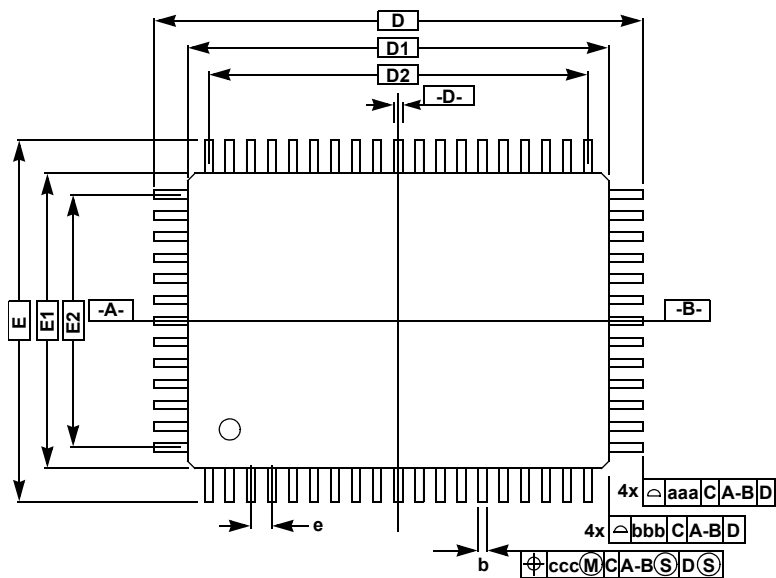


Plastic Packages for Integrated Circuits

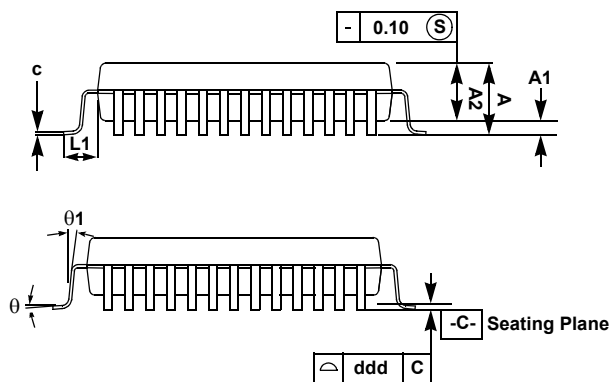
Package Outline Drawing

Q128.14x20F

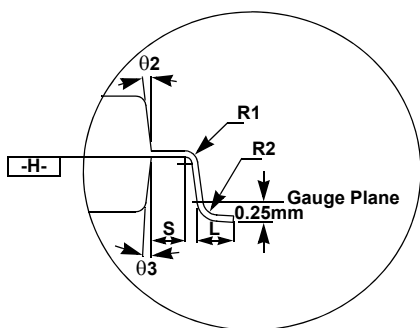
128 Lead Low Plastic Quad Flatpack Package (LQFP)



Top View



Side View



Detail

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	22.00 BSC			0.866 BSC		
D1	20.00 BSC			0.787 BSC		
E	16.00 BSC			0.630 BSC		
E1	14.00 BSC			0.551 BSC		
R2	0.08	-	0.20	0.003	-	0.008
R1	0.08	-	-	0.003	-	-
θ	0°	3.5°	7°	0°	3.5°	7°
$\theta 1$	0°	-	-	0°	-	-
$\theta 2$	11°	12°	13°	11°	12°	13°
$\theta 3$	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
L1	1.00 REF			0.039 REF		
S	0.20	-	-	0.008	-	-
b	0.170	0.200	0.270	0.007	0.008	0.011
e	0.50 BSC			0.020 BSC		
D2	18.50			0.728		
E2	12.50			0.492		
Tolerances Form and Position						
aaa	0.20			0.008		
bbb	0.20			0.008		
ccc	0.08			0.003		
ddd	0.08			0.003		

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Notes:

1. Dimension D1 and E1 do not include mold protrusion. Allowable protrusion is 0.25mm per side. Dimensions D1 and E1 do include mold mismatch and are determined at datum plane -H-.
1. Dimension b does not include dambar protrusion. Allowable dambar protrusion shall be 0.08mm total in excess of the b dimension at maximum material condition. Dambar cannot be located on the lower radius or the lead foot.