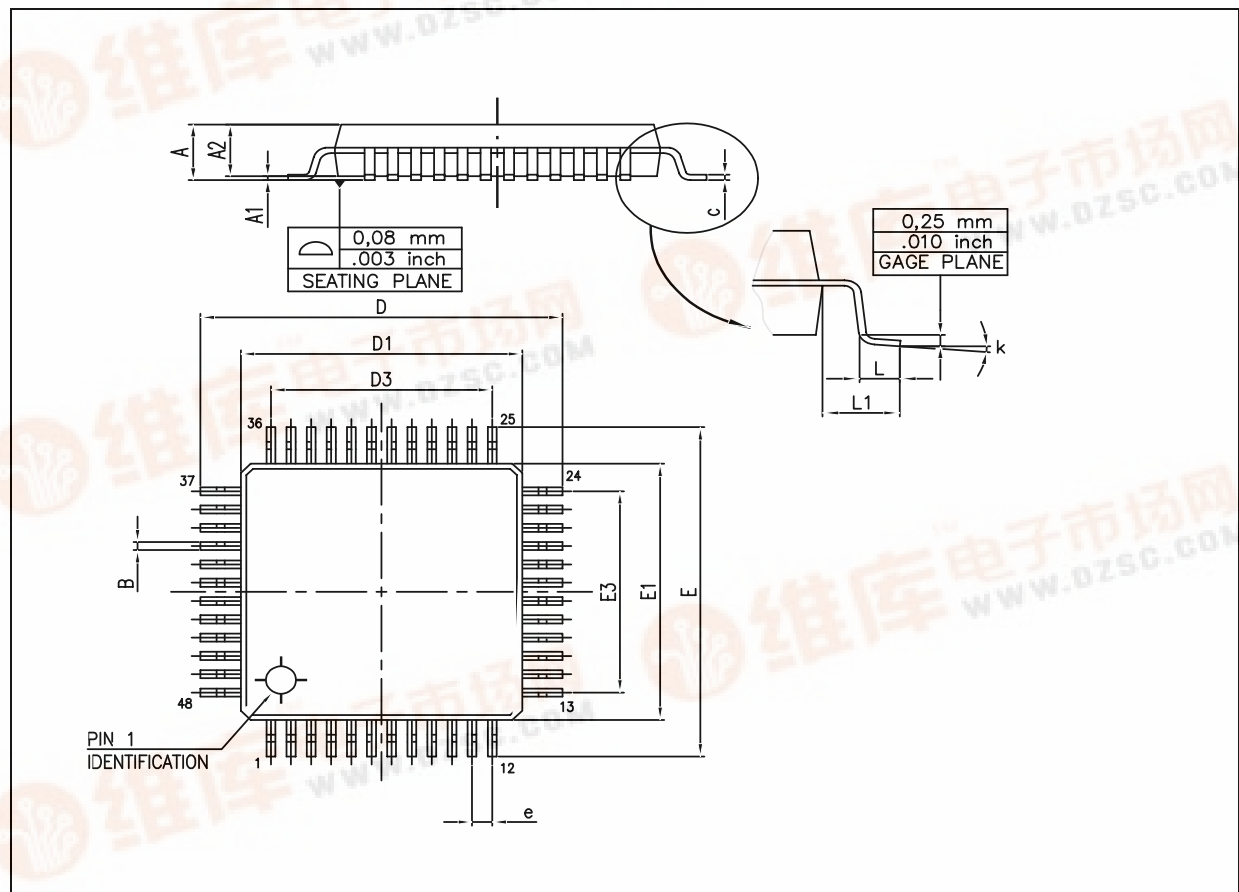


DIMENSIONS						
REF.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.6			0.063
A1	0.05		0.15	0.002		0.006
A2	1.35	1.40	1.45	0.053	0.055	0.057
B	0.17	0.22	0.27	0.007	0.009	0.011
C	0.09		0.20	0.003		0.0079
D		9.00			0.354	
D1		7.00			0.276	
D3		5.50			0.216	
e		0.50			0.020	
E		9.00			0.354	
E1		7.00			0.276	
E3		5.50			0.216	
L	0.45	0.60	0.75	0.018	0.024	0.030
L1		1.00			0.039	
K	0°	3.5°	7°	0°	3.5°	7°



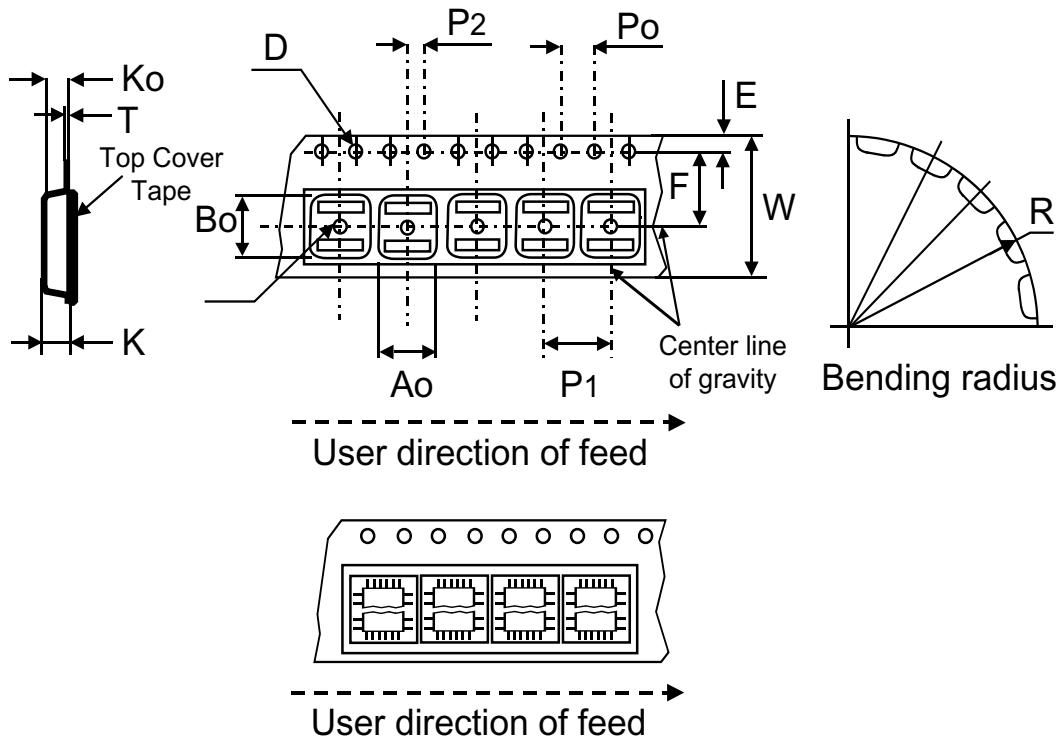
**48-LEAD THIN QUAD FLAT PACKAGE**



**TQFP48 PACKAGE AND PACKING INFORMATION**

**TAPE & REEL SHIPMENT INFORMATION**

**TAPE SPECIFICATIONS**

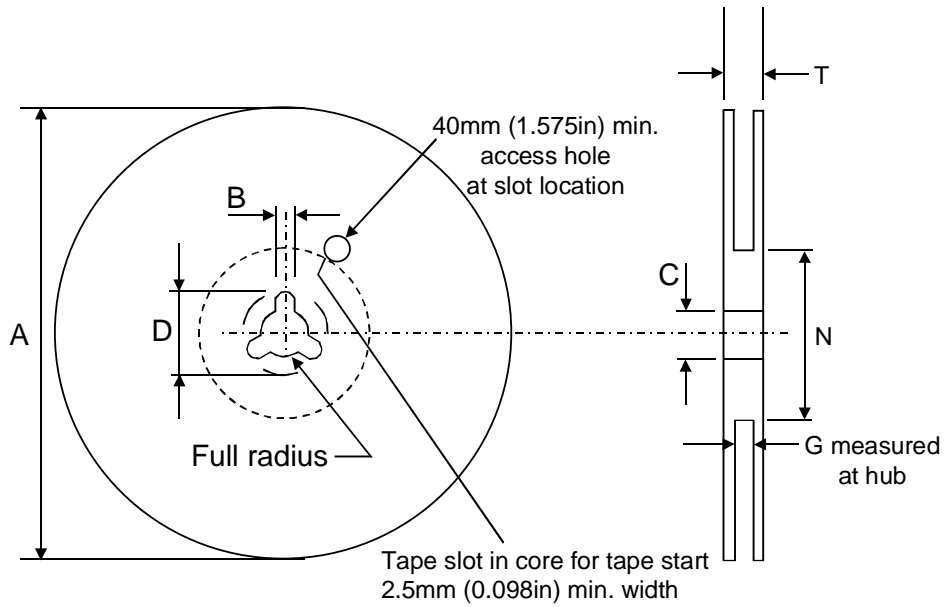


TAPE MECHANICAL DATA		
	mm.	inch
D	1.50 +0.1/0	0.059 +0.004/0
E	1.75 ±0.1	0.069 ±0.004
Po	4.00 ±0.1	0.157 ±0.004
T max.	0.40	0.016
D1 min.	1.50	0.059
F	7.5 ±0.05	0.295 ±0.002
K max.	6.50	0.256
P2	2.00 ±0.05	0.079 ±0.002
R	40	1.575
W	16.00 ±0.30	0.630 ±0.012
P1	12.00	0.472
Ao, Bo, Ko	0.05 min to 0.90 max.	0.002 min to 0.035 max.

BASE QUANTITY	2400 pcs.
BULK QUANTITY	2400 pcs.

TQFP48 PACKAGE AND PACKING INFORMATION

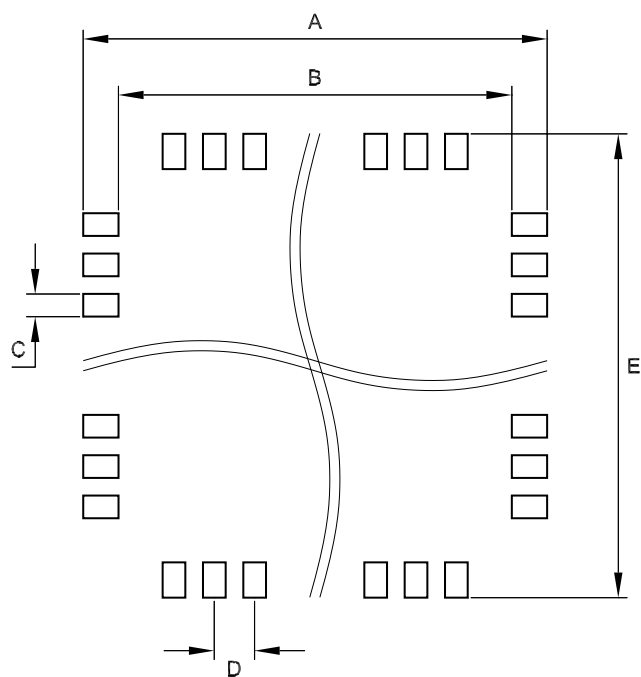
TAPE & REEL SHIPMENT INFORMATION  
REEL SPECIFICATIONS



REEL MECHANICAL DATA		
	mm.	inch
Tape size	16.0 ±0.30	0.630 ±0.012
A max.	330.0	12.992
B min.	1.5	0.059
C	13.0 ±0.20	0.512 ±0.008
D min.	20.2	0.795
N min.	60	2.362
G	16.4 +2/-0	0.646 +0.079/-0
T max.	22.4	0.882

## TQFP48 PACKAGE AND PACKING INFORMATION

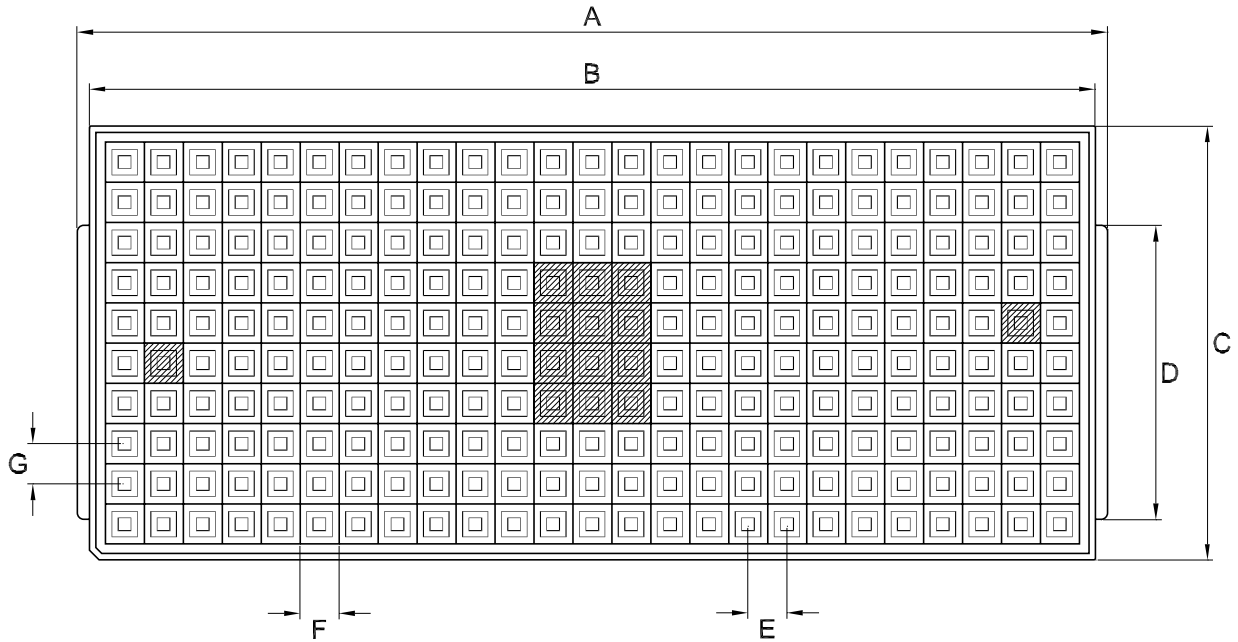
### FOOTPRINT RECOMMENDED DATA



FOOTPRINT DATA		
	mm.	inch
A	9.40	0.370
B	7.70	0.303
C	0.32	0.012
D	0.50	0.020
E	9.4	0.370

## TQFP48 PACKAGE AND PACKING INFORMATION

### TRAY SHIPMENT INFORMATION



TRAY DATA		
	mm.	inch
A	322.6	12.700
B	315.0 ±0.10	12.402 ±0.004
C	135.9 ±0.10	5.350 ±0.004
D	92.1 ±0.10	3.626 ±0.004
E	12.2 ±0.10	0.480 ±0.004
F	12.2 ±0.10	0.480 ±0.004
G	12.2 ±0.10	0.480 ±0.004

BASE QUANTITY	250 pcs.
BULK QUANTITY	1500 pcs.