



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

N-Channel Silicon MOSFET

ATP202 — General-Purpose Switching Device Applications

Features

- Low ON-resistance
- 4.5V drive
- Halogen free compliance
- Large current
- Slim package
- Protection diode in

Specifications

Absolute Maximum Ratings at Ta=25°C

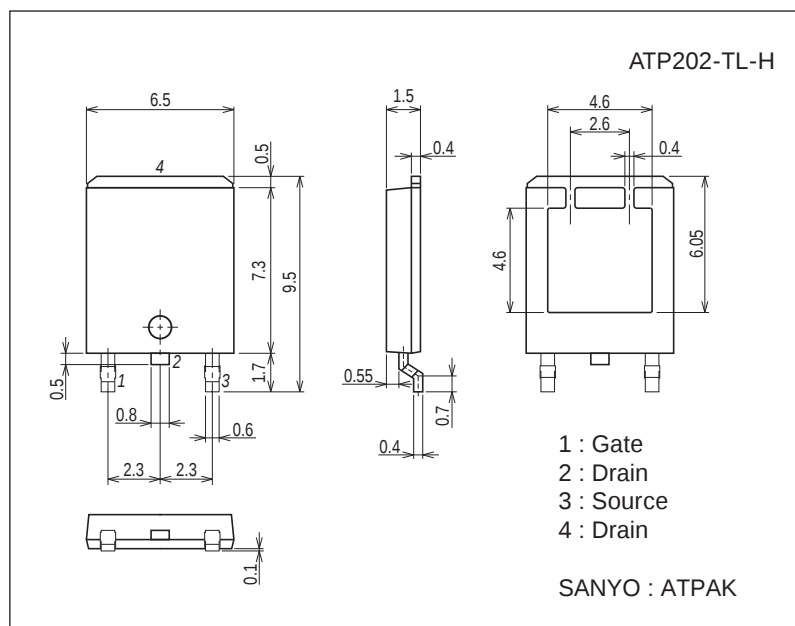
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		30	V
Gate-to-Source Voltage	V_{GS}		± 20	V
Drain Current (DC)	I_D		50	A
Drain Current (PW $\leq 10\mu s$)	I_{DP}	PW $\leq 10\mu s$, duty cycle $\leq 1\%$	150	A
Allowable Power Dissipation	P_D	Tc=25°C	40	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C
Avalanche Energy (Single Pulse) *1	E_{AS}		45	mJ
Avalanche Current *2	I_{AV}		25	A

Note : *1 $V_{DD}=10V$, $L=100\mu H$, $I_{AV}=25A$ *2 $L\leq 100\mu H$, Single pulse

Package Dimensions

unit : mm (typ)

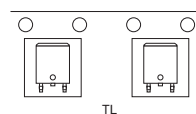
7057-001



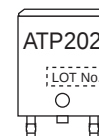
Product & Package Information

- Package : ATPAK
- JEITA, JEDEC : -
- Minimum Packing Quantity : 3,000 pcs./reel

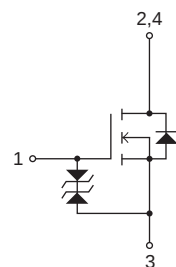
Packing Type: TL



Marking



Electrical Connection

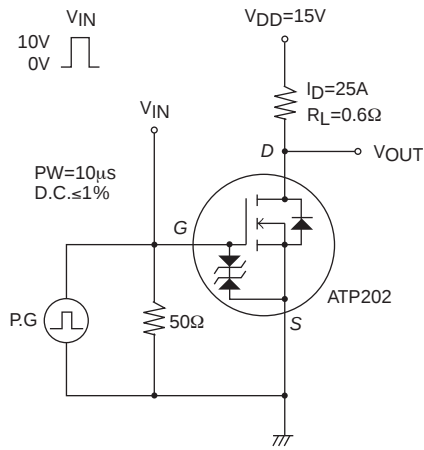


ATP202

Electrical Characteristics at Ta=25°C

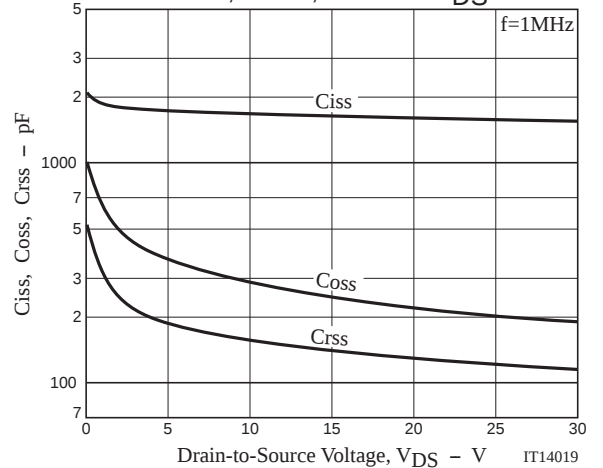
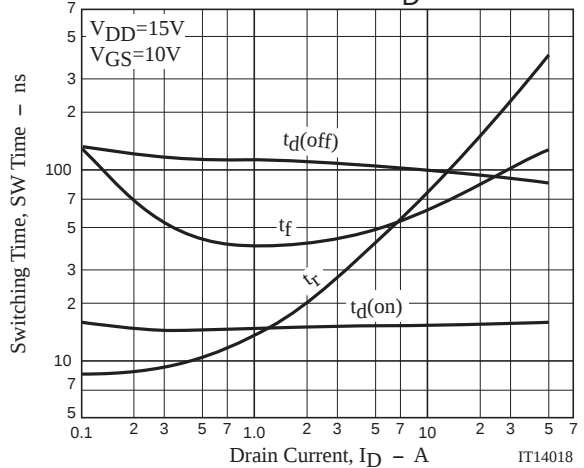
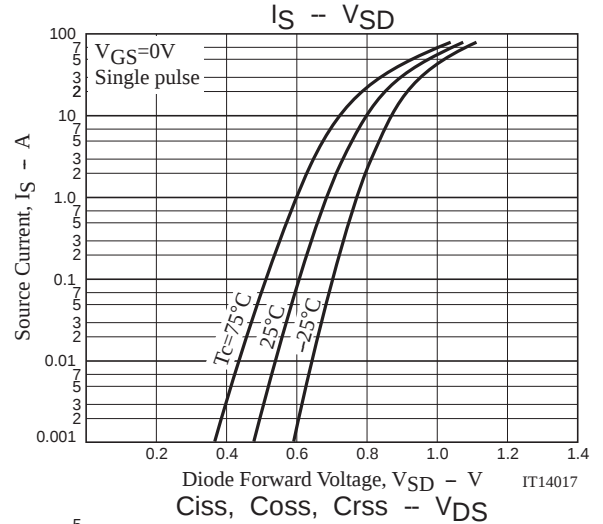
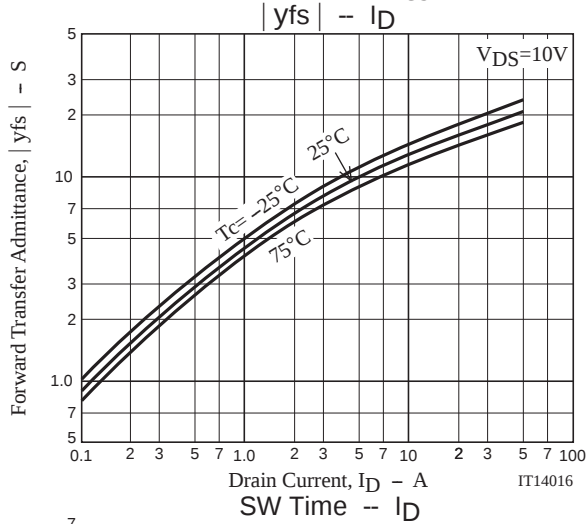
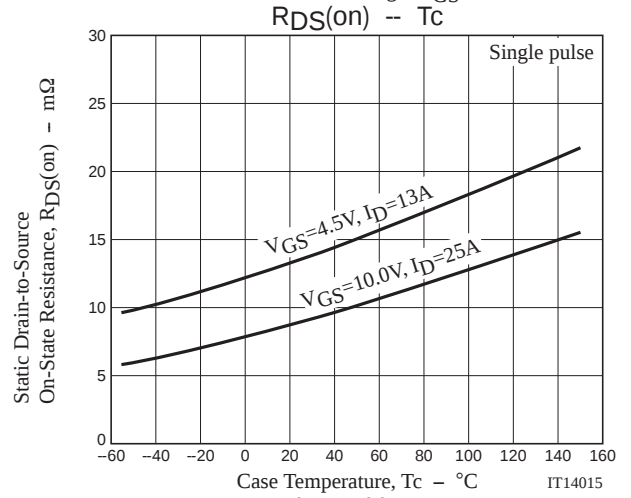
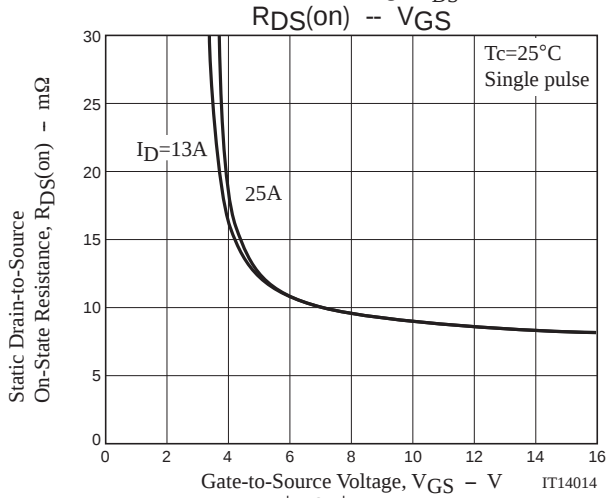
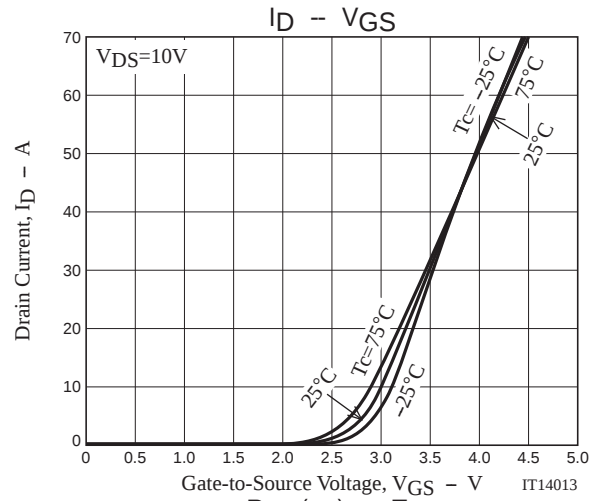
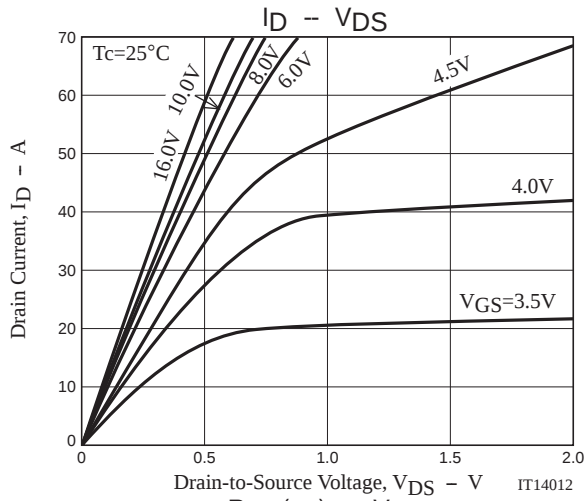
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	30			V
Zero-Gate Voltage Drain Current	IDSS	VDS=30V, VGS=0V			1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=10V, ID=1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	VDS=10V, ID=25A	10	17		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=25A, VGS=10V		9	12	mΩ
	RDS(on)2	ID=13A, VGS=4.5V		14	20	mΩ
Input Capacitance	Ciss	VDS=10V, f=1MHz		1650		pF
Output Capacitance	Coss			285		pF
Reverse Transfer Capacitance	Crss			160		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		16		ns
Rise Time	tr			185		ns
Turn-OFF Delay Time	td(off)			93		ns
Fall Time	tf			93		ns
Total Gate Charge	Qg	VDS=15V, VGS=10V, ID=50A		27		nC
Gate-to-Source Charge	Qgs			7.5		nC
Gate-to-Drain "Miller" Charge	Qgd			4		nC
Diode Forward Voltage	VSD	IS=50A, VGS=0V		0.97	1.2	V

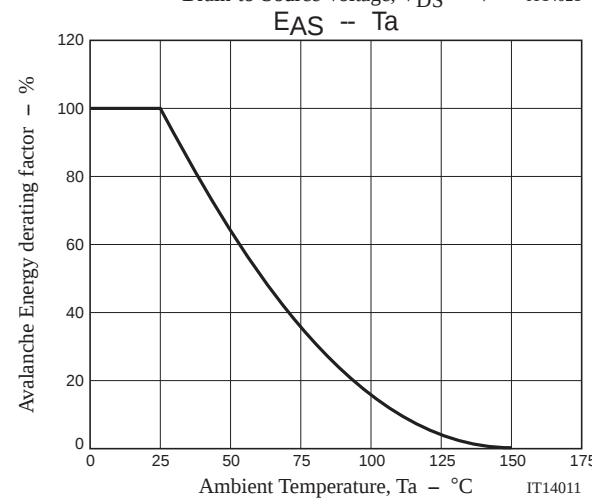
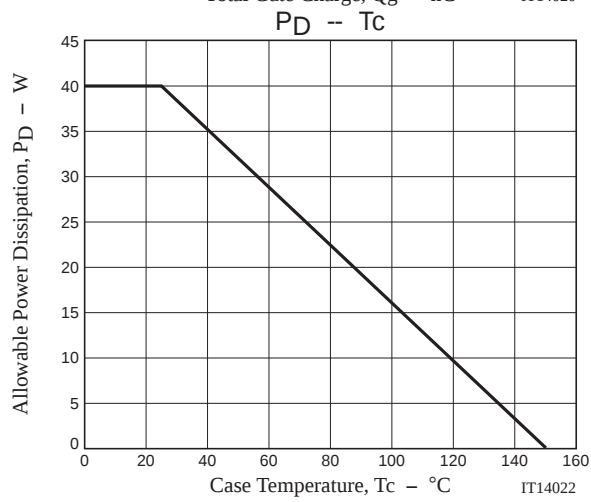
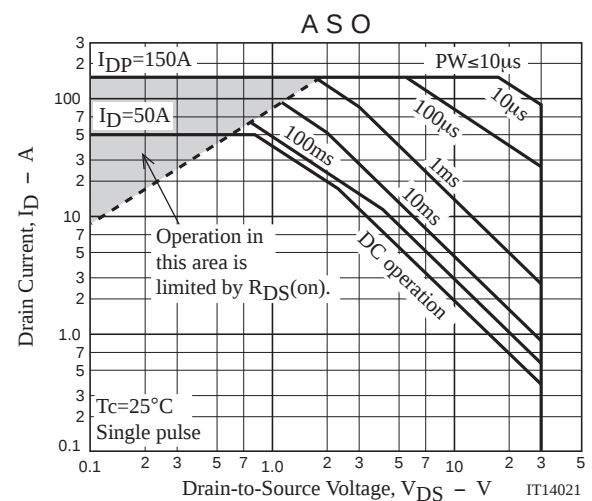
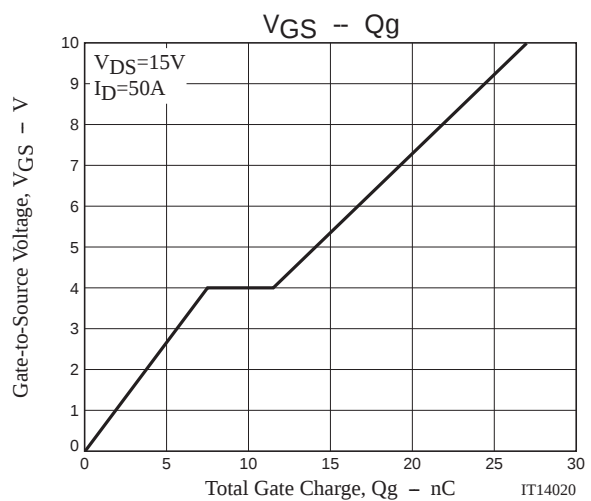
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
ATP202-TL-H	ATPAK	3,000pcs./reel	Pb Free and Halogen Free





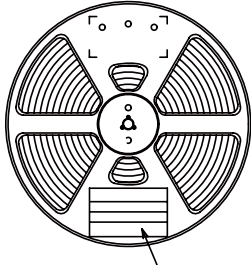
Taping Specification

ATP202-TL-H

1. Packing Format (TL)

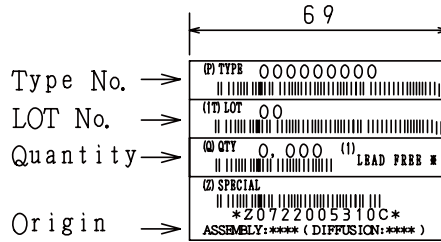
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	INNER BOX SD-C-18	OUTER BOX SD-A-18
ATPAK	ATP	3,000	3,000	15,000	1 reels contained Dimensions:mm (external) 340×340×28	5 inner boxes contained Dimensions:mm (external) 355×355×165

Packing method



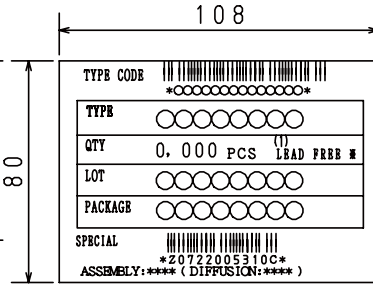
Reel label

Reel label, Inner box label (unit:mm)



Outer box label

It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.



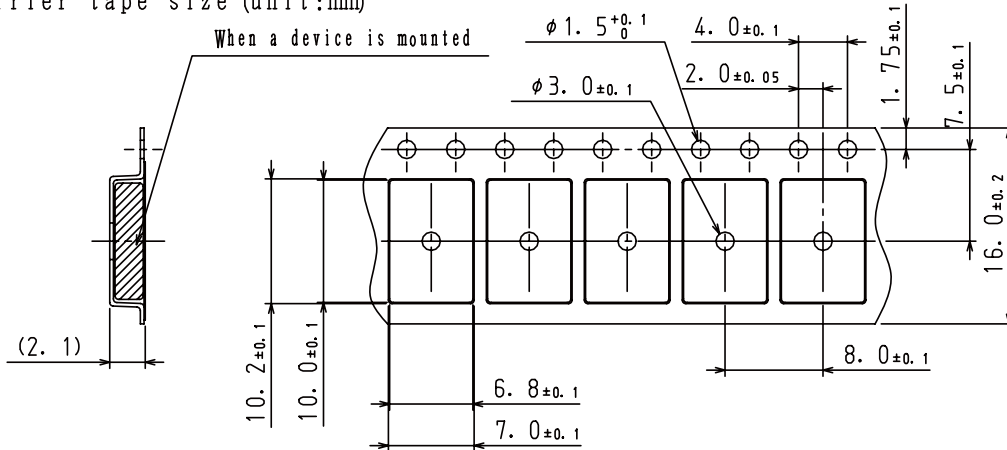
NOTE (1)

The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

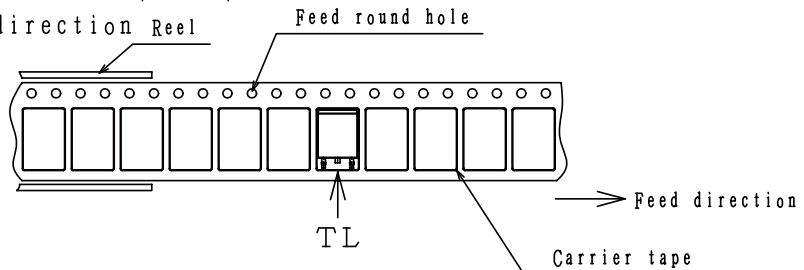
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)

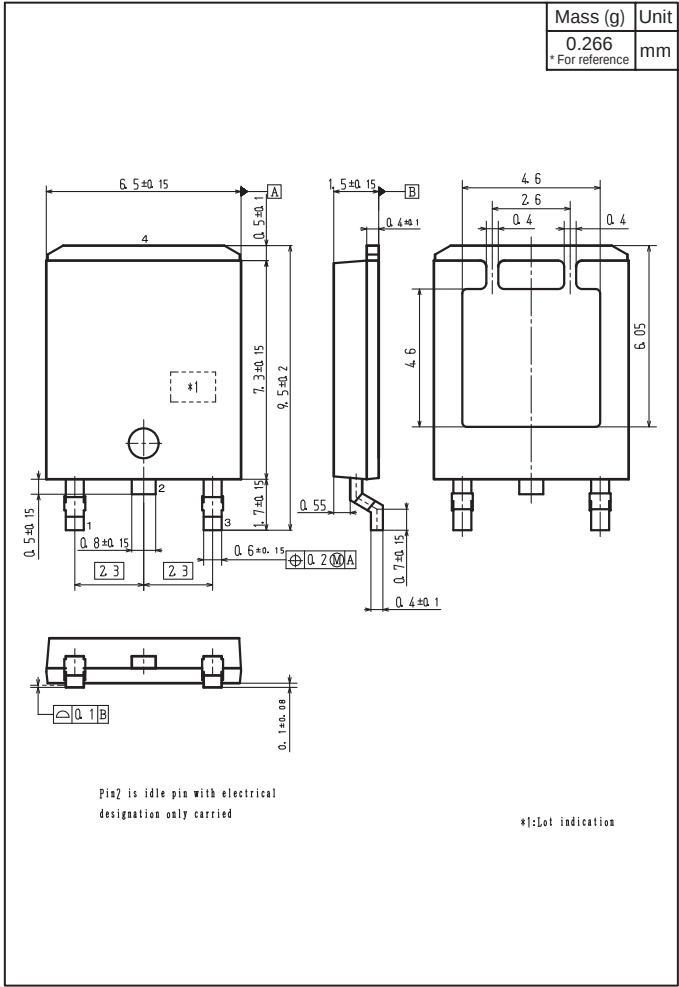


2-2. Device placement direction Reel

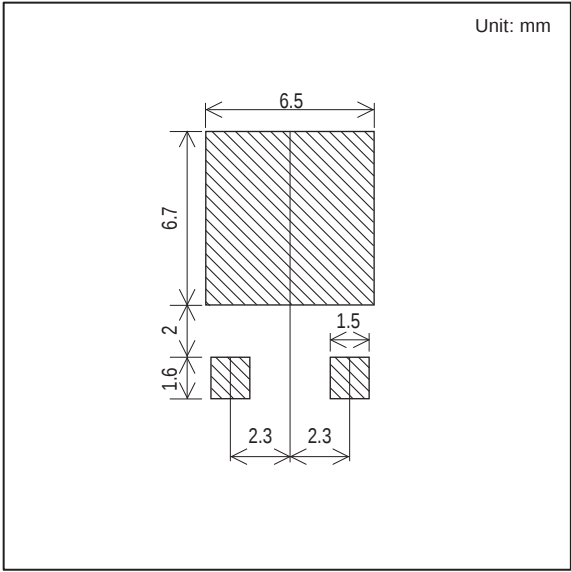


The one electrode terminals on feed hole side...TL

Outline Drawing
ATP202-TL-H



Land Pattern Example



Note on usage : Since the ATP202 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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