

CARE[®] BQR, FMECA

Failure Mode and Effects Analysis (All Failure Modes to End Effects)

Master Project Name - - Mission Name - Mission 1
 FMECA Project Name - FMECA3 Phase Name - Phase 1
 Project Notes - -

Block ID	Level	RefDes	Function	Description	Qty per parent
2	1	Assy		-	1

Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
Without effect		None	System / Without effect	Without effect	IV	-	None	-	-	-	-
Loss of VDD signal		None	System / Loss of VDD telemetrics	Loss of VDD telemetrics	III	-	None	-	-	-	-
Protection trigger and loss of 3V3_VEILLE		None	System / System Shutdown	System Shutdown	II	-	None	-	-	-	-
Loss of 3V3_VEILLE converter		None	System / System Shutdown	System Shutdown	II	-	None	-	-	-	-
Loss of 3V3_VEILLE Supply		None	System / System Shutdown	System Shutdown	II	-	None	-	-	-	-

Block ID	Level	RefDes	Function	Description	Qty per parent
55	2	01 3V3_VEILLE	3V3_VEILLE	-	1

Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
EMC effect		None	Assy / Without effect	Without effect	IV	-	None	-	-	-	-
3V3_VEILLE short circuit		None	Assy / Protection trigger and loss of 3V3_VEILLE	System Shutdown	II	-	None	-	-	-	-
Loss of GND		None	Assy / Without effect	Without effect	IV	-	None	-	-	-	-
Loss of U_VEILLE		None	Assy / Loss of 3V3_VEILLE converter	System Shutdown	II	-	None	-	-	-	-
Loss of 3V3_VEILLE Enable		None	Assy / Loss of 3V3_VEILLE converter	System Shutdown	II	-	None	-	-	-	-
Loss of 3V3_VEILLE		None	Assy / Loss of 3V3_VEILLE Supply	System Shutdown	II	-	None	-	-	-	-
loss of FB/SNS Input		None	Assy / Loss of 3V3_VEILLE converter	System Shutdown	II	-	None	-	-	-	-

Block ID	Level	RefDes	Function	Description	Qty per parent
10	3	C3		Ceramic capacitor - 0603 - X7R - 1µF/25V - 10%	1

Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
Change in Value	Internal cause / Cause of Change in Value	None	01 3V3_VEILLE / EMC effect	Without effect	IV	-	None	-	-	-	-
Open	Internal cause / Cause of Open	None	01 3V3_VEILLE / EMC effect	Without effect	IV	-	None	-	-	-	-
Short	Internal cause / Cause of Short	None	01 3V3_VEILLE / 3V3_VEILLE short circuit	System Shutdown	II	-	None	-	-	-	-

Block ID	Level	RefDes	Function	Description	Qty per parent
11	3	C4		Ceramic capacitor - 0603 - X7R - 2.2µF/10V - 10%	1

Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
Change in Value	Internal cause / Cause of Change in Value	None	01 3V3_VEILLE / EMC effect	Without effect	IV	-	None	-	-	-	-
Open	Internal cause / Cause of Open	None	01 3V3_VEILLE / EMC effect	Without effect	IV	-	None	-	-	-	-
Short	Internal cause / Cause of Short	None	01 3V3_VEILLE / 3V3_VEILLE short circuit	System Shutdown	II	-	None	-	-	-	-

Block ID	Level	RefDes	Function	Description	Qty per parent
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48	3	U13		3.3V/1A - Small Size - Low-Dropout Linear Voltage Regulator - Voltage Input Range: 2.5V to 16V	1
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Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
U13-1 open circuit	Internal cause / U13-1 open circuit	None	01 3V3_VEILLE / Loss of 3V3 VEILLE	System Shutdown	II	-	None	-	-	-	-
U13-2 open circuit	Internal cause / U13-2 open circuit	None	01 3V3_VEILLE / Loss of FB/SNS Input	System Shutdown	II	-	None	-	-	-	-
U13-3 open circuit	Internal cause / U13-3 open circuit	None	01 3V3_VEILLE / Loss of GND	Without effect	IV	-	Redundant GND pins	-	-	-	-
U13-4 open circuit	Internal cause / U13-4 open circuit	None	01 3V3_VEILLE / Loss of 3V3 VEILLE Enable	System Shutdown	II	-	None	-	-	-	-
U13-5 open circuit	Internal cause / U13-5 open circuit	None	01 3V3_VEILLE / Loss of GND	Without effect	IV	-	Redundant GND pins	-	-	-	-
U13-6 open circuit	Internal cause / U13-6 open circuit	None	01 3V3_VEILLE / Loss of U_VEILLE	System Shutdown	II	-	None	-	-	-	-
U13-7 open circuit	Internal cause / U13-7 open circuit	None	01 3V3_VEILLE / Loss of GND	Without effect	IV	-	Redundant GND pins	-	-	-	-

Block ID	Level	RefDes	Function	Description	Qty per parent
60	2	06 VDD_TARGET	VDD_TARGET	-	1

Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
Loss of VDD signal		None	Assy / Loss of VDD signal	Loss of VDD telemetrics	III	-	None	-	-	-	-
Without effect		None	Assy / Without effect	Without effect	IV	-	None	-	-	-	-

Block ID	Level	RefDes	Function	Description	Qty per parent
35	3	R24		SMD resistor - 22k - 1% - 0603 - 100mW	1

Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
Open	Internal cause / Cause of Open	None	06 VDD_TARGET / Loss of VDD signal	Loss of VDD telemetrics	III	-	None	-	-	-	-
Parameter Change	Internal cause / Cause of Parameter Change	None	06 VDD_TARGET / Without effect	Without effect	IV	-	None	-	-	-	-

Block ID	Level	RefDes	Function	Description	Qty per parent
40	3	R29		SMD resistor - 10k - 1% - 0402 - 63mW	1

Failure Mode Name	Internal Causes	Local Effect	Next Effects (Block / FM)	End Effects	Severity	Detection Method	Compensating Provisions	Failure Predictability	Maintenance Actions	Equipment List	Remarks
a	b	c	d	e	f	g	h	i	j	k	l
Open	Internal cause / Cause of Open	None	06 VDD_TARGET / Loss of VDD signal	Loss of VDD telemetrics	III	-	None	-	-	-	-
Parameter Change	Internal cause / Cause of Parameter Change	None	06 VDD_TARGET / Without effect	Without effect	IV	-	None	-	-	-	-

End of Report