OAE, OAP, OAP3 Series
ECL and PECL Oscillator

Lead-Free
RoHS Compliant

CALIBER
Electronics Inc.

PART NUMBERING GUIDE

Environmental/Mechanical Specifications on page F5

OAE 100 27 AA C - 30.000MHz

Package
OAE = 14 Pin Dip / ±5.2Vdc / ECL
OAP = 14 Pin Dip / +5.0Vdc / PECL
OAP3 = 14 Pin Dip / +3.3Vdc / PECL

Inclusive Stability
100= +/-100ppm, 50= +/-50ppm, 25= +/-25ppm,
10= +/-10ppm @ 25°C / +/-20ppm @ 0-70°C

Operating Temperature Range
Blank = 0°C to 70°C
27 = -20°C to 70°C (50ppm and 100ppm Only)
48 = -40°C to 85°C (50ppm and 100ppm Only)

Pin One Connection
Blank = No Connect
C = Complimentary Output

Pin Configurationy
See Table Below
ECL = AA, AB, AC, AB
PECL = A, B, C, E

ELECTRICAL SPECIFICATIONS

Revision: 1994-B

Frequency Range		20.000MHz to 250.000MHz
Operating Temperature Range		0°C to 70°C / -20°C to 70°C / -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage		ECL = ±5.2Vdc ±5% PECL = +5.0Vdc ±5% / +3.3Vdc ±5%
Input Current		140mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage and Load	±100ppm, ±50ppm, ±25ppm, ±10ppm/±20ppm (0° C to 70°C)
Output Voltage Logic High (Voh)	ECL Output	-1.0Vdc Minimum / -0.7Vdc Maximum
	PECL Output	4.0Vdc Minimum / 4.5Vdc Maximum
Output Voltage Logic Low (Vol)	ECL Output	-1.95Vdc Minimum / -1.6Vdc Maximum
	PECL Output	3.0Vdc Minimum / 3.42Vdc Maximum
Rise Time / Fall Time	20% to 80% of Waveform	2nSeconds Maximum
Duty Cycle	@1.4Vdc w/TTL Load	50 ±10% (Standard), 50±5% (Optional)
Load Drive Capability	ECL Output / AA, AB, AM / AC PECL Output	50 Ohms into -2.0Vdc / 50 Ohms into +3.0Vdc 50 Ohms into +3.0Vdc
Aging (@ 25°C)		±5ppm / year Maximum
Start Up Time		20mSeconds Maximum

PIN CONFIGURATIONS

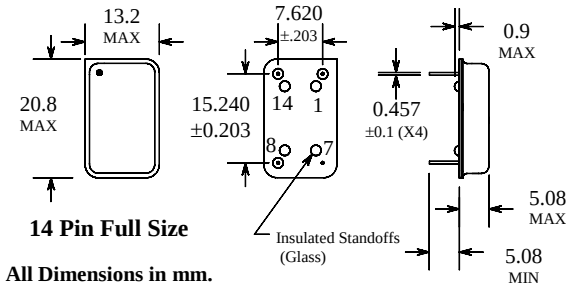
ECL

	AA	AB	AM
Pin 1	Ground/ Case	No Connect or Comp. Output	No Connect or Comp. Output
Pin 7	-5.2V	-5.2V	Case Ground
Pin 8	ECL Output	ECL Output	ECL Output
Pin 14	Ground	Case Ground	-5.2Vdc

PECL

	A	C	D	E
Pin 1	No Connect	No Connect	PECL Comp. Out	PECL Comp. Out
Pin 7	Vee (Case Ground)	Vee	Vee	Vee (Case Ground)
Pin 8	PECL Output	PECL Output	PECL Output	PECL Output
Pin 14	Vcc	Vcc (Case Ground)	Vcc	Vcc

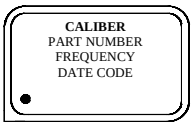
MECHANICAL DIMENSIONS



14 Pin Full Size

All Dimensions in mm.

Marking Guide



Marking Guide
Line 1: Caliber
Line 2: Complete Part Number
Line 3: Frequency in MHz
Line 4: Date Code (Year/Week)

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PART NUMBERING GUIDE

Environmental/Mechanical Specifications on page F5

CPO - D P 5 A E T - 125.000MHz

Package Style:
A = Full Size, 14 Pin Dip
B = Half Size, 8 Pin Dip
C1 = Ceramic SMD, 5X7X1.6mm (4 pad)
C2 = Ceramic SMD, 5X7X1.6mm (6 pad/PECL)
P = Plastic SMD, 10X13X5mm

Output Type:
C = HCMOS
P = PECL
S = HCMOS (with Tristate)

Pin One Connection:
5 = +5.0V
3 = +3.3V

Pin 1 Connection:
T = Tristate Enable High
P = Power Down

Operating Temperature Range:
Blank =-20°C to 70°C
E = -40°C to 85°C (50ppm / 100ppm)

Inclusive Stability:
A = +/-100ppm
B = +/-50ppm
C = +/-30ppm (0°C-70°C)
D = +/-25ppm (0°C-70°C)

ELECTRICAL SPECIFICATIONS

Revision: 2000-B

Frequency Range		340.000kHz to 250.000MHz
Operating Temperature Range		-20°C to 70°C / -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage		5.0Vdc ±10%, 3.3Vdc ±10%
Input Current		70mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage and Load	±100ppm, ±50ppm, ±30ppm (-20°C to 70°C), ±25ppm (-20° to 70°C)
Output Voltage Logic High (Voh) / PECL **Output Voltage Logic High (Voh) / HCMOS**		-1.0V Min. Vdd: -0.8V Max. -.04Vdc Min.
Output Voltage Logic Low (Vol) / PECL **Output Voltage Logic Low (Vol) / HCMOS**		-2.0V Min. Vdd: -1.6V Max. 0.4Vdc Max.
Rise Time / Fall Time		2nS Max. 20% to 80% / 80% to 20% (PECL) 5nS Max. 10% to 90% / 90% to 10% (HCMOS)
Duty Cycle	PECL HCMOS	50 ±10% 50 ±5%
Load Drive Capability	5.0V: up to 100.000MHz = 25pF / 100 to 250.000MHz = 10pF 3.3V: up to 100.000MHz = 15pF / 100 to 250.000MHz = 10pF	
Pin 1 Tristate Input Voltage	No Connection VIH VIL	Enables Output +2.2Vdc Minimum to Enable Output +0.8Vdc Maximum to Disable Output
Disable Current (TS Option)		30mA Max. (pin 1 ground)
Standby Current (PD Option)		50uA Max. (pin 1 ground)
Aging (@ 25°C)		±5ppm / year Maximum
Start Up Time		10mSeconds Maximum
Absolute Clock Jitter		±175pSeconds Maximum
One Sigma Clock Jitter		±50pSeconds Maximum