

Hitachi High-Power IGBT Modules

Status List

Date: Dec. 2010

Compliance status of RoHS directive

C: Compliant **S.C:** Compliant (Included RoHS exemption substance) **N:** Non compliant

Production Status

M: Mass production **W:** Working sample **D:** Discontinued

High-Voltage High-Power Series

Connection	Type name	Absolute Max. Ratings		Electrical Characteristics					Outline	RoHS Status	Status
		V _{CE(s)} (V)	I _C (A)	V _{CE(sat)} (V)Typ.	V _F (V)Typ.	t _{on} (s)Max.	t _{off} (s)Max.	t _f (s)Max.			
1 in 1	MBN1200E17D	1,700	1,200	2.7	1.9	1.8	3.4	0.7	N-10	N	M
	MBN1600E17D	1,700	1,600	2.7	1.9	2.4	3.8	0.4	N-10	N	M
	MBN1800E17DD	1,700	1,800	2.7	1.7	2.6	3.0	0.4	N-9	N	M
	MBN2400E17D	1,700	2,400	2.6	1.7	3.4	3.6	0.4	N-9	N	M
	MBN1200E17E	1,700	1,200	2.2	1.9	4.0	4.2	2.0	N-10	N	M
	MBN1800E17E	1,700	1,800	2.2	1.9	4.4	4.4	1.8	N-9	N	M
	MBN3600E17F	1,700	3,600	2.4	2.3	tbd	tbd	tbd	N-9	N	W
	MBN1200E25C	2,500	1,200	3.0	2.0	5.2	5.6	3.4	N-9	N	M
	MBN1200E33C	3,300	1,200	4.8	2.3	3.8	5.6	3.2	N-9	N	M
	MBN800E33D	3,300	800	4.2	2.5	3.3	5.1	2.5	N-10	N	M
	MBN1200E33D	3,300	1,200	4.2	2.5	3.3	5.1	2.5	N-9	N	M
	MBN1200H33D	3,300	1,200	4.2	2.5	3.3	5.1	2.5	N-12	N	M
	MBN800E33E	3,300	800	3.5	2.5	3.3	5.7	3.1	N-10	N	M
	MBN1200E33E	3,300	1,200	3.5	2.5	3.3	5.7	3.1	N-9	N	M
	MBN1000E33E2	3,300	1,000	3.1	2.5	tbd	tbd	tbd	N-10	N	M
	MBN1500E33E2	3,300	1,500	3.1	2.6	3.5	5.5	2.6	N-9	N	M
	MBN1500E33E3	3,300	1,500	3.4	2.6	4.0	5.8	3.3	N-9	N	M
	MBN600E45A	4,500	600	5.5	4.2	3.0	5.5	3.0	N-10	N	M
	MBN900D45A	4,500	900	5.5	4.2	3.0	5.5	3.0	N-1	N	M
	MBN800H45E2	4,500	800	3.7	2.9	tbd	tbd	tbd	N-13	N	W
MBN1200H45E2	4,500	1,200	3.7	2.9	4.0	8.0	4.5	N-12	N	W	
MBN800H45E2-H	4,500	800	4.2	3.7	tbd	tbd	tbd	N-13	N	W	
MBN1200H45E2-H	4,500	1,200	4.2	3.7	5.4	7.2	3.6	N-12	N	W	
MBN500H65E2	6,500	500	4.2	3.9	tbd	tbd	tbd	N-13	N	W	
MBN750H65E2	6,500	750	4.3	3.9	5.9	9.6	4.7	N-12	N	W	

High-Voltage High-Power Series (continued)

Conne ^c tion	Type name	Absolute Max. Ratings		Electrical Characteristics					Outline	RoHS Status	Status
		V _{CES} (V)	I _C (A)	V _{CE(sat)} (V)Typ.	V _F (V)Typ.	t _{on} (μ s)Max.	t _{off} (μ s)Max.	t _f (μ s)Max.			
2 in 1	MBM600E17D	1,700	600	2.6	1.9	1.6	3.0	1.0	M-10	N	M
	MBM600F17D	1,700	600	3.0	2.4	2.0	3.6	1.2	M-12	Y	W
	MBM1200E17D	1,700	1,200	2.7	1.9	1.8	3.2	0.6	M-10	N	M
	MBM600E17E	1,700	600	2.2	1.9	2.8	3.8	2.2	M-10	N	W
	MBM800E17E	1,700	800	2.2	1.6	3.6	4.2	2.4	M-10	N	W
	MBM1200E17E	1,700	1,200	2.2	1.9	3.8	4.0	2.0	M-10	N	W
	MBM400E25E	2,500	400	2.3	2.2	3.2	4.8	2.0	M-11	N	M
	MBM500E33E2	3,300	500	3.1	2.5	tbd	tbd	tbd	M-11	N	W
Choper	MBL1200E17D	1,700	1,200	2.7	1.9	2.4	3.4	0.4	N10	N	M
	MBL800E33C	3,300	800	4.8	2.3	3.8	5.6	3.2	N-9	N	M
	MBL400E33D	3,300	400	4.2	2.5	3.3	5.1	2.5	N-10	N	M
	MBL800E33D	3,300	800	4.2	2.5	3.3	5.1	2.5	N-9	N	M
	MBL800E33E	3,300	800	3.5	2.5	3.3	5.7	3.1	N-9	N	M

Conne ^c tion	Type name	Absolute Max. Ratings		Electrical Characteristics					Outline	RoHS Status	Status
		V _{RRM} (V)	I _F (A)	V _F (V)Typ.	-	-	-	t _{tr} (μ s)Max.			
Diode	MDM900E17D	1,700	900	2.0	-	-	-	1.4	N-10	N	M
	MDN1200D33	3,300	1,200	3.2	-	-	-	1.4	N-3	N	M
	MDM800E33D	3,300	800	2.5	-	-	-	1.1	N-10	N	M
	MDM1200E33D	3,300	1,200	2.8	-	-	-	1.1	N-10	N	M
	MDM600E45A	4,500	600	4.5	-	-	-	1.0	N-10	N	M
	MDM900E45A	4,500	900	4.5	-	-	-	tbd	N-10	N	W
	MDM800H45E2	4,500	800	2.9	-	-	-	tbd	N-13	N	W
	MDM1200H45E2	4,500	1,200	3.4	-	-	-	tbd	N-13	N	W
	MDM800H45E2-H	4,500	800	4.2	-	-	-	tbd	N-13	N	W
	MDM1200H45E2-H	4,500	1,200	4.2	-	-	-	1.8	N-13	N	W
	MDM500H65E2	6,500	500	3.9	-	-	-	tbd	N-13	N	W
	MDM750H65E2	6,500	750	3.9	-	-	-	tbd	N-13	N	W

GR-A Series (Advanced GR Series)

Conne ^c tion	Type name	Absolute Max. Ratings		Electrical Characteristics					Outline	RoHS Status	Status
		V _{CES} (V)	I _C (A)	V _{CE(sat)} (V)Typ.	V _F (V)Typ.	t _{on} (μ s)Max.	t _{off} (μ s)Max.	t _f (μ s)Max.			
1 in 1	MBN1200GR12A	1,200	1,200	2.4	2.5	2.1	1.8	0.4	N-7	N	M
	MBN600GR12A	1,200	600	2.2	2.5	0.8	1.2	0.35	N-6	N	M
	MBN400GR12A	1,200	400	2.2	2.5	0.7	1.1	0.3	N-5	N	M
2 in 1	MBM300GR12A	1,200	300	2.2	2.5	0.7	1.1	0.3	M-9	N	M
	MBM200GR12A	1,200	200	2.2	2.5	0.6	1.0	0.3	M-8	N	M
	MBM150GR12A	1,200	150	2.2	2.5	0.6	1.0	0.3	M-8	N	M
	MBM100GR12A	1,200	100	2.2	2.5	0.6	1.0	0.3	M-8	N	M

Status List

Discontinued

■ Discontinue : HV-IGBT Module										
Connection	Type name	Absolute Max. Ratings		Electrical Characteristics				Outline	RoHS Status	Status
		V _{CEs} (V)	I _c (A)	V _{CE(sat)} (V) Typ.	t _{on} (s) Max.	t _{off} (s) Max.	t _f (s) Max.			
1 in 1	MBN1800E17D	1,700	1,800	2.7	2.4	3.0	0.4	N-9	N	D
	MBN2400ES17D	1,700	2,400	2.7	2.8	3.6	0.6	N-10	N	D
	MBN3600E17E	1,700	3,600	2.2	3.6	5.6	1.6	N-9	N	D
	MBN1600EB17D	1,700	1,600	2.7	2.4	3.8	0.4	N-11	N	D
	MBN1200D33A	3,300	1,200	4.1	3.2	5.6	3.2	N-1	N	D
	MBN1200D33C	3,300	1,200	4.8	3.8	5.6	3.2	N-1	N	D
	MBN400C33A	3,300	400	4.5	3.2	5.3	2.8	N-3	N	D
	MBN600C33A	3,300	600	4.5	4.0	6.0	3.2	N-2	N	D
	MBN400D33A	3,300	400	4.5	3.2	5.3	2.8	N-3	N	D
	MBN600C20	2,000	600	4.4	2.5	5.9	2.7	N-3	N	D
	MBN400C20	2,000	400	4.2	2.6	5.9	2.4	N-4	N	D
	MBN600D20	2,000	600	4.4	2.5	5.9	2.7	N-3	N	D
	MBN400D20	2,000	400	4.2	2.6	5.9	2.4	N-4	N	D
2 in 1	MBM800E17D	1700	800	2.7	2.4	3.2	0.5	M-10	N	D
Chopper	MBL800D33C	3,300	800	4.1	3.8	5.6	1.4	N-1	N	D
	MBL800D33B	3,300	800	4.1	3.3	5.0	2.7	N-1	N	D
	MBL800E33D-R	3,300	800	4.2	3.3	5.1	2.5	N-9	N	D
Connec tion	Type name	Absolute Max. Ratings		Electrical Characteristics				Outline	RoHS Status	Status
		V _{RRM} (V)	I _F (A)	V _F (V) Typ.	-	-	t _{rr} (s) Max.			
Diode	MDM400E33D	3,300	400	2.5	-	-	0.7	N-10	N	D
	MDM300E45A	4,500	300	4.5	-	-	1.0	N-10	N	D

Status List

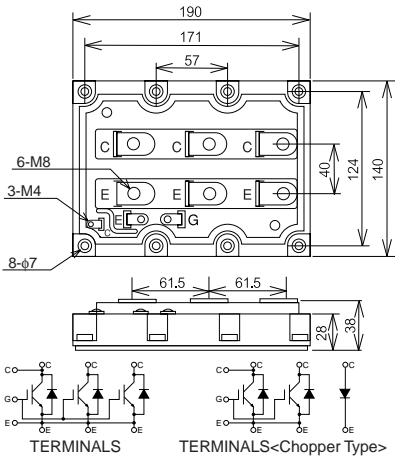
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Discontinue : IGBT Module

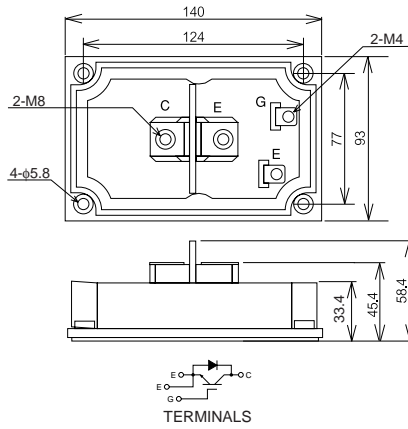
Connection	Type name	Absolute Max. Ratings		Electrical Characteristics				outline	RoHS Status	Status
		V _{CES} (V)	I _c (A)	V _{CE(sat)} (V)Typ.	t _{on} (°s)Max.	t _{off} (°s)Max.	t _r (°s)Max.			
1 in 1	MBN600GR12	1,200	600	2.2	1.0	1.2	0.4	N-6	N	D
	MBN400GR12	1,200	400	2.2	0.9	1.1	0.35	N-5	N	D
	MBN1200GS12AW	1,200	1,200	2.9	2.2	1.6	0.55	N-7	N	D
	MBN600GS12AW	1,200	600	2.7	0.8	1.2	0.4	N-6	N	D
	MBN400GS12AW	1,200	400	2.7	0.7	1.1	0.35	N-5	N	D
	MBN400GS12BW	1,200	400	2.7	0.7	1.1	0.35	N-5	N	D
	MBN300GS12AW	1,200	300	2.7	0.7	1.1	0.35	N-5	N	D
2 in 1	MBM300GR12	1,200	300	2.2	0.9	1.1	0.35	M-9	N	D
	MBM200GR12	1,200	200	2.2	0.8	1.0	0.35	M-8	N	D
	MBM150GR12	1,200	150	2.2	0.8	1.0	0.35	M-8	N	D
	MBM100GR12	1,200	100	2.2	0.8	0.9	0.35	M-8	N	D
	MBM400GR6	600	400	2.1	0.7	1.1	0.32	M-3	N	D
	MBM300GR6	600	300	2.1	0.7	1.0	0.32	M-8	N	D
	MBM200GR6	600	200	2.1	0.7	0.8	0.3	M-8	N	D
	MBM150GR6	600	150	2.1	0.7	0.8	0.3	M-8	N	D
	MBM300GS12AW	1,200	300	2.7	0.7	1.1	0.35	M-4	N	D
	MBM200GS12AW	1,200	200	2.7	0.55	1.0	0.35	M-1	N	D
	MBM200JS12AW	1,200	200	2.7	0.55	1.0	0.35	M-3	N	D
	MBM200JS12EW	1,200	200	2.7	0.55	1.0	0.35	M-2	N	D
	MBM150GS12AW	1,200	150	2.7	0.55	1.0	0.35	M-1	N	D
	MBM100GS12AW	1,200	100	2.7	0.55	0.9	0.35	M-6	N	D
	MBM75GS12AW	1,200	75	2.7	0.55	0.9	0.35	M-6	N	D
	MBM600GS6CW	600	600	1.9	0.8	1.1	0.4	M-7	N	D
	MBM400GS6AW	600	400	1.9	0.7	1.1	0.35	M-1	N	D
	MBM400JS6AW	600	400	1.9	0.7	1.1	0.35	M-3	N	D
	MBM300GS6AW	600	300	1.9	0.7	1.1	0.35	M-1	N	D
	MBM200GS6AW	600	200	1.9	0.6	0.9	0.35	M-6	N	D
MBM150GS6AW	600	150	1.9	0.6	0.9	0.35	M-6	N	D	

Outline

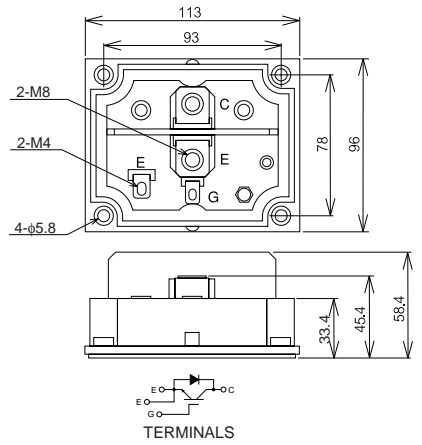
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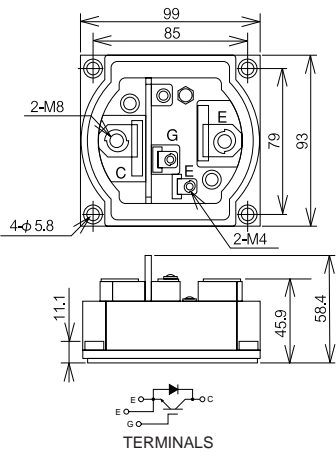
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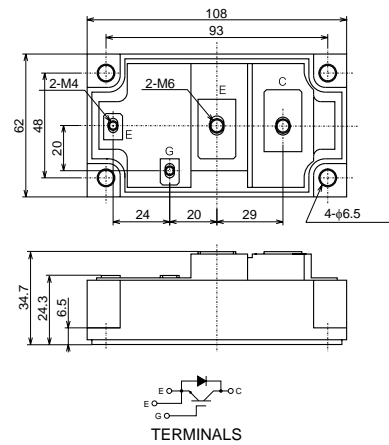
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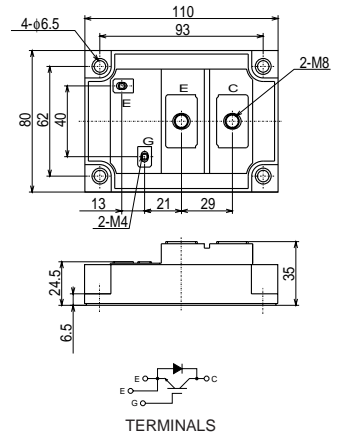
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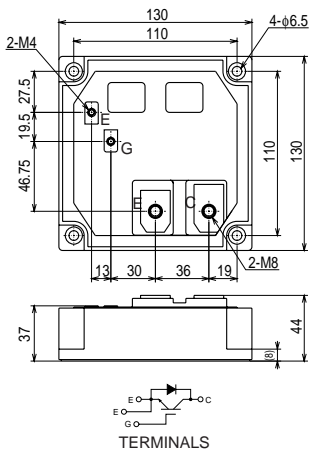
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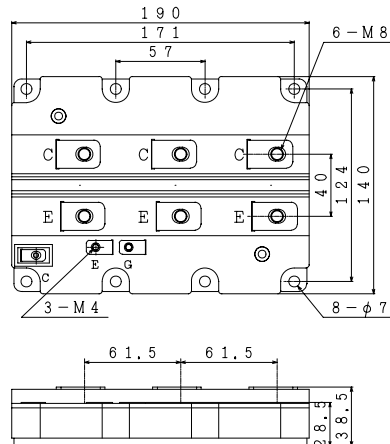
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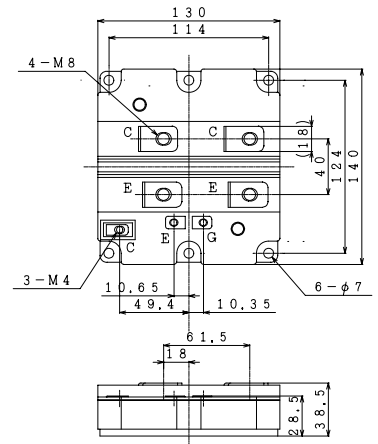
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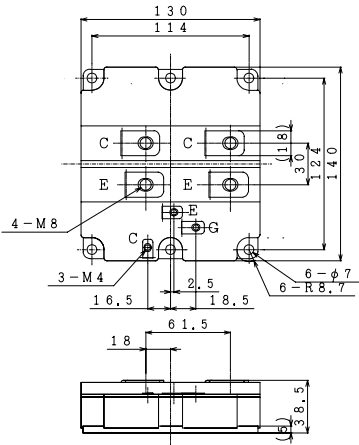
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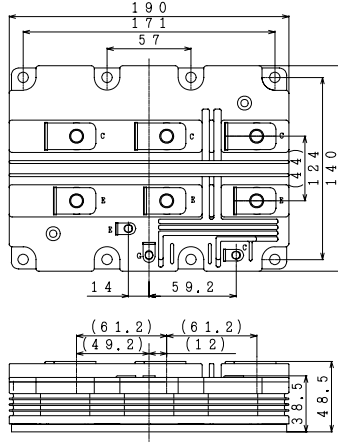
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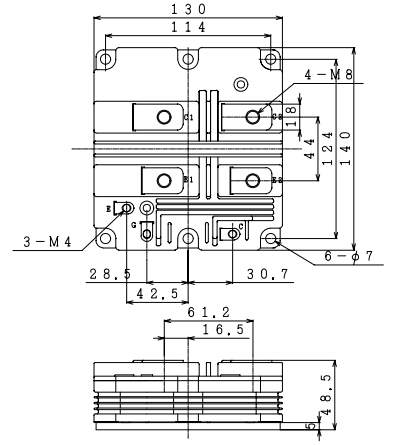
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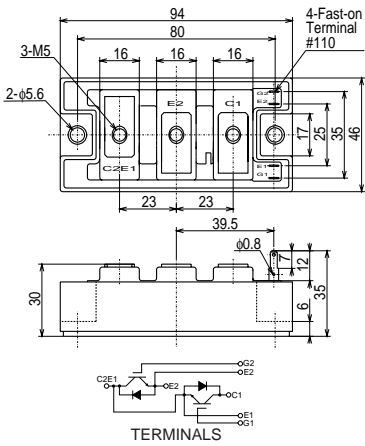
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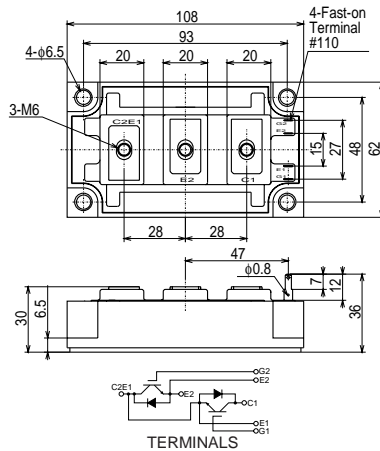
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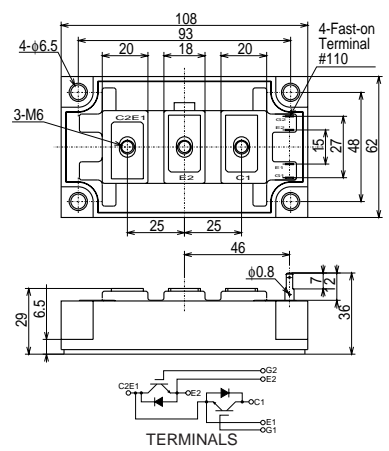
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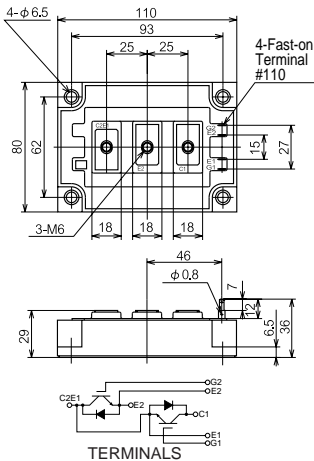
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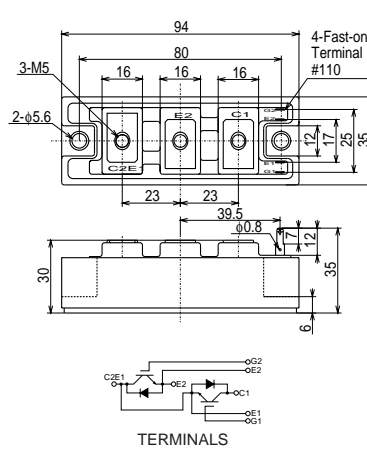
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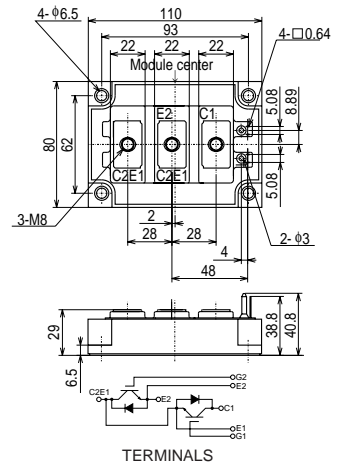
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M - 6



M - 7



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