



COTROL DIMENSIONS ARE IN MILLIMETERS.

SYMBOL	MILLIMETER			INCH		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	—	—	1.60	—	—	0.063
A1	0.05	—	0.15	0.002	—	0.006
A2	1.35	1.40	1.45	0.053	0.055	0.057
D	26.00 BSC.			1.024 BSC.		
D1	24.00 BSC.			0.945 BSC.		
E	26.00 BSC.			1.024 BSC.		
E1	24.00 BSC.			0.945 BSC.		
R2	0.08	—	0.20	0.003	—	0.008
R1	0.08	—	—	0.003	—	—
θ	0°	3.5°	7°	0°	3.5°	7°
θ_1	0°	—	—	0°	—	—
θ_2	11°	12°	13°	11°	12°	13°
θ_3	11°	12°	13°	11°	12°	13°
c	0.09	—	0.20	0.004	—	0.008
L	0.45	0.60	0.75	0.018	0.024	0.030
L ₁	1.00 REF			0.039 REF		
S	0.20	—	—	0.008	—	—

ASE <small>ADVANCED SEMICONDUCTOR ENGINEERING, INC.</small>		SCALE	\times	PROJ.	\oplus
TITLE		DWG. NO.		REV.	
PACKAGE OUTLINE 160/176/216L LQFP 24x24x1.4 mm 2.0mm FOOTPRINT		64-06-280-1392		0	
		SHEET		SIZE	
		1 OF 3		A4	
UNIT	TOLERANCE		REFERENCE DOCUMENT		
	DIMENSION	ANGLE			
INCH / MM			JEDEC SPEC MS-026		

SYMBOL	160L						176L						216L					
	MILLIMETER			INCH			MILLIMETER			INCH			MILLIMETER			INCH		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
b	0.17	0.20	0.27	0.007	0.008	0.011	0.17	0.20	0.27	0.007	0.008	0.011	0.13	0.16	0.23	0.005	0.006	0.009
e	0.50 BSC.			0.020 BSC.			0.50 BSC.			0.020 BSC.			0.40 BSC.			0.016 BSC.		
D2	19.50			0.768			21.50			0.846			21.20			0.835		
E2	19.50			0.768			21.50			0.846			21.20			0.835		
TOLERANCES OF FORM AND POSITION																		
aaa	0.20			0.008			0.20			0.008			0.20			0.008		
bbb	0.20			0.008			0.20			0.008			0.20			0.008		
ccc	0.08			0.003			0.08			0.003			0.08			0.003		
ddd	0.08			0.003			0.08			0.003			0.07			0.003		

NOTES :

1. DIMENSIONS D1 AND E1 DO NOT INCLUDE MOLD PROTRUSION.
ALLOWABLE PROTRUSION IS 0.25mm PER SIDE. D1 AND E1 ARE
MAXIMUM PLASTIC BODY SIZE DIMENSIONS INCLUDING MOLD MISMATCH.
2. DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION.
ALLOWABLE DAMBAR PROTRUSION SHALL NOT CAUSE THE
LEAD WIDTH TO EXCEED THE MAXIMUM b DIMENSION BY
MORE THAN 0.08mm.
DAMBAR CAN NOT BE LOCATED ON THE LOWER RADIUS
OR THE FOOT. MINIMUM SPACE BETWEEN PROTRUSION
AND AN ADJACENT LEAD IS 0.07mm FOR 0.4mm and
0.5mm PITCH PACKAGES.
3. ALL DIMENSION OF 160L WERE BASE ON THOSE OF 176L SINCE
THEY ARE NOT MENTIONED IN JEDEC SPEC MS-026.

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TITLE PACKAGE OUTLINE 160/176/216L LQFP 24x24x1.4 mm 2.0mm FOOTPRINT		DWG. NO.		REV.	
		64-06-280-1392		0	
		SHEET		SIZE	
		2 OF 3		A4	
UNIT	TOLERANCE		REFERENCE DOCUMENT		
	DIMENSION	ANGLE			
INCH / MM			JEDEC SPEC MS-026		

