.12	IF - 2093G-MO
24	0.284	x	0.170	U	0.606	x	0.293	0.015	0.025	0.015	0.085	0.050	0.022	B	0	0	IF - 2451A-MO
24	0.365	x	0.220	U	0.610	x	0.400	0.010	0.020	0.010	0.040	0.050	0.035	B	0	G PAD, No.12	IF - 2149C
28	0.220	x	0.235	U	0.720	x	0.410	0.020	0.020	0.022	0.097	0.050	0.035	B	0	0	IF - 2987A-MO
28	0.240	x	0.180	U	0.720	x	0.410	0.020	0.020	0.022	0.097	0.050	0.035	B	0	0	IF - 2475B-MO

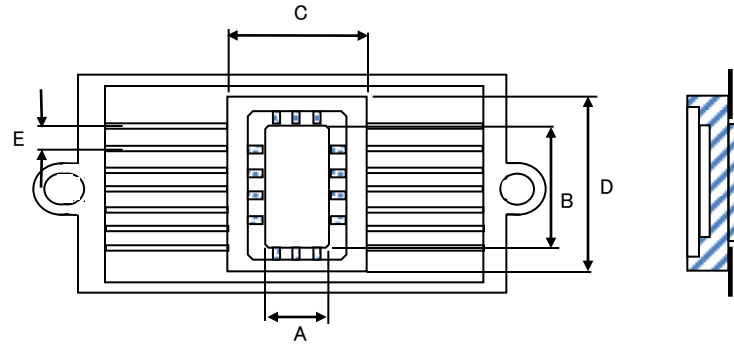
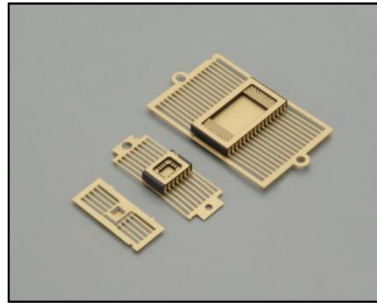
NTK CSOP (Ceramic – Small Outline Packages)

UNIT: inch

LEAD COUNT	CAVITY				OVERALL			LAYER THICKNESS				LEAD		NTK MATERIAL CODE B:Black W:White	CONNECTION (0:NON-Connect)		DRAWING NO.	
	DIE CAV.			UP(U) DOWN(D)				1st	2nd	3rd	TOTAL	PITCH	STAND OFF HEIGHT		SEAL RING	DIE ATTACH		
	A	X	B		C	X	D											
28	0.250	x	0.200	U	0.720	x	0.500	0.020	0.025	0.012	0.092	0.050	0.035	B	PAD C	PAD A & B	IF - 2197-MO	
28	0.250	x	0.250	U	0.720	x	0.410	0.030	0.030	0.010	0.070	0.050	0.035	B	No.7	No.7	IF - 2238B	
28	0.250	x	0.250	U	0.720	x	0.500	0.020	0.025	0.012	0.092	0.050	0.035	B	0	0	IF - 2250A-MO	
28	0.283	x	0.170	U	0.705	x	0.293	0.015	0.025	0.015	0.085	0.050	0.022	B	0	No.14, 15	IF - 2765A-MO	
28	0.310	x	0.235	U	0.720	x	0.390	0.020	0.020	0.010	0.050	0.050	0.036	B	0	No.14	IF - 2047J	
28	0.340	x	0.300	U	0.700	x	0.500	0.020	0.030	0.010	0.060	0.050	0.035	B	0	No.25/PAD A	IF - 2397AA	
28	0.350	x	0.280	U	0.732	x	0.410	0.015	0.030	0.030	0.110	0.050	0.035	B	0	0	IF - 2352AA	
28	0.410	x	0.390	U	0.720	x	0.500	0.020	0.025	0.012	0.092	0.050	0.035	B	0	PAD A, D	IF - 2414-MO	
28	0.425	x	0.280	U	0.720	x	0.410	0.020	0.020	0.022	0.097	0.050	0.035	B	0	0	IF - 2040B-MO	
28	0.510	x	0.305	U	0.732	x	0.410	0.020	0.030	0.025	0.110	0.050	0.035	B	0	-	IF - 2569A-MO	
30	0.409	x	0.189	U	0.602	x	0.307	0.025	0.020	0.020	0.085	0.039	0.020	B	0	GND PAD	IF - 2286A	
32	0.250	x	0.200	U	0.820	x	0.410	0.020	0.020	0.022	0.097	0.050	0.035	B	0	No.16/PAD A & DB	IF - 2696A-MO	
32	0.300	x	0.300	U	0.820	x	0.590	0.020	0.030	0.030	0.080	0.050	-	B	0	No.32	IF - 2268B	
32	0.368	x	0.228	U	0.820	x	0.410	0.020	0.020	0.020	0.095	0.050	0.035	B	0	0	IF - 2391D-MO	
32	0.425	x	0.270	U	0.820	x	0.410	0.020	0.020	0.035	0.075	0.050	-	B	No.16	0	IF - 2426A-MO	
32	0.438	x	0.368	U	0.930	x	0.645	0.020	0.020	0.050	0.090	0.050	-	B	0	0	IF - 2550A-MO	
32	0.450	x	0.320	U	0.820	x	0.435	0.015	0.030	0.020	0.100	0.050	0.035	B	0	0	IF - 2514A-MO	
32	0.450	x	0.320	U	0.820	x	0.435	0.015	0.030	0.020	0.100	0.050	0.035	B	0	0	IF - 2215A	
32	0.490	x	0.375	U	0.820	x	0.540	0.020	0.025	0.020	0.100	0.050	0.035	B	0	No.31	IF - 2453A-MO	
32	0.510	x	0.396	U	0.820	x	0.480	0.020	0.020	0.020	0.060	0.050	0.035	B	0	No.16	IF - 2191D	
32	0.610	x	0.320	U	0.820	x	0.435	0.015	0.030	0.020	0.100	0.050	0.035	B	0	0	IF - 2173A-MO	
36	0.320	x	0.303	U	0.920	x	0.510	0.020	0.020	0.020	0.095	0.050	0.035	B	0	0	IF - 2690A-MO	
36	0.330	x	0.260	U	0.920	x	0.510	0.020	0.020	0.020	0.095	0.050	0.035	B	0	VSS	IF - 2918A-MO	
40	0.876	x	0.223	U	1.050	x	0.354	0.015	0.045	0.025	0.085	0.050	-	B	No.23	No.23	IF - 2965A-MO	



NTK CSOP (Ceramic – Small Outline Packages)



UNIT: mm

LEAD COUNT	CAVITY				OVERALL			LAYER THICKNESS				LEAD		NTK MATERIAL CODE B:Black W:White	CONNECTION (0:NON-Connect)		DRAWING NO.
	DIE CAV.			UP(U) DOWN(D)				1st	2nd	3rd	TOTAL	TOTAL PITCH	STAND OFF HEIGHT		SEAL RING	DIE ATTACH	
	A	X	B		C	X	D										
8	3.404	x	3.404	U	6.477	x	6.477	0.508	0.508	0.254	1.270	1.270	0.889	B	-	-	IF - 2162B
10	2.700	x	2.210	U	6.477	x	6.477	0.483	0.483	0.254	2.108	1.270	0.889	B	0	0	IF - 2996A
10	3.810	x	3.810	U	6.477	x	6.477	0.508	0.508	0.254	1.270	1.270	0.889	B	0	0	IF - 2276A-MO
10	4.953	x	4.953	U	6.477	x	6.477	0.762	0.457	-	1.219	1.270	-	B	0	No.5	IF - 2977A-MO
10	5.080	x	2.286	U	6.477	x	3.632	0.508	0.381	-	1.778	1.270	0.889	B	0	SEE DWG	IF - 2417A
10	5.588	x	3.810	U	7.239	x	6.477	0.508	0.508	0.254	1.270	1.270	0.889	B	0	0	IF - 2903A
14	3.429	x	2.413	U	9.500	x	6.350	0.381	0.610	0.381	2.286	1.270	0.909	B	0	0	IF - 2119B-MO
14	3.810	x	3.048	U	9.500	x	6.350	0.381	0.635	0.381	2.286	1.270	0.889	B	PAD C	PAD A, B	IF - 2144D-MO
14	3.810	x	3.810	U	8.890	x	6.477	0.508	0.508	0.254	1.270	1.270	0.889	B	0	0	IF - 2055A
14	4.089	x	3.734	U	8.636	x	6.477	0.406	0.508	1.524	1.981	1.270	0.909	B	VSS	VSS	IF - 2958A-MO
14	4.191	x	3.302	U	9.957	x	6.909	0.254	0.635	0.254	1.143	1.270	0.381	B	0	0	IF - 2416AA
14	4.572	x	3.378	U	9.728	x	6.477	0.508	0.635	0.254	1.778	1.270	0.381	B	0	0	IF - 2669A-MO

NTK CSOP (Ceramic – Small Outline Packages)

UNIT: mm

LEAD COUNT	CAVITY				OVERALL			LAYER THICKNESS				LEAD		NTK MATERIAL CODE B:Black W:White	CONNECTION (0:NON-Connect)		DRAWING NO.	
	DIE CAV.			UP(U) DOWN(D)				1st	2nd	3rd	TOTAL	TOTAL PITCH	STAND OFF HEIGHT		SEAL RING	DIE ATTACH		
	A	X	B		C	X	D											
14	5.080	x	3.180	U	8.636	x	6.477	0.579	0.457	0.203	2.131	1.270	0.889	B	0	0	IF - 2418A-MO	
14	6.604	x	4.089	U	9.728	x	6.477	0.508	0.635	0.254	2.286	1.270	0.889	B	0	0	IF - 2545A-MO	
14	7.950	x	5.105	U	9.728	x	6.731	1.016	0.254	0.254	1.524	1.270	0.381	B	0	No.2,3,5,6,10,12	IF - 2488A	
14	9.398	x	7.239	U	11.938	x	11.430	0.508	0.508	0.508	2.413	1.270	0.889	B	0	-	IF - 2527A-MO	
14	9.398	x	7.239	U	11.938	x	11.430	0.508	1.270	0.508	3.175	1.270	0.889	B	0	-	IF - 2906A-MO	
16	4.064	x	3.429	U	10.414	x	6.858	0.254	0.508	2.540	3.302	1.270	0.889	B	PAD C	PAD A,B	IF - 2146A	
16	4.191	x	3.810	U	9.957	x	6.909	0.254	0.508	0.254	1.016	1.270	0.381	W	0	0	IF - 2036D	
16	5.588	x	3.556	U	10.160	x	6.858	0.508	0.508	0.254	1.270	1.270	0.483	B	0	0	IF - 327AA-MO	
16	5.740	x	3.658	U	10.160	x	6.858	0.483	0.483	0.254	2.108	1.270	0.889	B	0	0	IF - 2998A-MO	
16	5.740	x	3.658	U	10.160	x	6.858	0.762	0.762	0.254	2.667	1.270	0.889	B	0	No.10	IF - 2297A-MO	
16	6.985	x	4.953	U	10.668	x	7.874	0.508	0.762	0.254	2.261	1.270	1.001	B	0	0	IF - 2491-MO	
16	7.201	x	4.331	U	10.450	x	7.450	0.381	0.635	0.381	2.149	1.270	0.551	B	0	0	IF - 2449B-MO	
16	7.620	x	4.343	U	10.541	x	7.112	0.432	0.483	0.381	2.184	1.270	0.889	B	0	0	IF - 2278B	
18	6.096	x	6.096	U	9.017	x	9.017	0.508	0.508	0.203	1.727	1.270	0.508	B	0	0	IF - 2910A-MO	
20	5.334	x	5.334	U	10.160	x	10.160	0.508	0.508	0.254	1.270	1.270	0.508	B	0	0	IF - 2522A	
20	6.350	x	3.556	U	12.319	x	7.493	0.381	0.635	0.254	2.184	1.270	0.909	B	0	0	IF - 2246B-MO	
20	7.188	x	4.318	U	12.802	x	7.442	0.381	0.635	0.381	2.149	1.270	0.551	B	0	0	IF - 2450A-MO	
20	8.128	x	4.191	U	12.192	x	7.493	0.381	0.635	0.254	2.184	1.270	0.909	B	0	0	IF - 2187A	
20	21.590	x	4.318	U	25.400	x	7.493	0.508	1.016	0.762	2.286	2.540	-	B	0	No.5, 10	IF - 2334A-MO	
24	6.858	x	5.588	U	15.138	x	10.160	0.635	0.635	0.254	2.421	1.270	0.889	B	0	No.12	IF - 2093G-MO	
24	7.201	x	4.318	U	15.400	x	7.450	0.381	0.635	0.381	2.149	1.270	0.551	B	0	0	IF - 2451A-MO	
24	9.271	x	5.588	U	15.494	x	10.160	0.254	0.508	0.254	1.016	1.270	0.889	B	0	G PAD, No.12	IF - 2149C	
28	5.588	x	5.969	U	18.288	x	10.414	0.508	0.508	0.559	2.461	1.270	0.889	B	0	0	IF - 2987A-MO	
28	6.101	x	4.572	U	18.288	x	10.414	0.508	0.508	0.559	2.461	1.270	0.889	B	0	0	IF - 2475B-MO	



NTK CSOP (Ceramic – Small Outline Packages)

UNIT: mm

LEAD COUNT	CAVITY			OVERALL			LAYER THICKNESS				LEAD		NTK MATERIAL CODE B:Black W:White	CONNECTION (0:NON-Connect)		DRAWING NO.	
	DIE CAV.		UP(U) DOWN(D)				1st	2nd	3rd	TOTAL	TOTAL PITCH	STAND OFF HEIGHT		SEAL RING	DIE ATTACH		
	A	X		B	C	X							D				
28	6.350	x	5.080	U	18.288	x	12.700	0.508	0.635	0.305	2.337	1.270	0.889	B	PAD C	PAD A & B	IF - 2197-MO
28	6.350	x	6.350	U	18.288	x	10.414	0.762	0.762	0.254	1.778	1.270	0.889	B	No.7	No.7	IF - 2238B
28	6.350	x	6.350	U	18.288	x	12.700	0.508	0.635	0.305	2.337	1.270	0.889	B	0	0	IF - 2250A-MO
28	7.188	x	4.318	U	17.899	x	7.442	0.381	0.635	0.381	2.149	1.270	0.551	B	0	No.14, 15	IF - 2765A-MO
28	7.874	x	5.969	U	18.288	x	9.906	0.508	0.508	0.254	1.270	1.270	0.909	B	0	No.14	IF - 2047J
28	8.636	x	7.620	U	17.780	x	12.700	0.508	0.762	0.254	1.524	1.270	0.889	B	0	No.25/PAD A	IF - 2397AA
28	8.890	x	7.112	U	18.593	x	10.414	0.381	0.762	0.762	2.794	1.270	0.889	B	0	0	IF - 2352AA
28	10.414	x	9.906	U	18.288	x	12.700	0.508	0.635	0.305	2.337	1.270	0.889	B	0	PAD A, D	IF - 2414-MO
28	10.795	x	7.112	U	18.288	x	10.414	0.508	0.508	0.559	2.464	1.270	0.889	B	0	0	IF - 2040B-MO
28	12.954	x	7.747	U	18.593	x	10.414	0.508	0.762	0.635	2.794	1.270	0.889	B	0	-	IF - 2569A-MO
30	10.389	x	4.801	U	15.291	x	7.798	0.635	0.508	0.508	2.159	0.991	0.508	B	0	GND PAD	IF - 2286A
32	6.350	x	5.080	U	20.828	x	10.414	0.508	0.508	0.559	2.461	1.270	0.889	B	0	No.16/PAD A & DB	IF - 2696A-MO
32	7.620	x	7.620	U	20.828	x	14.986	0.508	0.762	0.762	2.032	1.270	-	B	0	No.32	IF - 2268B
32	9.347	x	5.791	U	20.828	x	10.414	0.508	0.508	0.508	2.413	1.270	0.889	B	0	0	IF - 2391D-MO
32	10.795	x	6.858	U	20.828	x	10.414	0.508	0.508	0.889	1.905	1.270	-	B	No.16	0	IF - 2426A-MO
32	11.125	x	9.347	U	23.622	x	16.380	0.508	0.508	1.270	2.286	1.270	-	B	0	0	IF - 2550A-MO
32	11.430	x	8.128	U	20.828	x	11.049	0.381	0.762	0.508	2.540	1.270	0.889	B	0	0	IF - 2514A-MO
32	11.430	x	8.128	U	20.828	x	11.049	0.381	0.762	0.508	2.540	1.270	0.889	B	0	0	IF - 2215A
32	12.446	x	9.525	U	20.828	x	13.716	0.508	0.635	0.508	2.540	1.270	0.889	B	0	No.31	IF - 2453A-MO
32	12.954	x	10.058	U	20.828	x	12.192	0.508	0.508	0.508	1.524	1.270	0.889	B	0	No.16	IF - 2191D
32	15.494	x	8.128	U	20.828	x	11.049	0.381	0.762	0.508	2.540	1.270	0.889	B	0	0	IF - 2173A-MO
36	8.128	x	7.696	U	23.368	x	12.954	0.508	0.508	0.508	2.410	1.270	0.889	B	0	0	IF - 2690A-MO
36	8.382	x	6.604	U	23.368	x	12.954	0.508	0.508	0.508	2.410	1.270	0.889	B	0	VSS	IF - 2918A-MO
40	22.250	x	5.664	U	26.670	x	8.992	0.381	1.143	0.635	2.159	1.270	-	B	No.23	No.23	IF - 2965A-MO