

REVISIONS			
DATE	REV	DESCRIPTION	AUTHOR
11/14/08	00	INITIAL RELEASE	RC
11/28/12	01	ADD EPAD OPTION	RC
12/5/13	02	COMBINE POD & LAND PATTERN	J.HUA
7/14/14	03	Change Dimension aaa	J.HUA
3/1/19	04	Add Wettable Flank Option	J.HUA
9/19/19	05	Add Wettable Flank S2	J.HUA
7/30/21	06	Update Dimensions of Wettable Flank	JHTAN

NOTE: REFER TO DCP FOR OFFICIAL RELEASE DATE

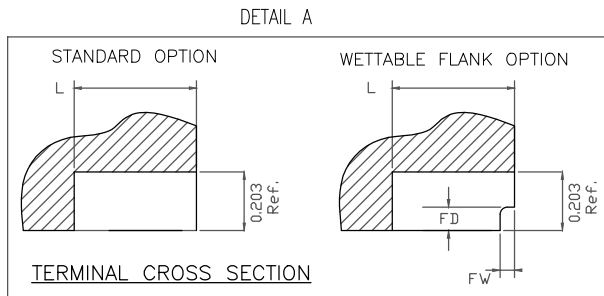


Table 1: Dimensions of wettable flank

Symbol	Unit (mm)	
	MIN	MAX
FD	0.100	-
FW	0.001	0.075

- NOTE :
- ALL DIMENSIONS ARE IN mm. ANGLES IN DEGREES.
 - COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS. COPLANARITY SHALL NOT EXCEED 0.05 mm.
 - WARPAGE SHALL NOT EXCEED 0.05 mm.
 - PACKAGE LENGTH / PACKAGE WIDTH ARE CONSIDERED AS SPECIAL CHARACTERISTIC. (S)
 - REFER JEDEC MO-220.

EPAD OPTION

Symbol	P1			P2		
	MIN	NOM	MAX	MIN	NOM	MAX
E2	0.95	1.10	1.25	1.55	1.65	1.75
D2	0.95	1.10	1.25	1.55	1.65	1.75

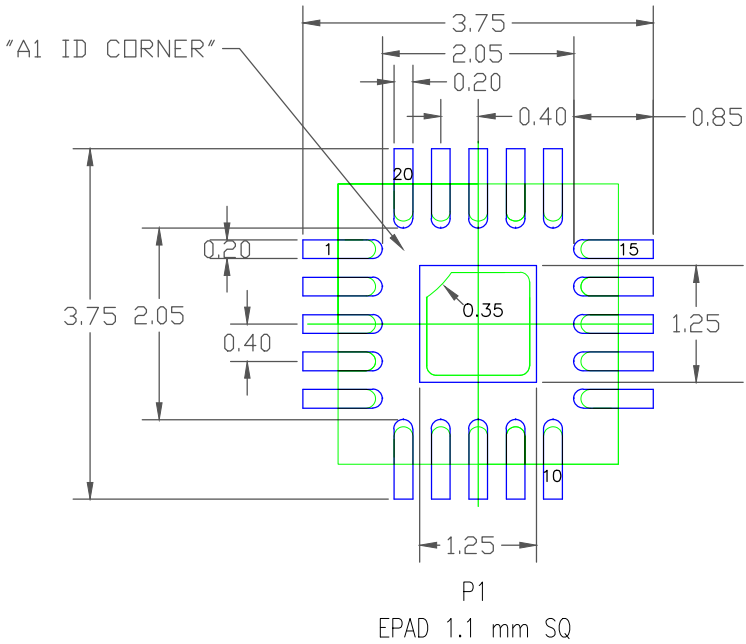
Symbol	S1 (FUSED LEAD)			S2		
	MIN	NOM	MAX	MIN	NOM	MAX
E2	1.55	1.65	1.75	1.55	1.65	1.75
D2	1.55	1.65	1.75	1.55	1.65	1.75
R	0.075	---	0.175	0.075	---	0.175
S	0.001	---	0.09	0.001	---	0.09

COMMON DIMENSION

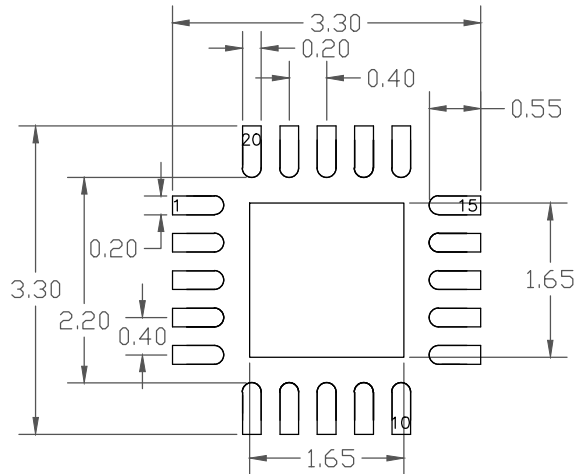
Symbol	DIMENSION		
	Min	Nom	Max
A	0.80	0.90	1.00
A1	0	0.02	0.05
A3	0.20 Ref		
b	0.17	0.20	0.25
e	0.40 BASIC		
N	20		
ND	5		
NE	5		
D	3.00 BASIC		
E	3.00 BASIC		
D2	SEE EPAD OPTION		
E2	SEE EPAD OPTION		
L	0.30	0.40	0.50

TOLERANCES UNLESS SPECIFIED DECIMAL ANGULAR X± ±1° XX± XXX±	6024 Silver Creek Valley Road San Jose CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-8591	
TITLE NDG20 Package Outline Drawing 3.0 x 3.0 mm Body 0.40mm Pitch VFQFPN		
SIZE C	DRAWING No. PSC-4179	REV 06
DO NOT SCALE DRAWING		SHEET 1 OF 2

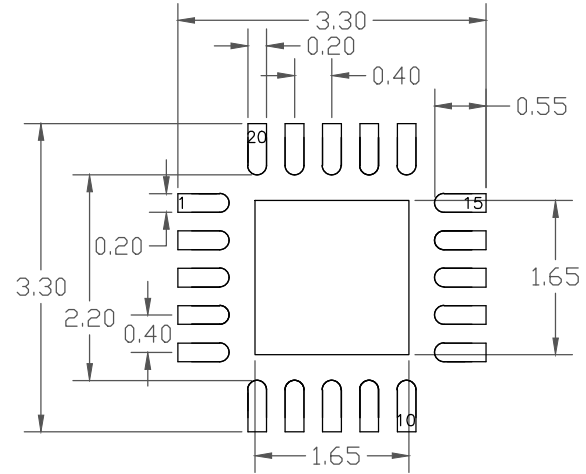
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RECOMMENDED LAND PATTERN DIMENSION



P2 & S1
EPAD 1.65 mm SQ



S2
EPAD 1.65 mm SQ

NOTES:

1. ALL DIMENSION ARE IN MM. ANGLES IN DEGREES.
2. TOP DOWN VIEW, AS VIEWED ON PCB.
3. COMPONENT OUTLINE SHOW FOR REFERENCE IN GREEN.
4. LAND PATTERN IN BLUE. NSMD PATTERN ASSUMED.
5. LAND PATTERN RECOMMENDATION PER IPC-7351B GENERIC REQUIREMENT FOR SURFACE MOUNT DESIGN AND LAND PATTERN.

TOLERANCES UNLESS SPECIFIED DECIMAL ANGULAR X± ±1° XX± XXX±	6024 Silver Creek Valley Road San Jose CA 95138 RENESAS PHONE: (408) 284-8200 FAX: (408) 284-8591	
	TITLE NDG20 Package Outline Drawing 3.0 x 3.0 mm Body 0.40mm Pitch VFQFPN	
SIZE	DRAWING No.	REV
C	PSC-4179	06
DO NOT SCALE DRAWING		SHEET 2 OF 2