

CTC APPROVAL CODE		020609PC6		DWG NO		QSQPM-CP0D-0077		REV		A		SCALE		NTS	
TOLERANCES (INCH/MM)		FRAC		DECIMALS		FINISHING		ORIGINATOR		REQUESTOR		TOOLING DEPT MANAGER		ENGINEERING MANAGER	
±		±		X		X		QA DEPT MANAGER		CTC DESIGN DEPT MANAGER		TITLE		QSQM MATRIX NARROW BODY PACKAGE OUTLINE	
±		±		XXX		XXX		QA DEPT MANAGER		CTC DESIGN DEPT MANAGER		REF :		CUSTOMER SPECIFICATION	
±		±		XXXX		XXXX		QA DEPT MANAGER		CTC DESIGN DEPT MANAGER		SHEET NO :		1 OF 3	
CTC APPROVAL CODE		020609PC6		DWG NO		QSQPM-CP0D-0077		REV		A		SCALE		NTS	
TOLERANCES (INCH/MM)		FRAC		DECIMALS		FINISHING		ORIGINATOR		REQUESTOR		TOOLING DEPT MANAGER		ENGINEERING MANAGER	
±		±		X		X		QA DEPT MANAGER		CTC DESIGN DEPT MANAGER		TITLE		QSQM MATRIX NARROW BODY PACKAGE OUTLINE	
±		±		XXX		XXX		QA DEPT MANAGER		CTC DESIGN DEPT MANAGER		REF :		CUSTOMER SPECIFICATION	
±		±		XXXX		XXXX		QA DEPT MANAGER		CTC DESIGN DEPT MANAGER		SHEET NO :		1 OF 3	



TITLE
QSQM MATRIX NARROW BODY
PACKAGE OUTLINE

REF : CUSTOMER SPECIFICATION
SHEET NO : 1 OF 3

REV	POS	DESCRIPTION	DATE	BY	APPD
A	—	BTM finishing: 12~27	2009 Apr	SH Lao	—
O	—	INITIAL RELEASE	—	—	—

SYMBOL	QSOP 16LD	
	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
A2	1.37	1.50
b	0.20	0.30
C	0.19	0.25
D	4.80	4.98
E	5.79	6.20
E1	3.81	3.99
e	0.635 BSC	
h	0.22	0.49
L	0.40	1.27
α	0 °	8 °
ZD	0.230 REF	


SYMBOL	QSOP 20LD	
	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
A2	1.37	1.57
b	0.20	0.30
C	0.19	0.25
D	8.55	8.74
E	5.79	6.20
E1	3.81	3.99
e	0.635 BSC	
h	0.22	0.49
L	0.40	1.27
α	0 °	8 °
ZD	1.473 REF	


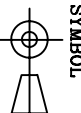
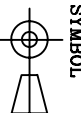

SYMBOL	QSOP 24LD	
	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
A2	1.37	1.57
b	0.20	0.30
C	0.19	0.25
D	8.55	8.74
E	5.79	6.20
E1	3.81	3.99
e	0.635 BSC	
h	0.22	0.49
L	0.40	1.27
α	0 °	8 °
ZD	0.838 REF	

SYMBOL	QSOP 28LD	
	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
A2	1.37	1.57
b	0.20	0.30
C	0.19	0.25
D	9.80	9.98
E	5.79	6.20
E1	3.81	3.99
e	0.635 BSC	
h	0.22	0.49
L	0.40	1.27
α	0 °	8 °
ZD	0.838 REF	

NOTES:

1. LEAD COPLANARITY SHOULD BE 0 TO 0.10MM (.004") MAX.
2. PACKAGE SURFACE FINISHING:
(2.1) TOP : MATTE (CHARMILES#18~30).
(2.2) BOTTOM : MATTE (CHARMILES#12~27).
3. ALL DIMENSIONS EXCLUDING MOLD FLASHES AND END FLASH FROM THE PACKAGE BODY SHALL NOT EXCEED 0.25MM (.010") PER SIDE(D).

4. DIMENSION "b" DOES NOT INCLUDE DAMBAR PROTRUSION/ INTRUSION BUT SOLDER COVERAGE.

 DETAIL OF PIN #1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN THE ZONE INDICATED.

CTC APPROVAL CODE		020609PC6	
DWG NO	QSOPM-CP0D-0077	FINISHING	
TOLERANCES (INCH/MM)		DECIMALS	X XX XXX XXXX
FRAC	±	ANGLE	±
SYMBOL		STYMBOL	
REV	A	SCALE	NTS
ORIGINATOR		REQUESTOR	
TOOLING DEPT MANAGER		ENGINEERING MANAGER	
QA DEPT MANAGER		CTC DESIGN DEPT MANAGER	
 Carssem Your Technology Partner		TITLE QSOP MATRIX NARROW BODY PACKAGE OUTLINE REF : CUSTOMER SPECIFICATION SHEET NO : 2 OF 3	

SYMBOL	QSOP 16LD	
	MIN	MAX
A	.0532	.0688
A1	.0040	.0098
A2	.054	.059
b	.008	.012
C	.0075	.0098
D	.189	.196
E	.228	.244
E1	.150	.157
e	.025	BSC
h	.009	.019
L	.016	.050
α	0 °	8 °
ZD	.009	REF

SYMBOL	QSOP 20LD	
	MIN	MAX
A	.0532	.0688
A1	.0040	.0098
A2	.054	.062
b	.008	.012
C	.0075	.0098
D	.337	.344
E	.228	.244
E1	.150	.157
e	.025	BSC
h	.009	.019
L	.016	.050
α	0 °	8 °
ZD	.058	REF

SYMBOL	QSOP 24LD	
	MIN	MAX
A	.0532	.0688
A1	.0040	.0098
A2	.054	.062
b	.008	.012
C	.0075	.0098
D	.337	.344
E	.228	.244
E1	.150	.157
e	.025	BSC
h	.009	.019
L	.016	.050
α	0 °	8 °
ZD	.033	REF

SYMBOL	QSOP 28LD	
	MIN	MAX
A	.0532	.0688
A1	.0040	.0098
A2	.054	.062
b	.008	.012
C	.0075	.0098
D	.386	.393
E	.228	.244
E1	.150	.157
e	.025	BSC
h	.009	.019
L	.016	.050
α	0 °	8 °
ZD	.033	REF

NOTES:

- LEAD COPLANARITY SHOULD BE 0 TO 0.10MM (.004") MAX.
- PACKAGE SURFACE FINISHING:
 - (2.1) TOP : MATTE (CHARMILLES#18~30).
 - (2.2) BOTTOM : MATTE (CHARMILLES#12~27).
- ALL DIMENSIONS EXCLUDING MOLD FLASHES AND END FLASH FROM THE PACKAGE BODY SHALL NOT EXCEED 0.25MM (.010") PER SIDE(D).
- DIMENSION "b" DOES NOT INCLUDE DAMBAR PROTRUSION/INTRUSION BUT SOLDER COVERAGE.
 - DETAIL OF PIN #1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN THE ZONE INDICATED.

CTC APPROVAL CODE		020609PC6	
DWG NO	QSOPM-CP0D-0077	REV	A
TOLERANCES (INCH/MM)		SCALE	NTS
FRAC	DECIMALS	REQUESTOR	
±	X	TOOLING DEPT MANAGER	
±	XX	ENGINEERING MANAGER	
±	XXX	QA DEPT MANAGER	
±	XXXX	CTC DESIGN DEPT MANAGER	
FINISHING		TITLE	
SYMBOL		QSOP MATRIX NARROW BODY	
PACKAGE OUTLINE		REF : CUSTOMER SPECIFICATION	
SHEET NO : 3 OF 3		Carsem Your Technology Partner	