

DOCUMENT TYPE: POD

DOCUMENT ID #: 21-0144

REVISION: Y-000

DOCUMENT TITLE: PACKAGE OUTLINE, 32, 44, 48, 56L THIN QF

EFFECTIVE DATE: 06/22/2023

EXPIRATION DATE:

CHANGE NUMBER: 1189376


ORIGINATOR: Bernard Go

REASON FOR CHANGE:
Add T5677+4

EXPOSED PAD VARIATIONS								CORNER LEAD CHAMFER VARIATION C
PKG. CODES	D2			E2			JEDEC MO220 REV. C	
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.		
T3277+2	4.55	4.70	4.85	4.55	4.70	4.85	—	—
T3277+2C	4.55	4.70	4.85	4.55	4.70	4.85	—	—
T3277+3	4.55	4.70	4.85	4.55	4.70	4.85	—	—
T3277+3C	4.55	4.70	4.85	4.55	4.70	4.85	—	—
T3277M+3	4.55	4.70	4.85	4.55	4.70	4.85	—	—
T4477+2	4.55	4.70	4.85	4.55	4.70	4.85	WKKD-1	—
T4477+2C	4.55	4.70	4.85	4.55	4.70	4.85	WKKD-1	—
T4477+3	4.55	4.70	4.85	4.55	4.70	4.85	WKKD-1	—
T4877+3	4.95	5.10	5.25	4.95	5.10	5.25	—	0.115 X 45°
T4877+3C	4.95	5.10	5.25	4.95	5.10	5.25	—	0.115 X 45°
T4877+4	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+4C	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+6	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+6C	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+7	4.95	5.10	5.25	4.95	5.10	5.25	—	0.115 X 45°
T4877-7C	4.95	5.10	5.25	4.95	5.10	5.25	—	0.115 X 45°
T4877+10	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+10C	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+11	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+11C	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+12	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877M+1	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877M+6	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877MN+8	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877N+8	5.40	5.50	5.60	5.40	5.50	5.60	—	0.115 X 45°
T4877+9C	3.92	4.02	4.12	3.92	4.02	4.12	—	0.115 X 45°
T4877+9CA	3.92	4.02	4.12	3.92	4.02	4.12	—	0.115 X 45°
T5677+1	5.40	5.50	5.60	5.40	5.50	5.60	—	—
T5677+1C	5.40	5.50	5.60	5.40	5.50	5.60	—	—
T5677MN+1	5.40	5.50	5.60	5.40	5.50	5.60	—	—
T5677+2	5.40	5.50	5.60	5.40	5.50	5.60	—	—
T5677+2C	5.40	5.50	5.60	5.40	5.50	5.60	—	—
T5677+3	5.40	5.50	5.60	5.40	5.50	5.60	—	—
T5677+4	4.50	4.60	4.70	4.50	4.60	4.70	—	—

COMMON DIMENSIONS															
PKG	32L 7x7			44L 7x7			48L 7x7			CUSTOM PKG. (T4877+1) 48L 7x7			56L 7x7		
SYMBOL	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	0.70	0.75	0.80	0.70	0.75	0.80	0.70	0.75	0.80	0.70	0.75	0.80	0.70	0.75	0.80
A1	0	0.02	0.05	0	0.02	0.05	0	0.02	0.05	0	0.02	0.05	0	—	0.05
A2	0.20 REF.			0.20 REF.			0.20 REF.			0.20 REF.			0.20 REF.		
b	0.25	0.30	0.35	0.20	0.25	0.30	0.20	0.25	0.30	0.20	0.25	0.30	0.15	0.20	0.25
D	6.90	7.00	7.10	6.90	7.00	7.10	6.90	7.00	7.10	6.90	7.00	7.10	6.90	7.00	7.10
E	6.90	7.00	7.10	6.90	7.00	7.10	6.90	7.00	7.10	6.90	7.00	7.10	6.90	7.00	7.10
e	0.65 BSC.			0.50 BSC.			0.50 BSC.			0.50 BSC.			0.40 BSC.		
k	0.25	—	—	0.25	—	—	0.25	—	—	0.25	—	—	0.25	—	—
L	0.45	0.55	0.65	0.45	0.55	0.65	0.30	0.40	0.50	0.45	0.55	0.65	0.30	0.40	0.50
N	32			44			48			44			56		
ND	8			11			12			10			14		
NE	8			11			12			12			14		

—DRAWING NOT TO SCALE—

			
TITLE: PACKAGE OUTLINE, 32, 44, 48, 56L THIN QFN, 7x7x0.75mm			
APPROVAL ZHEN LI	DOCUMENT CONTROL NO. 21-0144	REV. Y	2/3

NOTES:

1. DIMENSIONING & TOLERANCING CONFORM TO ASME Y14.5M-2009.
2. ALL DIMENSIONS ARE IN MILLIMETERS. ANGLES ARE IN DEGREES.
3. N IS THE TOTAL NUMBER OF TERMINALS.
4. THE TERMINAL #1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JESD 95-1 SPP-012. DETAILS OF TERMINAL #1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE TERMINAL #1 IDENTIFIER MAY BE EITHER A MOLD OR MARKED FEATURE.
5. DIMENSION b APPLIES TO METALLIZED TERMINAL AND IS MEASURED BETWEEN 0.25 mm AND 0.30 mm FROM TERMINAL TIP.
6. ND AND NE REFER TO THE NUMBER OF TERMINALS ON EACH D AND E SIDE RESPECTIVELY.
7. DEPOPULATION IS POSSIBLE IN A SYMMETRICAL FASHION.
8. DRAWING CONFORMS TO JEDEC MO220 EXCEPT THE EXPOSED PAD DIMENSIONS OF T4877+3/+4/+6 & T5677+1.
9. WARPAGE SHALL NOT EXCEED 0.10 mm.
10. MARKING IS FOR PACKAGE ORIENTATION REFERENCE ONLY.
11. NUMBER OF LEADS SHOWN ARE FOR REFERENCE ONLY.
12. MATERIAL MUST BE COMPLIANT WITH MAXIM SPECIFICATION 10-0131 FOR SUBSTANCE CONTENT, MUST BE Eu ROHS COMPLIANT WITHOUT EXEMPTION AND PB-FREE.
13. ALL DIMENSIONS APPLY TO BOTH LEADED (-) AND PbFREE (+) PKG. CODES.

-DRAWING NOT TO SCALE-



TITLE:
PACKAGE OUTLINE,
32, 44, 48, 56L THIN QFN, 7x7x0.75mm

APPROVAL ZHEN LI	DOCUMENT CONTROL NO. 21-0144	REV. Y	3/3
---------------------	---------------------------------	-----------	-----

REVISION HISTORY

REV	CHANGES MADE	DATE	INIT.
A	ECN # HQ-02-4655. INITIAL RELEASE INTO DOCUMENT CONTROL	06-12-02	GP
B	ECN # HQ-02-4657. DIMENSIONS & NOT CHANGES	06-13-02	ND
C	ECN # HQ-03-9326. NEW BOND BLOCK DIMENSIONS ADDED & DALLAS LOGO ADDED TO TITLE BLOCK	12-03-03	SS
D	ECN # HQ-04-3753. NEW PKG. CODES ADDED TO EXPOSED PAD VARIATIONS TABLE. DOWN BONDS COLUMN ADDED TO THIS TABLE	03-12-04	JD
E	ECN # HQ-05-8626. UPDATED PKG. CODES BASED ON CURRENT STATUS	09-12-05	RDEL
F	ECN # HQ-07-B495. COMMON DIMENSIONS TABLE & EXPOSED PAD VARIATIONS TABLE CHANGED TO MATCH ACTUAL NSEB TOOL DESIGN AND ACTUAL PARTS	03-20-07	RDEL
G	ECN # HQ-08-3701. T4877N-8 DATA ADDED TO VARIATIONS TABLE	06-09-08	GP
H	ECN # HQ-08-7841. ECN #HQ-02-4655. INITIAL RELEASE INTO DOCUMENT CONTROL.	07-24-08	GP
I	ECN # HQ-09-0590. T4877-1 / T4877-5 PKG. CODES REFERENCES REMOVED	04/10/09	GP
J	ECN # EV-12-0878. T5677-3 PKG. CODE ADDED	04/24/12	GP
K	ECN HQ-12-2641. ADD REFERENCE TO CORNER PIN CHAMFER DIMENSION ADD TABLE LISTING PACKAGE CODES WITH APPLICABLE CORNER PIN CHAMFER VARIATION.	11/29/12	WD
L	ECN #HQ-13-1370. ADD NEW PACKAGE CODE FOR COPPER WIRE BONDING.	06/20/13	AG
M	ECN #HQ-13-2007. T4877+9C PKG. CODE ADDED FOR AP80	10/18/13	GP
N	ECN #HQ-13-2889. Add new package code for copper wire bonding	11/21/13	GP
O	ECN #HQ-14-0957. Add new pkg. variation	03/31/14	AG
P	CN# 1000287. ADD NEW PACKAGE CODE T4877+6C	01/12/15	AG
Q	CN# 1000615. ADDED PKG CODE T3277M+3 TO THE EXPOSED PAD VARIATIONS TABLE.	03/12/15	GP
R	CN # 1000842. - ADDED PKGCODE T4877+11 TO THE EXPOSED PAD VARIATIONS TABLE.	5/6/15	JT
S	CN# 1001022. ADDED CU WIRE PKGCODES	06/23/15	MM
T	CN# 1004536. REMOVED COPLANARITY NOTE.	02/24/16	AG
U	CN# 1006148. ADD NEW PACAKGE CODE T4877+12	04/26/16	AG
V	CN# 1039831. ADDED NEW PACAKGE CODE T4877-9CA	08/06/18	BG
W	CN 1066124. Combined "Exposed Pad Variation" and "Corner Lead Chamfer variation" Tables.	08/23/19	BG
X	CN 1154316. Added T4877+11C, package codes to "+"	03/09/22	BG
Y	CN 1189376. Added T5677+4.	06/22/23	BG

TITLE: PACKAGE OUTLINE, 32, 44, 48, 56L THIN QFN, 7x7x0.75mm



DOCUMENT I.D.

21-0144

REVISION

Y

PAGE

4