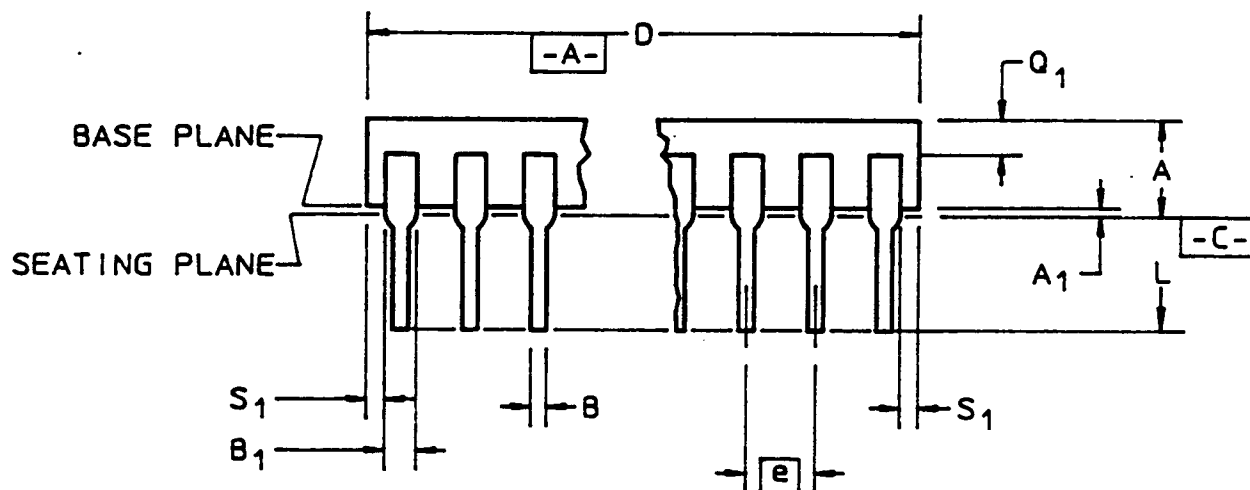
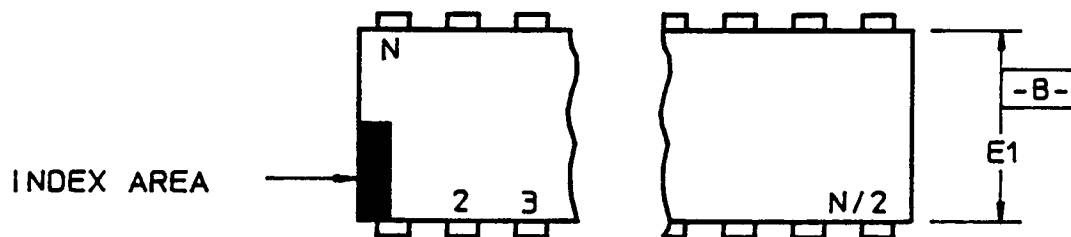


**MS-015**

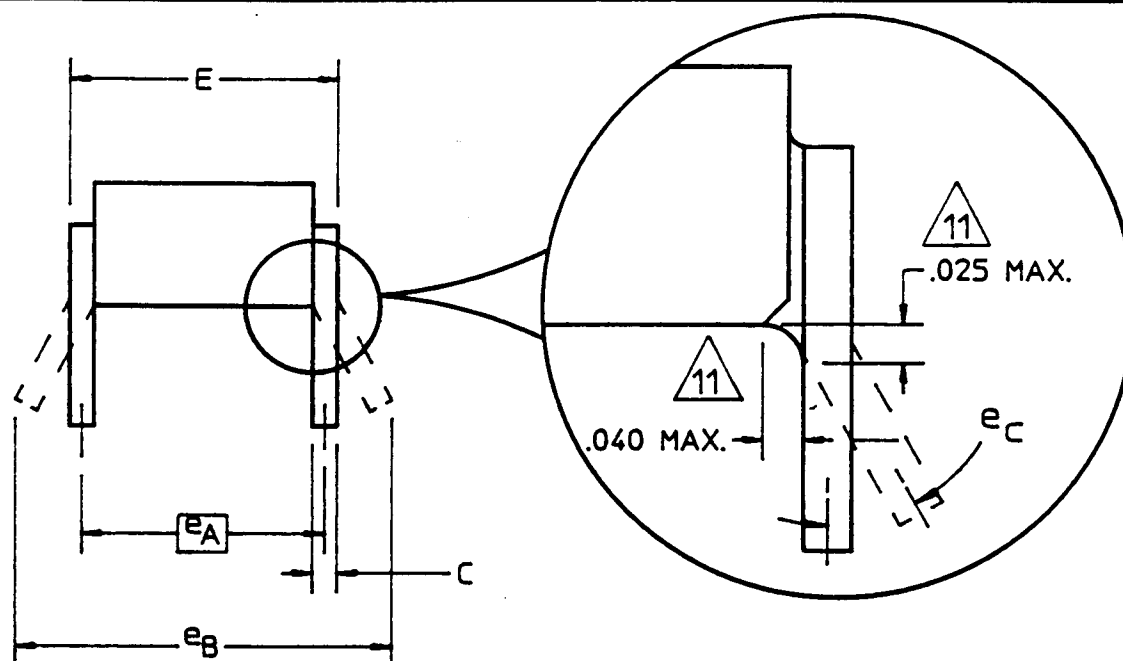
**.300, .400, .600, & .900" DUAL IN LINE  
.100 CENTER  
CERAMIC  
SIDE BRAZED**

**STANDARD**



B<sub>1</sub>  $\varnothing$  .000 (M) -.030 (.76) MAX C A (L)

B  $\varnothing$  .040 (1.02) (M) C A (S) B (S)  
          .010 (0.25) (M) C





## NOTES:



1. CONTROLLING DIMENSIONS: INCH. IN CASE OF CONFLICT BETWEEN ENGLISH AND METRIC DIMENSIONS, THE INCH DIMENSIONS CONTROL.
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.
3. SYMBOLS ARE DEFINED IN THE 'MS SERIES SYMBOL LIST' IN SECTION 2.2 OF PUBLICATION NO. 95.
4. DIMENSIONS A, A<sub>1</sub> AND L ARE MEASURED WITH THE PACKAGE SEATED IN JEDEC SEATING PLANE GAUGE GS-3. DIMENSION A INCLUDES THE LID THICKNESS, AND MAY INCREASE TO .260 INCHES MAXIMUM WHEN AN EPROM LID IS USED.
5. D AND E<sub>1</sub> DIMENSIONS DO NOT INCLUDE PARTICLES (BURRS AND/OR PROJECTIONS) OF PACKAGE MATERIAL. SUCH PARTICLES SHALL NOT EXCEED .010 INCHES (.25 mm) PER SIDE. INCLUDES ALLOWANCES FOR GLASS OVERRUN AND MENISCUS, AND LID-TO-BASE MISMATCH.
6. E AND e<sub>A</sub> ARE MEASURED WITH THE LEADS CONSTRAINED TO BE PERPENDICULAR TO PLANE C.
7. e<sub>B</sub> AND e<sub>C</sub> ARE MEASURED AT THE LEAD TIPS WITH THE LEADS UNCONSTRAINED.
8. N IS THE MAXIMUM NUMBER OF TERMINAL LEADS.
9. MAXIMUM LEAD THICKNESS INCLUDES ALL LEAD FINISHES. MINIMUM BASE MATERIAL SHALL BE .009 INCHES THICK.
10. ANY RAISED IRREGULARITY ON THE TOP SURFACE (STEP, MASS, ETC.) SHALL BE SYMMETRICAL ABOUT THE LATERAL AND LONGITUDINAL PACKAGE CENTERLINES.
11. MAXIMUM FILLET, INCLUDING SOLDER COAT, IF ANY.
12. MEASURED FROM THE TOP OF THE CERAMIC BODY TO THE NEAREST METALLIZATION OR LEAD.
13. MEASURED FROM THE END OF THE CERAMIC BODY TO THE NEAREST METALLIZATION OR LEAD.



JEDEC SOLID STATE PRODUCT OUTLINE	TITLE: SIDE BRAZED CERAMIC DUAL IN LINE .XXX CENTERLINE	ISSUE  A	DATE  7/90	SPEC NUMBER:  MS-015	SHEET:  2 OF 10
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S Y M B O L	DIMENSIONS ALL IN INCHES		N O T E	NOTE	S		8	ITEM NO.
				VARIATIONS	D		N	
	MIN	MAX			MIN	MAX		
A	.085	.200	4	AA	.500	.540	8	10-272
A1	.025	.070	4	AB	.730	.770	14	10-272
B	.015	.022	9	AC	.780	.820	16	10-272
B1	.045	.065		AD	.880	.920	18	10-272
C	.009	.015	9	AE	.980	1.020	20	10-272
D	SEE VARIATION		5	AF	1.080	1.120	22	10-272
E	.300	.325	6	AG	1.180	1.220	24	10-272
E1	.280	.310	5	AH	1.380	1.420	28	10-272
<b>e</b>	.100 BSC							
<b>eA</b>	.300 BSC		6					
L	.125	.200	4					
N	SEE VARIATION		8					
Q1	.005	---	12					
eB	---	.400	7					
eC	0 <sup>0</sup>	---	7					
S1	.005	---	13					
ISSUE	A							
NOTES	1, 2, 3							
REF	11.10 ITEM 272							
JEDEC SOLID STATE PRODUCT OUTLINE		TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE .300" CENTERLINE		ISSUE  A	DATE  7/90	SPEC NUMBER:  MS-015	SHEET:  3 OF 10	

S Y M B O L	DIMENSIONS ALL IN INCHES		N O T E	NOTE	S		8	ITEM NO.	
				VARIATIONS	D		N		
	MIN	MAX			MIN	MAX			
A	.085	.200	4	BA	.980	1.020	20	10-272	
A1	.025	.070	4	BB	1.060	1.100	22	10-272	
B	.015	.022	9	BC	1.180	1.220	24	10-272	
B1	.045	.065		BD	1.380	1.420	28	10-272	
C	.009	.015	9						
D	SEE VARIATION		5						
E	.400	.425	6						
E1	.380	.410	5						
<b>e</b>	.100 BSC								
<b>eA</b>	.400 BSC		6						
L	.125	.200	4						
N	SEE VARIATION		8						
Q1	.005	---	12						
eB	---	.500	7						
eC	0 <sup>0</sup>	---	7						
S1	.005	---	13						
ISSUE	A								
NOTES	1, 2, 3								
REF	11.10 ITEM 272								
JEDEC SOLID STATE PRODUCT OUTLINE				TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE .400" CENTERLINE		ISSUE A	DATE 7/90	SPEC NUMBER: MS-015	SHEET: 4 OF 10



S Y M B O L	DIMENSIONS ALL IN INCHES		N O T E	NOTE	5		8	ITEM NO.
				VARIATIONS	D		N	
	MIN	MAX			MIN	MAX		
A	.085	.200	4	CA	1.180	1.220	24	10-272
A1	.025	.070	4	CB	1.380	1.420	28	10-272
B	.015	.022	9	CC	1.580	1.620	32	10-272
B1	.045	.065		CD	1.780	1.820	36	10-272
C	.009	.015	9	CE	1.980	2.020	40	10-272
D	SEE VARIATION		5	CF	2.375	2.430	48	10-272
E	.600	.625	6	CG	2.575	2.630	52	10-272
E1	.580	.610	5					
	.100 BSC							
	.600 BSC		6					
L	.125	.200	4					
N	SEE VARIATION		8					
Q1	.005	---	12					
eB	---	.700	7					
eC	0°	---	7					
S1	.005	---	13					
ISSUE	A							
NOTES	1, 2, 3							
REF	11.10 ITEM 272							
JEDEC SOLID STATE PRODUCT OUTLINE		TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE .600" CENTERLINE		ISSUE A	DATE 7/90	SPEC NUMBER: MS-015	SHEET: 5 OF 10	

S Y M B O L	DIMENSIONS ALL IN INCHES		N O T E	NOTE	5		8	ITEM NO.
				VARIATIONS	D		N	
	MIN	MAX			MIN	MAX		
A	.085	.200	4	DA	2.475	2.530	50	10-272
A1	.025	.070	4	DB	3.175	3.230	64	10-272
B	.015	.022	9					
B1	.045	.065						
C	.009	.015	9					
D	SEE VARIATION		5					
E	.900	.925	6					
E1	.880	.910	5					
	.100 BSC							
	.900 BSC		6					
L	.125	.200	4					
N	SEE VARIATION		8					
Q1	.005	---	12					
eB	---	1.000	7					
eC	0°	---	7					
S1	.005	---	13					
ISSUE	A							
NOTES	1, 2, 3							
REF	11.10 ITEM 272							
JEDEC SOLID STATE PRODUCT OUTLINE		TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE .900" CENTERLINE		ISSUE  A	DATE  7/90	SPEC NUMBER:  MS-015	SHEET:  6 OF 10	

SYM BOL	DIMENSIONS ALL IN MILLIMETERS		NOTE	VARIATIONS	S		8	ITEM NO.
					D		N	
	MIN	MAX			MIN	MAX		
A	2.159	5.080	4	AA	12.700	13.716	8	10-272
A1	0.635	1.778	4	AB	18.542	19.558	14	10-272
B	0.381	0.559	9	AC	19.812	20.828	16	10-272
B1	1.143	1.651		AD	22.352	23.368	18	10-272
C	0.229	0.381	9	AE	24.892	25.908	20	10-272
D	SEE VARIATION		5	AF	27.432	28.448	22	10-272
E	7.620	8.255	6	AG	29.972	30.988	24	10-272
E1	7.112	7.874	5	AH	35.052	36.068	28	10-272
	2.540 BSC							
	7.620 BSC		6					
L	3.175	5.080	4					
N	SEE VARIATION		8					
Q1	0.127	---	12					
eB	---	10.160	7					
eC	0°	---	7					
S1	0.127	---	13					
ISSUE	A							
NOTES	1, 2, 3							
REF	11.10 ITEM 272							
JEDEC SOLID STATE PRODUCT OUTLINE		TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE 7.620mm CENTERLINE		ISSUE  A	DATE  7/90	SPEC NUMBER:  MS-015		SHEET:  7 OF 10



S Y M B O L	DIMENSIONS ALL IN MILLIMETERS		N O T E	NOTE	5		8	ITEM NO.
				VARIATIONS	D		N	
	MIN	MAX			MIN	MAX		
A	2.159	5.080	4	8A	24.892	25.908	20	10-272
A1	.635	1.778	4	8B	26.924	27.940	22	10-272
B	.381	.559	9	8C	29.972	30.988	24	10-272
B1	1.143	1.651		8D	35.052	36.068	28	10-272
C	.229	.381	9					
D	SEE VARIATION		5					
E	10.160	10.795	6					
E1	9.652	10.414	5					
<b>e</b>	2.540 BSC							
<b>eA</b>	10.160 BSC		6					
L	3.175	5.080	4					
N	SEE VARIATION		8					
Q1	.127	---	12					
eB	---	12.700	7					
eC	0°	---	7					
S1	.127	---	13					
ISSUE	A							
NOTES	1, 2, 3							
REF	11.10 ITEM 272							
JEDEC SOLID STATE PRODUCT OUTLINE		TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE 10.160mm CENTERLINE		ISSUE A	DATE 7/90	SPEC NUMBER: MS-015	SHEET: 8 OF 10	

S Y M B O L	DIMENSIONS ALL IN MILLIMETERS		N O T E	NOTE	5		8	ITEM NO.
					D		N	
	MIN	MAX		VARIATIONS	MIN	MAX		
A	2.159	5.080	4	CA	29.972	30.988	24	10-272
A1	.635	1.778	4	CB	35.052	36.068	28	10-272
B	.381	.559	9	CC	40.132	41.148	32	10-272
B1	.143	1.651		CD	45.212	46.228	36	10-272
C	.229	.381	9	CE	50.292	51.308	40	10-272
D	SEE VARIATION		5	CF	60.325	61.722	48	10-272
E	15.240	15.875	6	CG	65.405	66.802	52	10-272
E1	14.732	15.494	5					
	2.540 BSC							
	15.240 BSC		6					
L	3.175	5.080	4					
N	SEE VARIATION		8					
Q1	.127	---	12					
eB	---	17.780	7					
eC	0°	---	7					
S1	.127	---	13					
ISSUE	A							
NOTES	1, 2, 3							
REF	11.10 ITEM 272							
JEDEC SOLID STATE PRODUCT OUTLINE			TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE 15.240mm CENTERLINE		ISSUE A	DATE 7/90	SPEC NUMBER: MS-015	SHEET: 9 OF 10

S Y M B O L	DIMENSIONS ALL IN MILLIMETERS		N O T E	NOTE	5		8	ITEM NO.
				VARIATIONS	D		N	
	MIN	MAX			MIN	MAX		
A	2.159	5.080	4	DA	62.865	64.262	50	10-272
A1	0.635	1.778	4	DB	80.645	82.042	64	10-272
B	0.381	0.559	9					
B1	1.143	1.651						
C	0.229	0.381	9					
D	SEE VARIATION		5					
E	22.860	23.495	6					
E1	22.352	23.114	5					
<b>e</b>	2.540 BSC							
<b>eA</b>	22.860 BSC		6					
L	3.175	5.080	4					
N	SEE VARIATION		8					
Q1	0.127	---	12					
eB	---	25.400	7					
eC	0°	---	7					
S1	0.127	---	13					
ISSUE	A							
NOTES	1, 2, 3							
REF	11.10 ITEM 272							
JEDEC SOLID STATE PRODUCT OUTLINE		TITLE: SIDE BRAZED CERRAMIC DUAL IN LINE 22.860mm CENTERLINE		ISSUE  A	DATE  7/90	SPEC NUMBER:  MS-015		SHEET:  10 OF 10