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SVN path: \$URL::

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Universal input (85Vac - 265Vac), 12V/100W

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board		PMP8920	Any	-	-
C1	1	220uF	CAP, AL, 220uF, 450V, +/-20%, TH	Radial 10-35x25	LGXW221MELC25	Nichicon		
C2	1	0.1uF	CAP, Film, 0.1uF, 275V, +/-20%, TH	17.5x5.5x12.5mm	ECQ-U2A104ML	Panasonic		
C3	1	0.22uF	CAP, Film, 0.22uF, 275V, +/-20%, TH	17.5x8x17.5mm	ECQ-U2A224ML	Panasonic		
C5	1	0.1uF	CAP, Film, 0.1uF, 400V, +/-10%, TH	Radial 18.2x8.5x17.9	ECQ-E4104KF	Panasonic		
C6	1	1uF	CAP, Film, 1uF, 450V, +/-10%, TH	Radial 18.2x8.5x17.9	ECQ-E2W105KH	Panasonic		
C7, C8	2	1000pF	CAP, CERM, 1000pF, 300V, +/-20%, Y5U, Radial Disc 7.5mm, Is=7.5	Radial Disc 7.5mm, Is=7.5	VY2102M29Y5UG63V7	Vishay-Bccomponents		
C9, C10	2	0.022uF	CAP CER 2200PF 300V 20% RADIAL	CAPRD500W60D900 H1200	VY2222M35Y5US6UV5	Vishay-Bccomponents		
C11	1	1uF	CAP, CERM, 1uF, 25V, +/-10%, X5R, 1206	1206	GRM319R61E105KC36 D	MuRata		
C12	1	1000pF	CAP, CERM, 1000pF, 50V, +/-5%, COG/NPO, 0603	0603	C0603C102J5GAC	Kemet		
C13, C17	2	0.22uF	CAP, CERM, 0.22uF, 16V, +/-10%, X7R, 0603	0603	C1608X7R1C224K	TDK		
C14	1	2.2uF	CAP, CERM, 2.2uF, 6.3V, +/-10%, X5R, 0603	0603	C0603C225K9PACTU	Kemet		
C15	1	220pF	CAP, CERM, 220pF, 50V, +/-5%, COG/NPO, 0805	0805	08055A221JAT2A	AVX		
C16	1	18pF	CAP, CERM, 18pF, 50V, +/-5%, COG/NPO, 0603	0603	C0603C180J5GACTU	Kemet		
C18, C20	2	1uF	CAP, CERM, 1uF, 25V, +/-10%, X5R, 0603	0603	GRM188R61E105KA12 D	MuRata		
C19, C29	2	DNP	CAP, CERM, xxxF, xxV, [TempCo], xx%, [PackageReference]	Used in PnP output	Used in BOM report	Used in BOM report	-	-
C21, C101	2	1000uF	CAP ALUM 1000UF 16V 20% RADIAL	10x20	EEUFM1C102	Panasonic		
C22, C23, C40, C54, C57	5	1uF	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603	0603	C0603C105K4PACTU	Kemet		
C24	1	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	0603	06033C104KAT2A	AVX		
C25	1	1uF	CAP, CERM, 1uF, 25V, +/-10%, X5R, 0805	0805	08053D105KAT2A	AVX		
C26	1	100pF	CAP, CERM, 100pF, 500V, +/-10%, X7R, 1808	1808	VJ1808Y101KXEA15Z	Vishay-Vitramon		
C27	1	0.015uF	CAP, Film, 0.015uF, 1250V, +/-5%, TH	18x7.5x13mm	121MPE153J	Rubycon		
C28, C36	2	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0402	0402	GRM155R61C104KA88 D	MuRata		
C30	1	0.01uF	CAP, CERM, 0.01uF, 50V, +/-5%, COG/NPO, 0805	0805	C2012C0G1H103J	TDK		
C31, C41, C42, C45, C47, C48	6	0.1uF	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603	06033C104JAT2A	AVX		
C32	1	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 1206	1206	12063C105KAT2A	AVX		
C33	1	100pF	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	0603	06033C101KAT2A	AVX		
C34	1	0.22uF	CAP, CERM, 0.22uF, 25V, +/-10%, X5R, 0603	0603	06033D224KAT2A	AVX		
C35	1	6800pF	CAP, CERM, 6800pF, 100V, +/-10%, X7R, 0603	0603	06031C682KAT2A	AVX		
C37	1	150pF	CAP, CERM, 150pF, 50V, +/-5%, COG/NPO, 0402	0402	GRM1555C1H151JA01 D	MuRata		
C38	1	0.1uF	CAP, CERM, 0.1uF, 250V, +/-10%, X7R, 1210	1210	GRM32DR72E104KW0 1L	MuRata		
C39	1	22uF	CAP, CERM, 22uF, 16V, +/-20%, X5R, 1206	1206	GRM31CR61C226ME15 L	MuRata		
C43	1	1uF	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0805	0805	0805YD105KAT2A	AVX		
C46, C49	2	2.2uF	CAP, CERM, 2.2uF, 10V, +/-10%, X5R, 0603	0603	C0603C225K8PACTU	Kemet		
C52, C53	2	47pF	CAP, CERM, 47pF, 25V, +/-5%, COG/NPO, 0402	0402	GRM1555C1E470JA01 D	MuRata		
C55, C56, C58, C59	4	47uF	CAP, CERM, 47uF, 16V, +/-10%, X5R, 1210	1210	GRM32ER61C476KE15 L	MuRata		
C104	1	2200pF	CAP, CERM, 2200pF, 50V, +/-5%, COG/NPO, 0603	0603	C1608C0G1H222J	TDK		
D1	1	0.0875V	Diode, Ultrafast, 600V, 8A, DDPK	DDPK	STTH8L06G	ST Microelectronics		
D2, D3, D6, D7	4	S5J	Diode, P-N, 600V, 5A, SMC	SMC	SSJ-E3/5T	Vishay-Semiconductor		
D4, D9, D10, D16	4	0.35V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54HT1G	ON Semiconductor		
D5	1	20V	Diode, Zener, 20V, 225mW, SOT-23	SOT-23	BZX84C20LT1G	ON Semiconductor		
D8, D13, D26, D32	4	0.63V	Diode, P-N, 70V, 0.2A, SOT-323	SOT-323	BAV99WT1G	Fairchild Semiconductor		
D12, D25	2	0.55V	Diode, Schottky, 30V, 0.35A, SOD-323	SOD-323	SD103BWS-7-F	Diodes Inc.		
D17, D24	2	1.4V	Diode, Ultrafast, 100V, 0.25A, SOD-323	SOD-323	BAS316, 115	NXP Semiconductor		
D18	1	12V	Diode, Zener, 12V, 200mW, SOD-323	SOD-323	MMSZ5242BS-7-F	Diodes Inc.		
D21, D22	2	MURA160T3G	Diode, Schottky, xxV, xxA, [PackageReference]	Used in PnP output	MURA160T3G	Used in BOM report	-	-
D23	1		Diode, Schottky, 200V, 0.2A, SOT-23	SOT-23	BAS21-V-GS08	Diodes Inc.		
D27, D28, D30, D31	4	1.25V	Diode, P-N, 150V, 0.2A, SOD-323	SOD-323	BAV20WS-TP	Micro Commercial Componen		
D29	1	0.65V	Diode, Schottky, 30V, 0.2A, SOT-23	SOT-23	BAT54C-7-F	Diodes Inc.		
D33	1	1V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT42WS	Diodes Inc.		
D100, D200	2		Diode, Schottky, 40V, 3A, SMA	SMA	CDBA140-G	Comchip Technology		
Earth1	1	White	Test Point, TH, Miniature, White	Keystone5002	5002	Keystone		
F1	1		Fuse, 5A, 250V, TH	TR5 fuse 8.5mm DIA	37215000001	Littelfuse		
GT1	1		Gas Discharge Tube, 2-Pole, TH	5mm Diameter	GTCA25-401M-R02	TE Connectivity		
J1	1	2x1	Conn Term Block, 2POS, 5.08mm, TH	PhoenixContact_1715 721	1715721	Phoenix Contact		
L1	1	180uH	Inductor, Shielded, Ferrite, 180uH, 2.65A, 0.17 ohm, TH	13.3mm DIA	RFS1317-184KL	Coilcraft		
L2, TP1, TP3, TP5, TP7	5	Red	Test Point, TH, Miniature, Red	Keystone5000	5000	Keystone		
L3	1	3.5uH	Inductor, Shielded Drum Core, Ferrite, 3.5uH, 11A, 0.0059 ohm, SMD	WE-PD-XXL	7447709003	Würth Elektronik eiSos		
L4	1	470uH	Inductor, yyA SMD	0.300" sq	MSD7342-474MLB	Coilcraft		
L5	1	150uH	Inductor, Shielded Drum Core, Ferrite, 150uH, 0.69A, 0.591 ohm, SMD	DR74	DR74-151-R	Coiltronics		
N1, TP2, TP4, TP6	4	Black	Test Point, TH, Miniature, Black	Keystone5001	5001	Keystone		
Q1	1		MOSFET N-CH 600V 20.2A TO263	DDPK	IPB60R190C6	Infineon Technologies		None
Q2	1	650V	MOSFET, N-CH, 650V, 11A, DPAK	DDPK	STD13NM60N	ST Microelectronics		None
Q3, Q7, Q14	3	20V	Transistor, PNP, 20V, 1.5A, SOT-23	SOT-23	FMMT718TA	Diodes Inc.		
Q4, Q6	2		MOSFET, N-CH, 250V, 25A, DDPK	DDPK	STB23NM50N			None
Q5, Q13	2		Transistor, NPN, 32V, 0.1A, SOT-23	SOT-23	FMMT620TA	Diode Inc	None	None
Q8	1	0.75V	Transistor, PNP, 40V, 0.6A, SOT-23	SOT-23	MMBT4403	Fairchild Semiconductor	None	None
Q9	1		MOSFET N-CH 800V 3A DPAK	DDPK	STDAK802T4	STMicroelectronics		None
Q10, Q15	2	40V	MOSFET, N-CH, 40V, 22A, SON 5x6mm	SON 5x6mm	CSD18501Q5A	Texas Instruments		None
Q12	1	60V	MOSFET, N-CH, 60V, 0.26A, SOT-23	SOT-23	2N7002ET1G	ON Semiconductor		
R1, R2	2	511k	RES, 511k ohm, 1%, 0.25W, 1206	1206	CRCW1206511KFKEA	Vishay-Dale		
R3, R5	2	680k	RES, 680k ohm, 5%, 0.25W, 1206	1206	CRCW1206680KJNEA	Vishay-Dale		
R4, R7	2	2.2	RES, 2.2 ohm, 5%, 0.1W, 0603	0603	CRCW06032R20JNEA	Vishay-Dale		
R6, R33	2	0	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R8	1	10.0k	RES, 10.0k ohm, 1%, 0.25W, 1206	1206	CRCW120610K0FKEA	Vishay-Dale		
R9	1	10	RES, 10 ohm, 5%, 0.125W, 0805	0805	CRCW080510R0JNEA	Vishay-Dale		
R10	1	49.9k	RES, 49.9k ohm, 1%, 0.25W, 1206	1206	CRCW120649K9FKEA	Vishay-Dale		

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
R11, R12, R13	3	0.68	RES, 0.68 ohm, 1%, 2W, 2512	2512	CSRN2512FKR680	Stackpole Electronics Inc		
R14, R16, R19	3	330k	RES, 330k ohm, 5%, 0.125W, 0805	0805	CRCW0805330KJNEA	Vishay-Dale		
R15, R18, R20	3	560k	RES, 560k ohm, 5%, 0.125W, 0805	0805	CRCW0805560KJNEA	Vishay-Dale		
R17	1	43.2k		0603		Vishay-Dale		
R21, R51	2	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R22	1	1.0k	RES, 1.0k ohm, 5%, 0.125W, 0805	0805	CRCW08051K00JNEA	Vishay-Dale		
R23	1	11.3k	RES, 11.3k ohm, 1%, 0.1W, 0603	0603	CRCW060311K3FKEA	Vishay-Dale		
R24	1	6.49k	RES, 6.49k ohm, 1%, 0.1W, 0603	0603	CRCW06036K49FKEA	Vishay-Dale		
R25, R31	2	10.0	RES, 10.0 ohm, 1%, 0.063W, 0402	0402	CRCW040210R0FKED	Vishay-Dale		
R27, R34	2	20k	RES, 20k ohm, 5%, 0.1W, 0603	0603	CRCW060320K0JNEA	Vishay-Dale		
R28, R37, R85	3	100k	RES, 100k ohm, 1%, 0.1W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		
R29	1	0	RES, 0 ohm, 5%, 0.25W, 1206	1206	RC1206JR-070RL	Yageo America		
R30	1	0.1	RES, 0.1 ohm, 1%, 1W, 2010	2010	CSRN2010FKR100	Stackpole Electronics Inc		
R32, R38	2	DNP	RES. xxx ohm, x%, xW. [PackageReference]	Used in PnP output		Used in BOM report	-	-
R35, R41	2	221k	RES, 221k ohm, 1%, 0.1W, 0603	0603	CRCW0603221KFKEA	Vishay-Dale		
R39	1	4.99k	RES, 4.99k ohm, 1%, 0.25W, 1206	1206	CRCW12064K99FKEA	Vishay-Dale		
R40	1	511	RES, 511 ohm, 1%, 0.1W, 0603	0603	CRCW0603511RFKEA	Vishay-Dale		
R41	1	2.2Meg	RES, 2.2Meg ohm, 5%, 0.1W, 0603	0603	CRCW06032M20JNEA	Vishay-Dale		
R42, R64, R66, R83, R98, R99, R101	7	100	RES, 100 ohm, 1%, 0.063W, 0402	0402	CRCW0402100RFKED	Vishay-Dale		
R43	1	DNP	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R44, R50	2	2.0k	RES, 2.0k ohm, 5%, 0.1W, 0603	0603	CRCW06032K00JNEA	Vishay-Dale		
R45	1	15.0	RES, 15.0 ohm, 1%, 0.1W, 0603	0603	CRCW060315R0FKEA	Vishay-Dale		
R46	1	3.83k	RES, 3.83k ohm, 1%, 0.1W, 0603	0603	CRCW06033K83FKEA	Vishay-Dale		
R47	1	20.0k	RES, 20.0k ohm, 1%, 0.1W, 0603	0603	CRCW060320K0FKEA	Vishay-Dale		
R48	1	3.74k	RES, 3.74k ohm, 1%, 0.1W, 0603	0603	CRCW06033K74FKEA	Vishay-Dale		
R49	1	1.0Meg	RES, 1.0Meg ohm, 5%, 0.1W, 0603	0603	CRCW06031M00JNEA	Vishay-Dale		
R52, R91	2	2.00k	RES, 2.00k ohm, 1%, 0.1W, 0603	0603	CRCW06032K00FKEA	Vishay-Dale		
R53, R56, R94	3	1.00k	RES, 1.00k ohm, 1%, 0.1W, 0603	0603	CRCW06031K00FKEA	Vishay-Dale		
R54	1	51.1k	RES, 51.1k ohm, 1%, 0.1W, 0603	0603	CRCW060351K1FKEA	Vishay-Dale		
R55	1	2.00k	RES, 2.00k ohm, 1%, 0.1W, 0603	0603	RC0603FR-072KL	Yageo America		
R57	1	619k	RES, 619k ohm, 1%, 0.063W, 0402	0402	CRCW0402619KFKEA	Vishay-Dale		
R58, R61	2	200k	RES, 200k ohm, 5%, 0.25W, 1206	1206	CRCW1206200KJNEA	Vishay-Dale		
R59	1	0	RES, 0 ohm, 5%, 0.063W, 0402	0402	ERJ-2GE0R00X	Panasonic		
R60, R62, R82	3	10.0k	RES, 10.0k ohm, 1%, 0.063W, 0402	0402	CRCW040210K0FKED	Vishay-Dale		
R63	1	1.8Meg	RES, 1.8Meg ohm, 5%, 0.063W, 0402	0402	CRCW04021M80JNED	Vishay-Dale		
R65	1	150k	RES, 150k ohm, 5%, 0.063W, 0402	0402	CRCW0402150KJNED	Vishay-Dale		
R67	1	1.0k	RES, 1.0k ohm, 5%, 0.063W, 0402	0402	CRCW04021K00JNED	Vishay-Dale		
R68, R70	2	1.0Meg	RES, 1.0Meg ohm, 5%, 0.125W, 0805	0805	ERJ-6GEYJ105V	Panasonic		
R69, R71	2	499k	RES, 499k ohm, 1%, 0.25W, 1206	1206	CRCW1206499KFKEA	Vishay-Dale		
R72, R73, R77, R81, R88, R95	6	20.0k	RES, 20.0k ohm, 1%, 0.063W, 0402	0402	CRCW040220K0FKED	Vishay-Dale		
R74	1	12.0k	RES, 12.0k ohm, 1%, 0.1W, 0603	0603	RC0603FR-0712KL	Yageo America		
R75	1	909k	RES, 909k ohm, 1%, 0.125W, 0805	0805	CRCW0805909KFKEA	Vishay-Dale		
R76	1	90.9k	RES, 90.9k ohm, 1%, 0.125W, 0805	0805	ERJ-6ENF9092V	Panasonic		
R78	1	205k	RES, 205k ohm, 1%, 0.1W, 0603	0603	CRCW0603205KFKEA	Vishay-Dale		
R79	1	15.0k	RES, 15.0k ohm, 1%, 0.063W, 0402	0402	CRCW040215K0FKED	Vishay-Dale		
R80, R92	2	100k	RES, 100k ohm, 1%, 0.063W, 0402	0402	CRCW0402100KFKEA	Vishay-Dale		
R84, R86	2	1.0Meg	RES, 1.0Meg ohm, 5%, 0.25W, 1206	1206	CRCW12061M00JNEA	Vishay-Dale		
R87	1	0	RES, 0 ohm, 5%, 0.125W, 0805	0805	CRCW08050000Z0EA	Vishay-Dale		
R89, R96	2	3.32k	RES, 3.32k ohm, 1%, 0.063W, 0402	0402	CRCW04023K32FKED	Vishay-Dale		
R90	1	12k	RES, 12k ohm, 5%, 0.125W, 0805	0805	CRCW080512K0JNEA	Vishay-Dale		
R93	1	150k	RES, 150k ohm, 1%, 0.063W, 0402	0402	CRCW0402150KFKEA	Vishay-Dale		
R97	1	13.0k	RES, 13.0k ohm, 1%, 0.063W, 0402	0402	CRCW040213K0FKED	Vishay-Dale		
R100	1	121k	RES, 121k ohm, 1%, 0.1W, 0603	0603	CRCW0603121KFKEA	Vishay-Dale		
R102, R103	2	10.0	RES, 10.0, 1%, 0.1 W, 0603	0603	CRCW060310R0FKEA	Vishay-Dale		
RT1	1	1 ohm	Thermistor NTC, 1 ohm, 20%	Disc. 11.5mmx6mm	B57237S109M51	EPCOS Inc		
RT2	1	10 ohm	Thermistor NTC, 10 ohm, 20%, Disc. 11.5mmx6mm	Disc. 11.5mmx6mm	B57236S0100M000	EPCOS Inc		
RV1, RV2, RV3, RV4	4		Varistor 275V RMS 10MM Radial, TH	10mm Radial	S10K275E2	EPCOS Inc		
T1	1	325 uH	Transformer, PFC Boost 325 uH	35.8x24.77x28.5 mm	750313807	Würth Elektronik eiSos		
T2	1	3300uH	Coupled inductor, 3300uH, 1.5A, 0.035 ohm, +/-30%, TH	17.5x22x13 mm	744822233	Würth Elektronik eiSos	-	-
T3	1	10mH	Coupled inductor, 10mH, 2A, 0.035 ohm, +/-30%, TH		744823210	Würth Elektronik eiSos	-	-
T4	1	810uH	Transformer, 810uH, TH	36.5x28.5x44mm	750313924	Würth Elektronik eiSos		
T5	1	260uH	Transformer, Gate Drive, 260uH, SMT	XFMR_7x6x7mm, SMT	760301105	Würth Elektronik eiSos		
U1	1		TRANSITION MODE PFC CONTROLLER, D0008A	D0008A	UCC28051D	Texas Instruments		None
U2, U11	2		GREEN Rectifier Controller Device, D0008A	D0008A	UCC24610D	Texas Instruments		None
U3	1		High-Performance Resonant Mode Controller with Voltage Control, 50 % Duty Cycle, -40 to +125 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br)	D0008A	UCC25600D	Texas Instruments	Equivalent	None
U4, U6	2		Opto-Isolator, 1 Channel, TH	DIP-4	PC817X4NSZOF			
U5	1		Adjustable Precision Zener Shunt Regulator, 3-pin SOT-23	MF03A	LM431ACM3	National Semiconductor		
U7	1		1.8V, Resistor-Programmable TEMPERATURE SWITCH and ANALOG OUT TEMPERATURE SENSOR, DCK0006A	DCK0006A	TMP300BIDCK	Texas Instruments		None
U8	1		Off-line Power Supply Controller, D0008A	D0008A	UCC2889D	Texas Instruments		None
U9	1		Low Power Low Offset Voltage Quad Comparator, 14-pin Narrow SOIC	M14A	LM2901MX	National Semiconductor		
U10	1		Precision Micropower Shunt Voltage Reference, 3-pin SOT-23	MF03A	LM4040CIM3X-5.0	National Semiconductor		
U12	1		50 mA, 24 V, 3.2-mA Supply Current Low-Dropout Linear Regulator, DCK0005A	DCK0005A	TPS71550DCK	Texas Instruments		None
XF1	1	TR5	Fuse Holder, TR5, TH	TR5 Fuse Holder	56000001009	Littelfuse		
C4, C44, C50	0	0.1uF	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603	06033C104JAT2A	AVX		
C51	0	47pF	CAP, CERM, 47pF, 1000V, +/-5%, U2J, 1206	1206	GRM31A7U3A470JW31D	MuRata		
D11	0	1.25V	Diode, P-N, 150V, 0.2A, SOD-323	SOD-323	BAV20WS-TP	Micro Commercial Component		
Q11	0	60V	MOSFET, N-CH, 60V, 0.26A, SOT-23	SOT-23	2N7002ET1G	ON Semiconductor		None
Q16	0	0.4V	Transistor, NPN, 40V, 0.15A, SOT-23	SOT-23	MMBT4401-7-F	Diodes Inc.		
R26	0	300k	RES, 300k ohm, 5%, 0.25W, 1206	1206	CRCW1206300KJNEA	Vishay-Dale		
R36	0	DNP	RES. xxx ohm, x%, xW. [PackageReference]	Used in PnP output		Used in BOM report	-	-
R104	0	100k	RES, 100k ohm, 1%, 0.063W, 0402	0402	CRCW0402100KFKEA	Vishay-Dale		
R105	0	41.2k	RES, 41.2k ohm, 1%, 0.063W, 0402	0402	CRCW040241K2FKED	Vishay-Dale		

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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