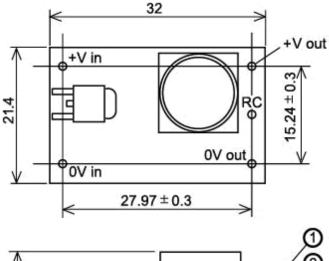
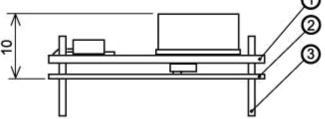


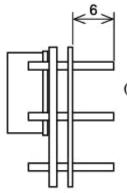


OC1XX-SCXXXX-A

4.6~28.8 WATT **NON-ISOLATED** DC-DC CONVERTER







Turn on by inputting voltage (4.5 to 56V) between "RC"pin and "0V"pin .Put a 5k ohm resistor between "+ in"pin and "RC"pin when remote on/off is not used

- 1 Double-sided PCB FR4t=1.0
- 2 t=0.5 Insulator UL94V0
- (3) 1. ODIA PIN Material: BsB 2700 1/2H

Solder Plating

At rated input and output, 25[°C] ambient unless noted MODEL 0C1-24SC48U1A SPECIFICATION INPUT SPECIFICATION Rated Input Voltage [V] DC DC 48 [mĀ]Max Rated Input Current 700 Allowable Input Voltage Range [٧] DC40. 8 56 Not Specified Inrush Current $\times 1$ (Reference: 33[A], $7[\mu s]$, DC48[V]in) [mA] Typ. Stand-by Input Current 14 Input Current when Remote Control is off μ A] Typ Input Leakage Ripple Voltade [mVp-p]Typ. 1000 Efficiency [%] Typ. 95. 0 OUTPUT SPECIFICATION Maximum Output Power 4.6 ~ 28.8 Rated Output Voltage Rated Output Current 24 [mA] 1200 Output Voltage Accuracy [۷] 23. 28~24. 72 Ripple and Noise [mVp-p]Max **X**2 200 등 a.Line Regulation [mV]Max. 120 [mV]Max. [mV]Max. b. Load Regulation $\times 4$ 120 -20~71[°C] c. Temperature Effect 655 [mV]Max. d. Drift 135 e.Dynamic Line Regulation [mV]Max. ×6 ± 1500 f.Dynamic Load Regulation [mV]Max. ×7 ± 200 $\times 6$ g Recovery Time [ms] Max. 5 <u>×</u>7 Start-up Time [ms]Max. 5 Hold-up Time Not Specified (= 0[S])OPTIONAL FUNCTIONS Over Current Protection Auto recover. Hiccup. [A]Min. 1.30 Over Voltage Protection Zener diode limiting [V]Min. 26 4 Operation Indicator None Remote Control(RC ×8 Available Remote Sensing(RS) None Power Fail(PF) None Output Voltage Trimming None Input Fuse Built-in (2[A]) Serial Operation Not available Parallel Operation GENERAL SPECICATIONS Not available (1+1 redundant with using OR-ing diode is acceptable.) Operating Temperature Refer to the De-Rating Condition. သိ -20 **~** +71 -20 ~ +85 Except thermal shock Storage Temperature [%] RH [%] RH Operating Humidity 20 ~ 90 Without condensation Storage Humidity 90 Without condensation Withstanding Voltage Non Isolated Insulation Resistance Non Isolated Vibration ×9 $5 - 10[Hz] / XYZ axis <math>10[mm], 10 - 550[Hz] / 24.5[m/s^2]$ XYZ axis (non-operating) Shock $\times 9$ $294[m/s^2]$ / XYZ axis. Cooling Method Convection Cooling APPLIED STANDARDS North America: UL60950-1 2nd ed. 2011-12-19 Safety Standards CAN/CSA-C22. 2 No. 60950-1-07 2nd ed. 2011-12 Approved DIMENSION AND WEIGHT

※¹ Reference : At cold start.

Appearance

Dimension

REFERENCE

MTBF

Weight

Measured by Measured by a Bayonet type probe. Bandwidth DC-100[MHz].

[h]

- 3 40.8 to 6[V] DC input voltage.
- %4 At 48[V] DC , 0 to 100[%] load.
- %5 Up to 8[h] after 1[h].
- *6 At rated load , input voltage is changed between 40.8[V] DC and 56[V] DC.

[mm] (HxWxD)

[g]<u>Max</u>.

** At 148[V] DC. load is changed between 25[%] and 75[%]
 **8 ON: Apply DC2. 8V-Input Voltage between PIN "RC" and "OV" (Inflowing current will be 5-500[μA]Typ. when 5-56V applied)
 OFF: When PIN "RC" and "OV" is open Short the PIN "RC" and "+Input Voltage" when not using the RC function

%10

- %9 The hole size of the mother board have to be 1.3[ϕ], Solder resist window 3.4[ϕ] (In Thickness 1.6[mm] CEM-3 mother board).
 - Mother board have to be Non-resonated.
- *10 Standard for recommended reliability estimation of components' count method of JEITA's switching power supply. According to JEITA RCR-9102B (MIL-HDBK-217F-NOTICE 2).

On-Board Type

10 x 32 x 21.4

8

587, 986, 27

At rated input and output, 25[°C] ambient unless noted.

			MODEL	001_2 200	12241114		t rated input and		
PECIFICATION			0C1-3, 3SC1224U1A		0C1-05SC1224U1A		0C1-06SC1224U1A		
INPUT SPECIFICATION		51/2 B.6					-		
Rated Input Voltage		[V] DC		12	24	12	24	12	24
Rated Input Current		[mA] Max.		500	300	800	400	900	450
Allowable Input Voltage Range		[V]				DC10, 2			
Inrush Current			X 1	(Pof	oronoo . 0[A]	Not Spe		0 F 44 o T D024 FV	/] in)
Chand by Innut Current		[mA] Tym				10[μs], DC12[y		Υ
Stand-by Input Current Input Current when Remote Contro	ol io off	[mA]Typ. [μA]Typ.		10	<u>11</u>	10	11	10	11
Input Leakage Ripple Voltade	01 15 011.	[mVp-p]Typ.		500	500	700	700	700	700
Efficiency		[%] Typ.		84. 0	81. 0	89.0	87. 0	90.0	88. 0
OUTPUT SPECIFICATION		L70JIYP.		04. 0	01.0	1 09.0	07.0	1 90.0	00.0
Maximum Output Power		ГW1		I		4.6 ~	28.8		
Rated Output Voltage		[V]		3.	3		5	Ì	6
Rated Output Current		[mA]		1400		1400		1400	
Output Voltage Accuracy		[V]		3. 20 -		4. 85			~6.18
Ripple and Noise	[mVp-p]Max.	L·J	※ 2	20			00		00
≲ a.Line Regulation	[mV] Max.		×3	3 18 25 30					
b. Load Regulation	[mV]Max.	••••••	×4	1			5	3	30
0	[mV]Max.	-20~71 [°C]		9	1	13	37	1	64
c. lemperature Effect d. Drift	[mV]Max.		※ 5	3	0	4	-0	4	15
	[mV]Max.		×6	±5			000		000
f. Dynamic Load Regulation g. Recovery Time	[mV]Max.		※ 7	±2	00	±2	200	<u>+</u> :	200
g. Recovery Time	[ms]Max.		\times 6				5	•	
			※ 7						
Start-up Time	[ms]Max.						5		
Hold-up Time						Not Specified	d = 0[S]		
OPTIONAL FUNCTIONS				T					
Over Current Protection						Auto recove			
		[A]Min.		1.	b0		50	<u>j</u> 1.	50
Over Voltage Protection		F\/3 M :		<u> </u>	00	Zener diode		1	00
On a washi and Tandi and an		[V]Min. 3.63 5.75 6.90			90				
Operation Indicator Remote Control(RC)									
mote Control(RC) ————————————————————————————————————			None						
Power Fail (PF)				None					
Output Voltage Trimming									
Input Fuse									
Serial Operation			Not available						
Parallel Operation			Not available (1+1 redundant with using OR-ing diode is acceptable.)						
GENERAL SPECICATIONS						and the state of t	AND SIL IND		/
Operating Temperature					Ref	er to the De-Ra	ating Conditio	n.	
]		[°C]				-20 -			
Storage Temperature		[°C]			-20) ~ +85 Exce	pt thermal sh	nock	
Operating Humidity		[%] RH) ~ 90 With			
Storage Humidity		[%] RH		20 ~ 90 Without condensation					
Withstanding Voltage				Non Isolated					
Insulation Resistance				Non Isolated					
Vibration			※ 9						
Shock			※ 9	 					
Cooling Method						Convection	n Cooling		
APPLIED STANDARDS									
Safety Standards				North America	: UL60950-1	2nd ed. 2011-12	2-19	Approve	ed
DIMENSION AND WEIGHT									
Appearance			On-Board Type						
Dimension [mm] (HxWxD)			10 x 32 x 21.4						
Weight [g]Max.				L			8		
REFERENCE			\1.4.4.*	T04.0	20.00		00.00		00.00
MTBF [h]			※10	564, 8	5Z, 39	564, 8	ŏ∠. პ 9	564, 8	82. 39

- $\times 1$ Reference: At cold start.

- **RETERENCE: At Cold start.

 **2 Measured by Measured by a Bayonet type probe. Bandwidth DC-100[MHz].

 **3 40.8 to 56[V] DC input voltage.

 **4 At 48[V] DC, 0 to 100[%] load.

 **5 Up to 8[h] after 1[h].

 **6 At rated load, input voltage is changed between 40.8[V] DC and 56[V] DC.

 **7 At 48[V] DC, load is changed between 25[%] and 75[%]

 8 ONL **Apply DC.3 Voltaget between PIN **PP and **OV** (Inflowing our
- **8 ON : Apply DC2. 8V-Input Voltage between PIN "RC" and "OV" (Inflowing current OFF: When PIN "RC" and "OV" is open Short the PIN "RC" and "+Input Voltage" when not using the RC function
 **9 The hole size of the mother board have to be 1.3[φ], Solder resist window
- - (In Thickness 1.6[mm] CEM-3 mother board). Mother board have to be Non-resonated.
- **10 Standard for recommended reliability estimation of components' count method of JEITA's switching power supply. According to JEITA RCR-9102B (MIL-HDBK-

At rated input and output, $25[^{\circ}C]$ ambient unless noted.

		MODEL	001-	001-	0C1-	001-	0C1-	001-
SPECIFICATION			3. 3SC2448U	1A 05SC2448U1A	06SC2448U1A	09SC2448U1A	12SC2448U1A	15SC2448U1A
INPUT SPECIFICATION								
Rated Input Voltage		[V] DC	24 48		24 48	24 48	24 48	24 48
Rated Input Current		[mA]Max.	300 15	0 400 200	450 250	650 350	800 400	850 450
Allowable Input Voltage Range		[V]			DC20. 4	∼ 56		
Inrush Current		※ 1				ecified		
			(F	Reference: 16[A], 8[μ s], DC24[V]in / 33[A],	$7[\mu s], DC48[V]$	[]in)
Stand-by Input Current		[mA]Typ.	11 13	11 13	11 13	11 13	12 13	12 13
Input Current when Remote Cont	rol is off.	[μ A]Typ.	2 5		2 5	2 5	2 5	2 5
Input Leakage Ripple Voltade		[mVp-p]Typ.	500 50		700 700	700 700	800 800	900 900
Efficiency		[%] Typ.	79. 0 74.	0 85.0 82.0	87. 0 83. 0	90.0 87.0	93.0 90.0	95.0 92.0
OUTPUT SPECIFICATION								
Maximum Output Power		[W]		······		- 28.8	•	·
Rated Output Voltage		[V]	3. 3	5	6	9	12	15
Rated Output Current		[mA]	1400	1400	1400	1400	1300	1200
Output Voltage Accuracy		[V]	3. 20~3. 4		5.82~6.18		11.64~12.36	
Ripple and Noise	[mVp-p]Max.	<u> </u>	200	200	200	200	200	200
등 a.Line Regulation	[mV]Max.	<u> </u>	18	25	30	45	60	75
b. Load Regulation	[mV]Max.	※ 4	18	25	30	45	60	75
a. Line Regulation b. Load Regulation c. Temperature Effect d. Drift e. Dynamic Line Regulation	[mV]Max.	-20~71[°C]	90	137	164	246	328	410
d. Drift	[mV]Max.	※ 5	30	40	45	60	75	90
e. Dynamic Line Regulation	[mV]Max.	<u> </u>	±500	±1000	±1000	±1500	±1500	±1500
ಕ್ಷ f. Dynamic Load Regulation	[mV]Max.	<u> </u>	±200	±200	±200	±200	±200	±200
g. Recovery Time	[ms]Max.	× 6				5		
		※ 7						
Start-up Time	[ms]Max.					5		
Hold-up Time					Not Specifie	d = 0[S]		
OPTIONAL FUNCTIONS Over Current Protection			I		Zonor dioc	le limiting		
		[A]Min.	1. 50	1, 50	1, 50	1, 50	1, 40	1. 30
Over Voltage Protection		ניט ווווווי	1.00	1.00		le limiting	1.70	1.00
ovor vortugo rrococtron		[V]Min.	3, 63	5. 75	6. 90	10.35	13. 80	17, 25
Operation Indicator						ne		
Remote Control(RC)	or delicit situitodor							
Remote Sensing (RS)			No	lone				
Power Fail(PF)			None					
Output Voltage Trimming			None					
Input Fuse			Built-in (2[A])					
Serial Operation			Not available Not available (1+1 redundant with using OR-ing diode is acceptable.)					
Parallel Operation			Not av	ailable (1+1 re	dundant with	using OR-ing	diode is acce	ptable.)
GENERAL SPECICATIONS			l			D 1 2 1 1 2		
Operating Temperature		[00]		Ref	er to the De-		ion.	
Storage Temperature		[°C]		_2(~ +71	nock	
Operating Humidity								
Storage Humidity		[%] RH			$0 \sim 90$ With			***************************************
Withstanding Voltage		L/U_1X11				solated		
Insulation Resistance						solated		
Vibration		※ 9		5 - 10[Hz] /			z] / 24 5[m/s ²	·1
		<i>7</i>		[=3 /	XYZ axis (no			-
Shock		※ 9			$294[m/s^2]$			
Cooling Method						on Cooling		
APPLIED STANDARDS								
Safety Standards			North	America: UL609				Approved
DIMENSION AND WEIGHT				: UAN/	CSA-C22. 2 No. 6	1-0/ 2nd	ı ea. zull-12 F	pproved
Appearance					On-Boa	rd Type		
Dimension [mm] (HxWxD)						2 x 21.4		
Weight [g]Max.						8		
REFERENCE								
MTBF [h]		× 10	564, 882. 3	9 564, 882. 39	564, 882. 39	564, 882. 39	570, 125. 43	570, 125. 43

- ※1 Reference : At cold start.
- *2 Measured by Measured by a Bayonet type probe. Bandwidth DC-
- *3 40.8 to 56[V] DC input voltage.
- *4 At 48[V] DC, 0 to 100[%] load.
- *5 Up to 8[h] after 1[h].

- **6 At rated load, input voltage is changed between 40.8[V] DC and

 **7 At 48[V] DC, load is changed between 25[%] and 75[%]

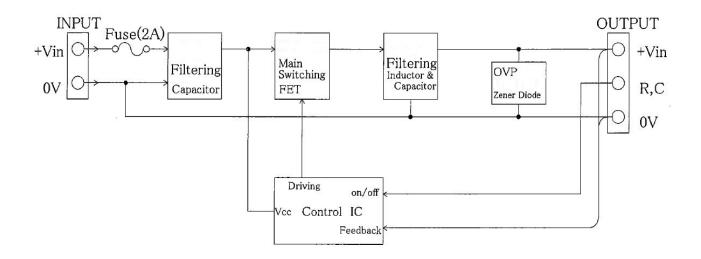
 **8 ON: Apply DC2.8V-Input Voltage between PIN "RC" and "OV"

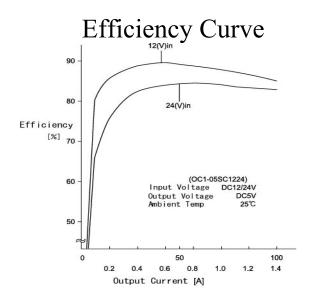
 OFF: When PIN "RC" and "OV" is open

 Short the PIN "RC" and "Input Voltage" when not using the RC function
- \$9 The hole size of the mother board have to be 1.3[ϕ], Solder (In Thickness 1.6[mm] CEM-3 mother board).
 - Mother board have to be Non-resonated.
- *10 Standard for recommended reliability estimation of components' count method of JEITA's switching power supply. According to



Block Diagram





SPEC SHEET

Subject	Part number	Old IC	New IC
Rated Input	0C1-3. 3SC1224u1	550/250 [mA]	500/300[mA]Max.
current	0C1-05SC1224u1	800/350 [mA]	800/400[mA]Max.
	0C1-06SC1224u1	950/450 [mA]	900/450[mA]Max.
	0C1-3. 3SC2448u1	300/150 [mA]	300/150[mA]Max.
	0C1-05SC2448u1	450/200 [mA]	400/200[mA]Max.
	0C1-06SC2448u1	500/250 [mA]	450/250[mA]Max.
	0C1-09SC2448u1	700/350 [mA]	650/350[mA]Max.
	0C1-12SC2448u1	850/400 [mA]	800/400[mA]Max.
	0C1-15SC2448u1	950/450 [mA]	850/450[mA]Max.
	0C1-24SC48u1	750 [mA]	700 [mA]Max.
No load Rated	0C1-3. 3SC1224u1	4/5 [mA]Typ.	10/11 [mA]Typ.
Input current	0C1-05SC1224u1	5/3 [mA]Typ.	10/11 [mA]Typ.
_	0C1-06SC1224u1	5/3 [mA]Typ.	10/11 [mA]Typ.
	0C1-3. 3SC2448u1	4/5 [mA]Typ.	11/13 [mA]Typ.
	0C1-05SC2448u1	2/2 [mA]Typ.	11/13 [mA]Typ.
	0C1-06SC2448u1	2/2 [mA]Typ.	11/13 [mA]Typ.
	0C1-09SC2448u1	3/2 [mA]Typ.	11/13 [mA]Typ.
	0C1-12SC2448u1	4/4 [mA]Typ.	12/13 [mA]Typ.
	0C1-15SC2448u1	6/4 [mA]Typ.	12/13 [mA]Typ.
	0C1-24SC48u1	4 [mA]Typ.	14 [mA]Typ.
Input current when RC is OFF	0C1-3. 3SC1224u1	0.2/0.56 [mA]Typ.	$1/2 [\mu A]$ Typ.
	0C1-05SC1224u1	0.24/0.6 [mA]Typ.	$1/2 \ [\mu A]$ Typ.
	0C1-06SC1224u1	0.24/1.15 [mA]Typ.	$1/2 [\mu A]$ Typ.
	0C1-3. 3SC2448u1	0.39/0.9 [mA]Typ.	2/5 [μA]Typ.
	0C1-05SC2448u1	0.42/0.93 [mA]Typ.	2/5 [μA]Typ.
	0C1-06SC2448u1	0.42/0.92 [mA]Typ.	2/5 [μA]Typ.
	0C1-09SC2448u1	0.37/0.9 [mA]Typ.	2/5 [μA]Typ.
	0C1-12SC2448u1	0.34/1.47 [mA]Typ.	2/5 [μA]Typ.
	0C1-15SC2448u1	0.27/1.50 [mA]Typ.	2/5 [μA]Typ.
	0C1-24SC48u1	0.56 [mA]Typ.	5 [μA]Typ.
Input current reakage ripple voltage	0C1-3. 3SC1224u1	1000/1000[mVp-p]Typ.	500/500[mVp-p]Typ.
	0C1-05SC1224u1	1000/1000[mVp-p]Typ.	700/700[mVp-p]Typ.
	0C1-06SC1224u1	1000/1000[mVp-p]Typ.	700/700[mVp-p]Typ.
	0C1-3. 3SC2448u1	700/1000[mVp-p]Typ.	500/500[mVp-p]Typ.
	0C1-05SC2448u1	1000/1300[mVp-p]Typ.	700/700[mVp-p]Typ.
	0C1-06SC2448u1	1200/1800[mVp-p]Typ.	700/700[mVp-p]Typ.
	0C1-09SC2448u1	1500/2000[mVp-p]Typ.	700/700[mVp-p]Typ.
	0C1-12SC2448u1	1500/2000[mVp-p]Typ.	800/800[mVp-p]Typ.
	0C1-15SC2448u1	1500/2500[mVp-p]Typ.	900/900[mVp-p]Typ.
	0C1-24SC48u1	3000[mVp-p]Typ.	1000[mVp-p]Typ.



	0C1-3. 3SC1224u1	78/75 [%]Typ.	84/81 [%]Typ.	
Efficiency	0C1-05SC1224u1	84/82 [%] Typ.	89/87 [%] Typ.	
	0C1-06SC1224u1	86/84 [%]Typ.	90/88 [%]Typ.	
	0C1-3. 3SC2448u1	74/69 [%]Typ.	79/74 [%] Typ.	
	0C1-05SC2448u1	81/78 [%]Typ.	85/82 [%]Typ.	
	0C1-06SC2448u1	84/80 [%]Typ.	87/83 [%]Typ.	
	0C1-09SC2448u1	88/85 [%]Typ.	90/87 [%]Typ.	
	0C1-12SC2448u1	91/88 [%]Typ.	93/90 [%] Typ.	
	0C1-15SC2448u1	93/90 [%]Typ.	95/92 [%]Typ.	
	0C1-24SC48u1	93 [%] Typ.	95 [%]Typ.	
Dynamic Load Voltage	0C1-3. 3SC1224u1	$\pm 500 [\mathrm{mV}] \mathrm{Max}.$	$\pm 500 [mV] Max.$	
	0C1-05SC1224u1	$\pm 600 [mV] Max.$	$\pm 1000 [\mathrm{mV}] \mathrm{Max}.$	
	0C1-06SC1224u1	$\pm 600 [mV] Max.$	$\pm 1000 [\mathrm{mV}] \mathrm{Max}$.	
	0C1-3. 3SC2448u1	$\pm 500 [\mathrm{mV}] \mathrm{Max}.$	$\pm 500 [\mathrm{mV}] \mathrm{Max.}$	
	0C1-05SC2448u1	$\pm 600 [\mathrm{mV}] \mathrm{Max}.$	$\pm 1000 [\mathrm{mV}] \mathrm{Max}.$	
	0C1-06SC2448u1	$\pm 600 [\mathrm{mV}] \mathrm{Max}.$	$\pm 1000 [\mathrm{mV}] \mathrm{Max}.$	
	0C1-09SC2448u1	$\pm 600 [\mathrm{mV}] \mathrm{Max}.$	$\pm1500[\mathrm{mV}]\mathrm{Max.}$	
	0C1-12SC2448u1	$\pm1000[\mathrm{mV}]\mathrm{Max}.$	$\pm 1500 [\mathrm{mV}] \mathrm{Max}.$	
	0C1-15SC2448u1	$\pm1000[\mathrm{mV}]\mathrm{Max}.$	$\pm1500[\mathrm{mV}]\mathrm{Max.}$	
	0C1-24SC48u1	$\pm 400 [\mathrm{mV}] \mathrm{Max}.$	$\pm 1500 [\mathrm{mV}] \mathrm{Max}.$	
Remote Control (Add voltage ON	All model	ON when 4.5-56V	ON when 2.8-56V	
Remote Contro Current	All model	150~1800 [μA]	5~500 [μA]	
Block Diagram	All model		See attached	

ПОСТАВКА ЭЛЕКТРОННЫХ КОМПОНЕНТОВ

многоканальный

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001 Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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