

PRODUCT CHANGE NOTICE

1. TITLE RADHARD MSI LOGIC POST IRRADIATION QIDD LIMIT INCREASE (MULTIPLE DEVICES)		2. DOCUMENT NUMBER SPO-2017-PCN-0001	
		3. DATE (Year, Month, Date) 2017, July 03	
4. MANUFACTURER NAME AND ADDRESS CAES 4350 CENTENNIAL BOULEVARD COLORADO SPRINGS, COLORADO 80907-3486		5. MANUFACTURER POINT OF CONTACT NAME Tim Meade	
		6. MANUFACTURER POINT OF CONTACT TELEPHONE 719-594-8048	
		7. MANUFACTURER POINT OF CONTACT EMAIL Tim.l.meade@cobhamaes.com	
8. CAGE CODE 65342	9. EFFECTIVE DATE 2017, October 31	10. PRODUCT IDENTIFICATION CODE See affected part list starting on SHEET 3	11. BASE PART See affected part list starting on SHEET 3
12. BLANK		13. SMD NUMBER See affected part list starting on SHEET 3	14. DEVICE TYPE DESIGNATOR See affected part list starting on SHEET 3
		15. RHA LEVELS R, F, G and H	16. QML LEVEL Q and V
		17. NON QML LEVEL N/A	18. GIDEP GB4-C-17-0002

19. PRODUCT CHANGE

As of the EFFECTIVE DATE listed in block 9, all RadHard Medium Scale Integrated (RHMSI) Logic devices listed in Table 1 starting on SHEET 3 will be guaranteed to the post-irradiation QIDD limits described below. Any previously purchased Rad Hard MSI devices are guaranteed to the SMD limits available at the time of purchase. The SMDs for all affected devices are targeted for update by the effective date above. The SMDs will be updated as appropriate to reflect the following limits for the device types listed on sheets 3 and 4:

New post-irradiation QIDD limits for SMD 5962-96572 Device Types 01 & 02 ONLY

TABLE IA. Electrical performance characteristics.								
Test	Symbol	Test conditions ^{2/} -55°C ≤ T _c ≤ +125°C unless otherwise specified	Device type	V _{DD}	Group A subgroups	Limits		Unit
						Min	Max	
Quiescent supply current	IDDQ	V _{IN} = V _{DD} OR V _{SS}	All	5.5 V	1, 2, 3		10.0	μA
		Max Rated RHA ^{2/}	All	5.5 V	1		50.0	

^{2/} Each device type supplied to this drawing is guaranteed to comply with the specifications in Table 1A through all RHA levels up to, and including, the maximum RHA level listed in section 1.5 Radiation Features. Pre and post irradiation values are identical unless otherwise specified in Table IA. When performing post irradiation electrical measurements for any RHA level, T_A = +25 °C.

Continued on sheet 2.

20. DISPOSITIONARY RECOMMENDATION:	CHECK & <input checked="" type="checkbox"/> USE AS IS	CONTACT <input type="checkbox"/> MANUFACTURER	REMOVE & <input type="checkbox"/> REPLACE	CORRECT & <input type="checkbox"/> USE AS SPECIFIED
21. ADEPT REPRESENTATIVE Lin-Chi Huang	22. SIGNATURE		23. DATE	

19. PRODUCT CHANGE CONTINUED

New post-irradiation QIDD limits for SMDs 5962-15238 and 5962-15239 ONLY

TABLE IA. Electrical performance characteristics.								
Test	Symbol	Test conditions <u>2/</u> -55°C ≤ T _C ≤ +125°C unless otherwise specified	Device type	V _{DD}	Group A subgroups	Limits		Unit
						Min	Max	
Quiescent supply current	I _{DDQ}	V _{IN} = V _{DD} or V _{SS}	All	3.6V and 5.5V	1, 2, 3		10.0	μA
			01		1		50.0	
			02		1		130.0	

2/ Each device type supplied to this drawing is guaranteed to comply with the specifications in Table 1A through all RHA levels up to, and including, the maximum RHA level listed in section 1.5 Radiation Features. Pre and post irradiation values are identical unless otherwise specified in Table IA. When performing post irradiation electrical measurements for any RHA level, T_A = +25 °C.

New post-irradiation QIDD limits for ALL other SMDs listed in affected device list starting on SHEET 3.

TABLE IA. Electrical performance characteristics.								
Test	Symbol	Test conditions <u>2/</u> -55°C ≤ T _C ≤ +125°C unless otherwise specified	Device type	V _{DD}	Group A subgroups	Limits		Unit
						Min	Max	
Quiescent supply current	I _{DDQ}	V _{IN} = V _{DD} or V _{SS}	All	5.5 V	1, 2, 3		10.0	μA
			01	5.5 V	1		50.0	
			03	5.5V	1		50.0	
			02	5.5 V	1		130.0	

2/ Each device type supplied to this drawing is guaranteed to comply with the specifications in Table 1A through all RHA levels up to, and including, the maximum RHA level listed in section 1.5 Radiation Features. Pre and post irradiation values are identical unless otherwise specified in Table IA. When performing post irradiation electrical measurements for any RHA level, T_A = +25 °C.

SHEET 3

Table 1. List of Affected Devices

SMD#:	Vendor #:
5962F1523801	CAG99
5962G1523801	CAG99
5962R1523801	CAG99
5962H1523802	CAG99
5962F1523901	CAS99
5962G1523901	CAS99
5962R1523901	CAS99
5962H1523902	CAS99
5962F9651201	CA000
5962G9651201	CA000
5962R9651201	CA000
5962F9651202	CE000
5962H9651202	CE000
5962F9651203	CE000
5962G9651203	CE000
5962R9651203	CE000
5962F9651301	LA000
5962G9651301	LA000
5962R9651301	LA000
5962F9651302	LE000
5962H9651302	LE000
5962F9651303	LE000
5962G9651303	LE000
5962R9651303	LE000
5962F9651401	CA002
5962G9651401	CA002
5962R9651401	CA002
5962F9651402	CE002
5962H9651402	CE002
5962F9651403	CE002
5962G9651403	CE002
5962R9651403	CE002
5962F9651501	LA002
5962G9651501	LA002
5962R9651501	LA002
5962F9651502	LE002
5962H9651502	LE002
5962F9651503	LE002
5962G9651503	LE002
5962R9651503	LE002
5962F9651601	CA004
5962G9651601	CA004
5962R9651601	CA004

5962F9651602	CE004
5962H9651602	CE004
5962F9651603	CE004
5962G9651603	CE004
5962R9651603	CE004
5962F9651701	L004
5962G9651701	L004
5962H9651701	L004
5962R9651701	L004
5962H9651702	LE004
5962F9651702	LE004
5962F9651703	LE004
5962G9651703	LE004
5962R9651703	LE004
5962G9651801	CA008
5962R9651801	CA008
5962F9651801	CA008
5962F9651802	CE008
5962H9651802	CE008
5962F9651803	CE008
5962G9651803	CE008
5962R9651803	CE008
5962F9651901	LA008
5962G9651901	LA008
5962R9651901	LA008
5962F9651902	LE008
5962H9651902	LE008
5962F9651903	LE008
5962G9651903	LE008
5962R9651903	LE008
5962F9652401	CA014
5962G9652401	CA014
5962R9652401	CA014
5962H9652402	CE014
5962F9652402	CE014
5962F9652403	CE014
5962G9652403	CE014
5962R9652403	CE014
5962F9652501	LA014
5962R9652501	LA014
5962G9652501	LA014
5962F9652502	LE014
5962H9652502	LE014
5962F9652503	LE014

5962G9652503	LE014
5962R9652503	LE014
5962F9652701	LA020
5962G9652701	LA020
5962R9652701	LA020
5962F9652702	LE020
5962H9652702	LE020
5962F9652703	LE020
5962G9652703	LE020
5962R9652703	LE020
5962F9653401	CA074
5962G9653401	CA074
5962R9653401	CA074
5962F9653501	LA074
5962G9653501	LA074
5962R9653501	LA074
5962F9653502	LE074
5962H9653502	LE074
5962F9653503	LE074
5962G9653503	LE074
5962R9653503	LE074
5962F9653801	CA086
5962G9653801	CA086
5962R9653801	CA086
5962F9653802	CE086
5962H9653802	CE086
5962F9653803	CE086
5962G9653803	CE086
5962R9653803	CE086
5962F9654001	CA109
5962G9654001	CA109
5962R9654001	CA109
5962F9654002	CE109
5962H9654002	CE109
5962F9654003	CE109
5962G9654003	CE109
5962R9654003	CE109
5962F9654201	CA132
5962G9654201	CA132
5962R9654201	CA132
5962F9654202	CE132
5962H9654202	CE132
5962F9654203	CE132
5962G9654203	CE132

5962R9654203	CE132
5962F9654301	LA132
5962G9654301	LA132
5962R9654301	LA132
5962F9654302	LE132
5962H9654302	LE132
5962F9654303	LE132
5962G9654303	LE132
5962R9654303	LE132
5962F9654401	C138
5962G9654401	C138
5962H9654401	C138
5962R9654401	C138
5962F9654402	CE138
5962H9654402	CE138
5962F9654403	CE138
5962G9654403	CE138
5962R9654403	CE138
5962F9655101	LA153
5962G9655101	LA153
5962R9655101	LA153
5962F9655102	LE153
5962H9655102	LE153
5962F9655103	LE153
5962G9655103	LE153
5962R9655103	LE153
5962R9655301	LA157
5962F9655301	LA157
5962G9655301	LA157
5962F9655302	LE157
5962H9655302	LE157
5962F9655303	LE157
5962G9655303	LE157
5962R9655303	LE157
5962F9655601	CA164
5962G9655601	CA164
5962R9655601	CA164
5962F9655602	CE164
5962H9655602	CE164
5962F9655603	CE164
5962G9655603	CE164
5962R9655603	CE164
5962F9655701	L164
5962G9655701	L164
5962H9655701	L164
5962R9655701	L164

5962F9655702	LE164
5962H9655702	LE164
5962R9655702	LE164
5962F9655703	LE164
5962G9655703	LE164
5962R9655703	LE164
5962F9655801	CA165
5962G9655801	CA165
5962R9655801	CA165
5962F9655802	CE165
5962H9655802	CE165
5962F9655803	CE165
5962G9655803	CE165
5962R9655803	CE165
5962F9656401	CA191
5962G9656401	CA191
5962R9656401	CA191
5962F9656402	CE191
5962H9656402	CE191
5962F9656403	CE191
5962G9656403	CE191
5962R9656403	CE191
5962F9656601	CA193
5962G9656601	CA193
5962R9656601	CA193
5962F9656602	CE193
5962H9656602	CE193
5962F9656603	CE193
5962G9656603	CE193
5962R9656603	CE193
5962F9656701	LA193
5962G9656701	LA193
5962R9656701	LA193
5962F9657001	CA244
5962G9657001	CA244
5962R9657001	CA244
5962F9657002	CE244
5962H9657002	CE244
5962F9657003	CE244
5962G9657003	CE244
5962R9657003	CE244
5962F9657101	L244
5962G9657101	L244
5962H9657101	L244
5962R9657101	L244
5962F9657201	C245

5962G9657201	C245
5962H9657201	C245
5962R9657201	C245
5962F9657202	C45S
5962G9657202	C45S
5962H9657202	C45S
5962R9657202	C45S
5962F9657301	LA245
5962G9657301	LA245
5962R9657301	LA245
5962H9657302	LE245
5962F9657302	LE245
5962F9657303	LE245
5962G9657303	LE245
5962R9657303	LE245
5962F9657801	CA273
5962G9657801	CA273
5962R9657801	CA273
5962F9657802	CE273
5962H9657802	CE273
5962F9657803	CE273
5962G9657803	CE273
5962R9657803	CE273
5962F9658401	CA283
5962G9658401	CA283
5962R9658401	CA283
5962F9658402	CE283
5962H9658402	CE283
5962F9658403	CE283
5962G9658403	CE283
5962R9658403	CE283
5962F9659501	LA541
5962G9659501	LA541
5962R9659501	LA541
5962H9659502	LE541
5962F9659502	LE541
5962F9659503	LE541
5962G9659503	LE541
5962R9659503	LE541