

RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RH8-B0282B/E	Rev.	2.00
Title	Wrong description of the number of transistors for failure rate calculation according to IEC/TR 62380 and SN29500.		Information Category	Technical Notification		
Applicable Product	Refer to the Table 1.	Lot No.	Reference Document	Refer to the Table 1.		
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The description of the target documents provided by the applicable products listed in Table 1 has wrong descriptions

This RENESAS Technical update describes adding and removing target documents. The parts that have been changed are written in blue.

1. Misdescription

The misdescription is as follows,

- Wrong description regarding the parameters for failure rate calculation according to IEC/TR 62380

Element category	Misdescription	Target products
IC_DIE_LOGIC	The correct value is larger than the current value.	RH850/F1L, RH850/F1M, RH850/F1H, RH850/F1K, RH850/F1KH-D8, RH850/R1L
	The correct value is smaller than the current value.	RH850/F1KM-S4, RH850/F1KM-S1
IC_DIE_ANALOG	The correct value is larger than the current value.	All
IC_DIE_FLASH	The correct value is calculated by a different method as the current value.	All
IC_DIE_EEPROM	The correct value is calculated by a different method as the current value.	All
IC_DIE_SRAM	The correct value is larger than the current value.	All

- Wrong description regarding the parameters for failure rate calculation according to SN29500 (Only F1KM-S1)

	Misdescription
No. of gates / No. of transistors	The correct parameter is smaller than the current value.

2. Workaround

Please use the corrected values to calculate the failure rate according to the operating conditions.

3. Final handling

The updated failure rate calculation parameters are provided upon request.

Please contact your sales representative for the corrected failure rate calculation parameters.

Table 1 Applicable products and reference documents (1/4)

Series	Product code	Reference Document
RH850/F1L	R7F701002	Static FMEDA Summary for Default Support Package (R01AN3028EJ0100)
	R7F701003	Static FMEDA Summary for Default Support Package (R01AN3027EJ0100)
		機能安全パラメータについて (ACBC2-AB-18-0081)
	R7F701006	機能安全パラメータについて (ABC-AB-16-0082)
	R7F701007	Static FMEDA Summary for Default Support Package (R01AN2813EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN2813EJ0200)
		IEC/TR 62380 Parameters RH850/F1L 176pin ROM2MB ECO (LLWEB-10069234)
	R7F701008	Static FMEDA Summary for Default Support Package (R01AN2810EJ0100)
		機能安全パラメータについて (ACB-AB-15-0510)
		機能安全パラメータについて (ABC-AB-17-0171)
	R7F701010	IEC/TR 62380 Parameters RH850/F1L 48pin ROM512KB ECO (APCB-AB-19-0065)
		RH850/F1L Parameters for failure rate (APCB-AB-19-0042)
		Static FMEDA Summary for Default Support Package (R01AN2816EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN2816EJ0200)
	R7F701010 R7F701019 R7F701040 R7F701042	機能安全パラメータについて (ABC-AB-17-0155)
	R7F701011	IEC/TR 62380 Parameters RH850/F1L 64pin ROM256KB ECO (ACBC2-AB-18-0101)
		Static FMEDA Summary for Default Support Package (R01AN3046EJ0100)
	R7F701012	Static FMEDA Summary for Default Support Package (R01AN2646EJ0100)
	R7F701013	IEC/TR 62380 Parameters RH850/F1L 64pin ROM512KB ECO (ACBC2-AB-18-0209)
		RH850/F1L 64pin512KB ECO Failure Rate Parameter (ABC-AB-17-0108)
		RH850/F1L Parameters for failure rate (APCB-AB-18-0226)
		Static FMEDA Summary for Default Support Package (R01AN3047EJ0100)
		機能安全パラメータについて (ABC-AB-17-0591)
	R7F701015	RH850/F1L Parameters for failure rate (ACBC2-AB-18-0216)
	R7F701016	Static FMEDA Summary for Default Support Package (R01AN2947EJ0100)
	R7F701017	機能安全パラメータについて (ACBC2-AB-18-0060)
	R7F701018	IEC/TR 62380 Parameters RH850/F1L 80pin ROM512KB ECO (ACBC2-AB-18-0084)
		Static FMEDA Summary for Default Support Package (R01AN2993EJ0100)
	R7F701019	Static FMEDA Summary for Default Support Package (R01AN2891EJ0100)
	R7F701020	Static FMEDA Summary for Default Support Package (R01AN2815EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN2815EJ0200)
	R7F701021	IEC/TR 62380 Parameters RH850/F1L 100pin ROM256KB ECO (ACBC2-AB-18-0180)
		Static FMEDA Summary for Default Support Package (R01AN3099EJ0100)
		機能安全パラメータと面積比率について (ACB-AB-15-0658)
		機能安全パラメータについて (ABC-AB-17-0430)
	R7F701021 R7F701046	機能安全パラメータについて (ABC-AB-17-0156)
	R7F701021 R7F701023	機能安全パラメータについて (ABC-AB-17-0413)
	R7F701022	RH850/F1L Parameters for failure rate (APCB-AB-19-0016)
		Static FMEDA Summary for Default Support Package (R01AN2882EJ0100)
	R7F701023	IEC/TR 62380 Parameters RH850/F1L 100pin ROM512KB ECO (APCB-AB-18-0146)
		RH850/F1L Parameters for failure rate (ACBC2-AB-18-0122)
		RH850/F1L Parameters for failure rate (ACBC2-AB-18-0176)
		RH850/F1L Parameters for failure rate (ACBC2-AB-18-0196)
		Static FMEDA Summary for Default Support Package (R01AN3043EJ0100)

Table 1 Applicable products and reference documents (2/4)

Series	Product code	Reference Document
RH850/F1L	R7F701024	IEC/TR 62380 Parameters RH850/F1L 100pin ROM768KB ECO (ACBC2-AB-18-0154)
		RH850/F1L Parameters for failure rate (APCB-AB-19-0017)
		Static FMEDA Summary for Default Support Package (R01AN2892EJ0100)
		機能安全パラメータについて (ABC-AB-16-0083)
		機能安全パラメータについて (ABC-AB-17-0136)
	R7F701025	IEC/TR 62380 Parameters RH850/F1L 100pin ROM1MB ECO (ACBC2-AB-18-0153)
		RH850/F1L Parameters for failure rate (APCB-AB-18-0001)
		Static FMEDA Summary for Default Support Package (R01AN3325EJ0100)
		機能安全パラメータについて (ABC-AB-16-0010)
		機能安全パラメータについて (ABC-AB-16-0441)
		機能安全パラメータについて (ABC-AB-17-0016)
		機能安全パラメータについて (ABC-AB-17-0556)
		機能安全パラメータについて (ABC-AB-17-0594)
	R7F701028	RH850/F1L Parameters for failure rate (APCB-AB-19-0047)
		Static FMEDA Summary for Default Support Package (R01AN2883EJ0100)
	R7F701029	IEC/TR 62380 Parameters RH850/F1L 144pin ROM1MB ECO (ACBC2-AB-18-0102)
		Static FMEDA Summary for Default Support Package (R01AN2712EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN2712EJ0200)
		機能安全パラメータについて (ABC-AB-16-0111)
		FUNCTIONAL SAFETY PARAMETER FOR FIT CALCULATION (ABC-AB-17-0057)
	R7F701029 R7F701047	機能安全パラメータについて (ACSM-AB-14-0368)
	R7F701030	Static FMEDA Summary for Default Support Package (R01AN2814EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN2814EJ0200)
	R7F701032	Static FMEDA Summary for Default Support Package (R01AN3090EJ0100)
		機能安全パラメータについて (ABC-AB-16-0131)
	R7F701033	IEC/TR 62380 Parameters RH850/F1L 176pin ROM1MB ECO (ACBC2-AB-18-0151)
		RH850/F1L Parameters for failure rate (LLWEB-10064925)
		Static FMEDA Summary for Default Support Package (ABC-AB-17-0051)
		Static FMEDA Summary for Default Support Package (R01AN3737EJ0100)
		機能安全パラメータと面積比率について (ACB-AB-15-0333)
		機能安全パラメータについて (ABC-AB-17-0326)
		機能安全パラメータについて (ABC-AB-17-0445)
		機能安全パラメータについて (ABC-AB-17-0597)
	R7F701034	IEC/TR 62380 Parameters RH850/F1L 176pin ROM1.5MB ECO (APCB-AB-18-0128)
		Static FMEDA Summary for Default Support Package (ABC-AB-17-0052)
		Static FMEDA Summary for Default Support Package (R01AN3330EJ0100)
		機能安全パラメータについて (ABC-AB-16-0112)
		FUNCTIONAL SAFETY PARAMETER FOR FIT CALCULATION (ABC-AB-17-0055)
		FUNCTIONAL SAFETY PARAMETER FOR FIT CALCULATION (ABC-AB-17-0056)
	R7F701007 R7F701034	RH850/F1L Parameters for failure rate (ACBC2-AB-18-0071)
	R7F701040	Static FMEDA Summary for Default Support Package (R01AN3026EJ0100)
	R7F701044	機能安全パラメータについて (ABC-AB-17-0040)
		機能安全パラメータについて (ABC-AB-17-0461)
	R7F701045	IEC/TR 62380 Parameters RH850/F1L 100pin ROM1MB ADVANCED (ACBC2-AB-18-0103)
	R7F701046	Static FMEDA Summary for Default Support Package (R01AN3354EJ0100)
	R7F701047	IEC/TR 62380 Parameters RH850/F1L 144pin ROM1MB ADVANCED (APCB-AB-18-0003)

Table 1 Applicable products and reference documents (3/4)

Series	Product code	Reference Document
RH850/F1L	R7F701049	Static FMEDA Summary for Default Support Package (R01AN2812EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN2812EJ0200)
	R7F701053	Static FMEDA Summary for Default Support Package (R01AN2811EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN2811EJ0200)
		機能安全パラメータについて (ABC-AB-17-0585)
	R7F701054	機能安全パラメータについて (ABC-AB-17-0053)
	R7F701057	Static FMEDA Summary for Default Support Package (R01AN2905EJ0100)
		FMEDA(summary) (R01AN2614EJ0100)
RH850/F1M	R7F701002	RH850/F1L Parameters for failure rate (APCB-AB-18-0109)
	R7F701003	RH850/F1L Parameters for failure rate (APCB-AB-18-0108)
	R7F701544	機能安全パラメータについて (ABC-AB-16-0009)
		Functional safety Parameter for FIT calculation (ABC-AB-17-0264)
	R7F701548	RH850/F1M Parameters for failure rate (APCB-AB-18-0225)
		Static FMEDA Summary for Default Support Package (R01AN3465EJ0100)
	R7F701552	Static FMEDA Summary for Default Support Package (R01AN3178EJ0100)
		Static FMEDA (Summary) (ACBC2-AB-18-0017)
RH850/F1H	R7F701564	RH850/F1M 144pin3MB ADVANCED Failure Rate Parameter (ABC-AB-17-0134)
	R7F701573	Parameters for failure rate (ACBC2-AB-18-0135)
	R7F701501	RH850/F1H 176pin 3MB ECO IEC62380 Parameter (ABC-AB-17-0514)
	R7F701502	機能安全パラメータについて (ACB-AB-15-0268)
	R7F701503	
	R7F701503	Static FMEDA Summary for Default Support Package (R01AN3106EJ0100)
	R7F701506	Static FMEDA Summary for Default Support Package (R01AN3166EJ0100)
	R7F701526	Static FMEDA (Summary) (ABC-AB-17-0470)
	R7F701527	機能安全パラメータについて (ABC-AB-16-0327)
	R7F701527	機能安全パラメータについて (ABC-AB-17-0495)
	R7F701530	
	R7F701529	IEC/TR 62380 Parameters (APCB-AB-19-0081)
RH850/F1K	R7F701530	IEC/TR 62380 Parameters (APCB-AB-19-0084)
	R7F701531	機能安全パラメータについて (ABC-AB-16-0326)
	R7F701543	Static FMEDA (Summary) (LLWEB-10073114)
	R7F701563	機能安全パラメータについて (ABC-AB-17-0167)
	R7F701583	
	R7F701613	
	R7F701623	
	R7F701560	IEC/TR 62380 ParametersRH850/F1K 100pin ROM1.5MB ADVANCED (LLWEB-10069770)
	R7F701566	IEC/TR 62380 Parameters RH850/F1K 176pin ROM1.5MB ADVANCED (ACBC2-AB-18-0090)
	R7F701567	RH850/F1K IEC/TR62380 Parameters (ACBC2-AB-18-0013)
		RH850/F1K Parameters for failure rate (APCB-AB-18-0191)
	R7F701577	IEC/TR 62380 Parameters RH850/F1K 176pin ROM1MB ADVANCED (APCB-AB-18-0219)
	R7F701581	IEC/TR 62380 Parameters RH850/F1K 100pin ROM2MB PREMIUM (ACBC2-AB-18-0092)
		RH850/F1K Parameters for failure rate (APCB-AB-19-0062)
		IEC/TR 62380 Parameters (ACBC2-AB-18-0039)
	R7F701582	RH850/F1K Parameters for failure rate (APCB-AB-19-0087)
	R7F701583	IEC/TR 62380 Parameters RH850/F1K 144pin ROM2MB PREMIUM (APCB-AB-19-0060)
		RH850/F1K Parameters for failure rate (APCB-AB-18-0165)
		Static FMEDA (Summary) (LLWEB-10072579)
	R7F701586	RH850/F1K Parameters for failure rate (ACBC2-AB-18-0069)
		RH850/F1K Parameters for failure rate (APCB-AB-18-0148)
	R7F701587	IEC/TR 62380 Parameters RH850/F1K 176pin ROM2MB PREMIUM (APCB-AB-19-0059)
		RH850/F1K Parameters for failure rate (APCB-AB-18-0187)

Table 1 Applicable products and reference documents (4/4)

Series	Product code	Reference Document
RH850/F1K	R7F701597	IEC/TR 62380 Parameters RH850/F1K 176pin ROM1MB PREMIUM (LLWEB-10065386)
	R7F701610	機能安全パラメータについて (ABC-AB-17-0060)
	R7F701611	IEC/TR 62380 Parameters RH850/F1K 100pin ROM1MB ADVANCED (ACBC2-AB-18-0091)
		機能安全パラメータについて (ABC-AB-17-0061)
	R7F701620	RH850/F1K Parameters for failure rate (APCB-AB-18-0111)
		機能安全パラメータについて (ABC-AB-16-0032)
		機能安全パラメータについて (ABC-AB-17-0409)
	R7F701621	RH850/F1K Parameters for failure rate (APCB-AB-18-0110)
		IEC/TR 62380 Parameters RH850/F1K 100pin ROM1MB PREMIUM (LLWEB-10068052)
		RH850/F1K 100pin1MB PREMIUM Failure Rate Parameter (ABC-AB-17-0323)
	R7F701623	IEC/TR 62380 Parameters RH850/F1K 144pin ROM1MB PREMIUM (LLWEB-10065385)
		Static FMEDA (Summary) (ABC-AB-17-0469)
RH850/F1KM-S4	R7F701634	IEC/TR 62380 Parameters (ACBC2-AB-18-0087)
	R7F701644	IEC/TR 62380 Parameters RH850/F1KM-S4 100pin ROM3MB CPU240MHz (APCB-AB-18-0209)
		RH850/F1KM Parameters for failure rate (APCB-AB-18-0213)
	R7F701645	IEC/TR 62380 Parameters RH850/F1KM-S4 100pin ROM4MB CPU240MHz (ACBC2-AB-18-0086)
	R7F701646	IEC/TR 62380 Parameters RH850/F1KM-S4 144pin ROM3MB CPU240MHz (APCB-AB-19-0043)
	R7F701647	Static FMEDA (Summary) (LLWEB-10069893)
	R7F701648	IEC/TR 62380 Parameters RH850/F1KM-S4 176pin ROM3MB CPU240MHz (APCB-AB-19-0033)
		RH850/F1KM Parameters for failure rate (APCB-AB-18-0176)
	R7F701649	IEC/TR 62380 Parameters RH850/F1KM-S4 176pin ROM4MB CPU240MHz (ACBC2-AB-18-0085)
		RH850/F1KM Parameters for failure rate (APCB-AB-18-0188)
		Functional Safety parameters (ABC-AB-17-0435)
		機能安全パラメータについて (ABC-AB-17-0443)
	R7F701651	RH850/F1KM Parameters for failure rate (LLWEB-10066023)
	R7F701653	IEC/TR 62380 Parameters (APCB-AB-18-0013)
RH850/F1KM-S1	R7F701684	IEC/TR 62380 Parameters (ACBC2-AB-18-0088)
		機能安全パラメータについて (ACC-AB-17-0286)
	R7F701686	IEC/TR 62380 Parameters (ACBC2-AB-18-0089)
	R7F701687	RH850/F1KM-S1 Parameters for failure rate (LLWEB-10074433)
	R7F701692	RH850/F1KM-S1 Parameters for failure rate (LLWEB-10059546)
RH850/F1KH-D8	R7F701709	RH850/F1KH Parameters for failure rate (LLWEB-10065147)
RH850/R1L	R7F701069	Static FMEDA Summary for Default Support Package (R01AN2881EJ0100)
		Static FMEDA Summary for Default Support Package (R01AN3575EJ0100)