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ATP202

N-Channel Power MOSFET 30V, 50A, 12mΩ, Single ATPAK

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 _{DSS}		30	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		50	A
Drain Current (PW≤10μs)	I _{DP}	PW≤10μs, duty cycle≤1%	150	A
Allowable Power Dissipation	P _D	T _c =25°C	40	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-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=100μH, I_{AV}=25A

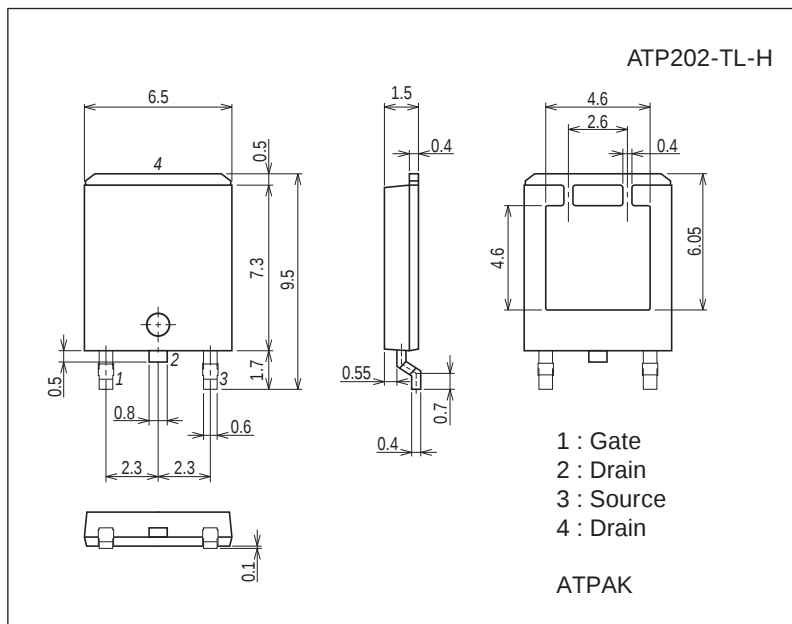
*2 L≤100μH, Single pulse

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions

unit : mm (typ)

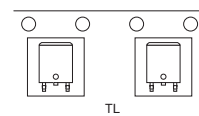
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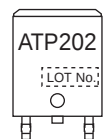
Product & Package Information

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

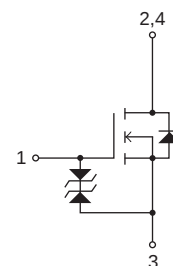
Packing Type: TL



Marking



Electrical Connection

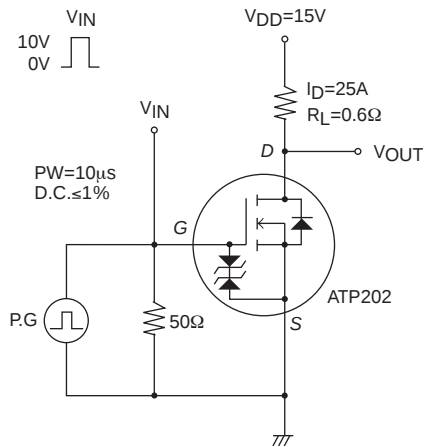


ATP202

Electrical Characteristics at Ta=25°C

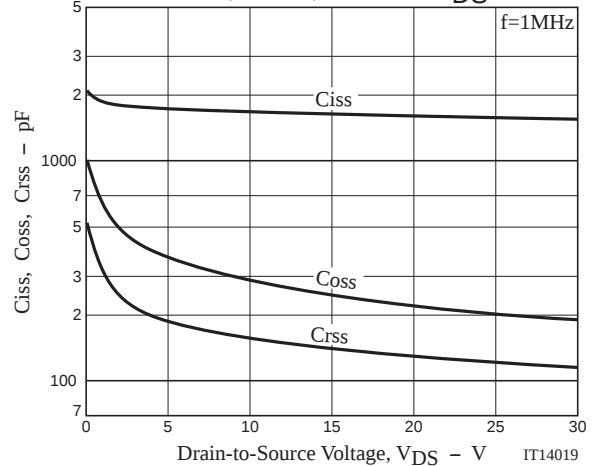
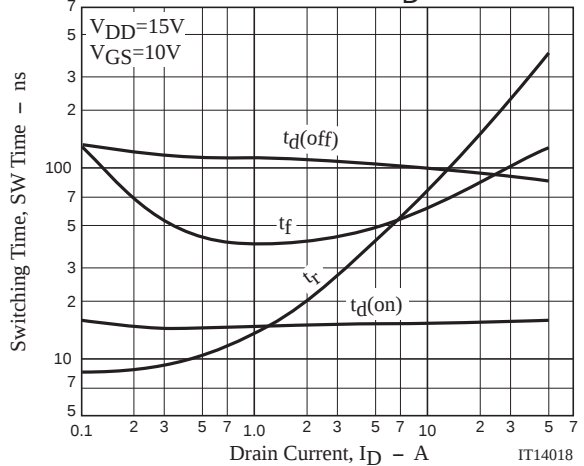
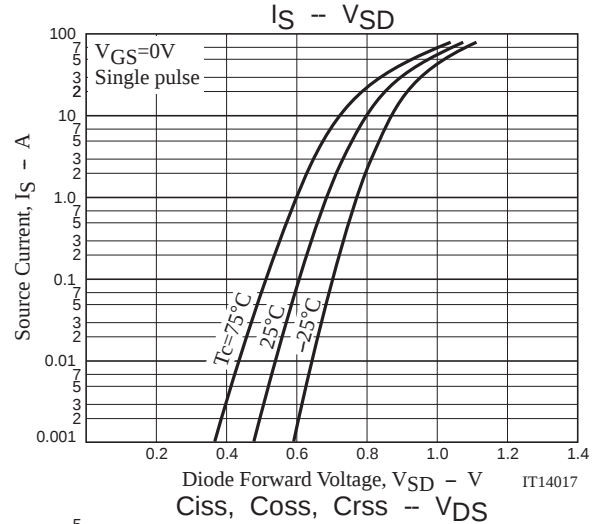
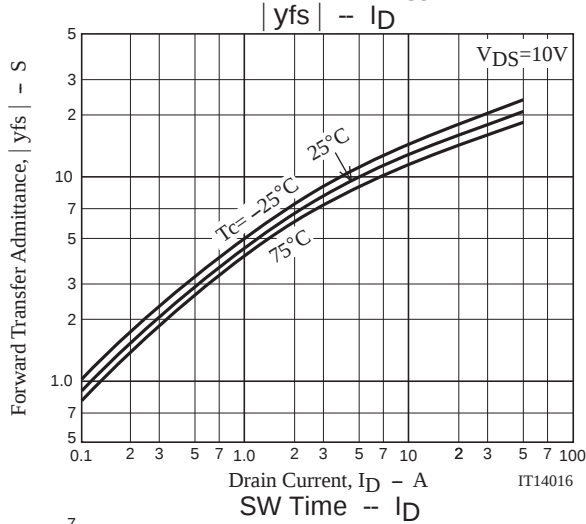
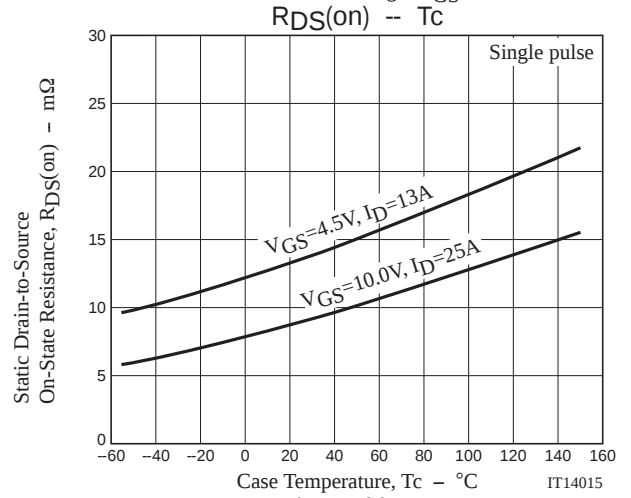
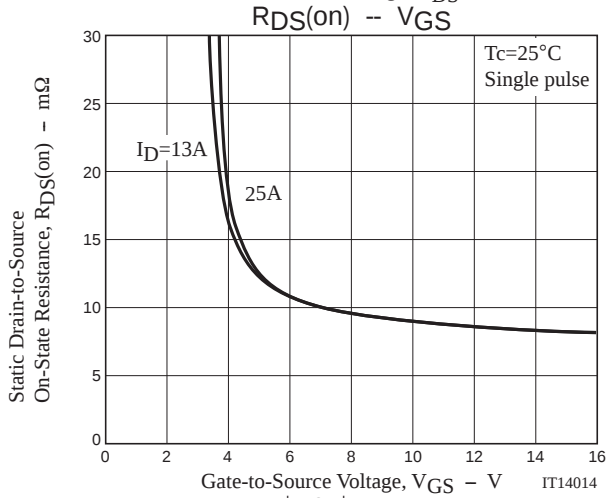
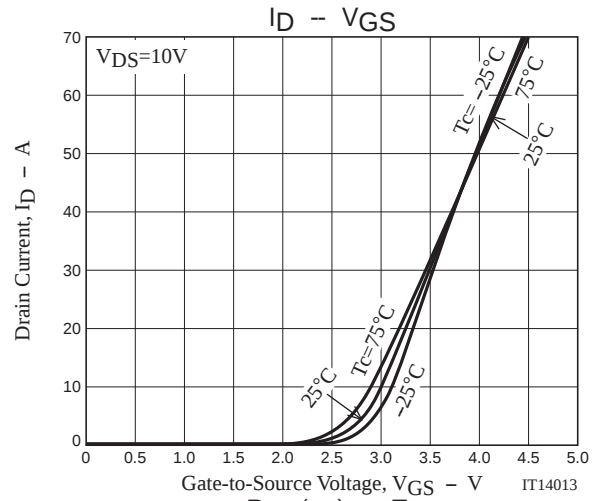
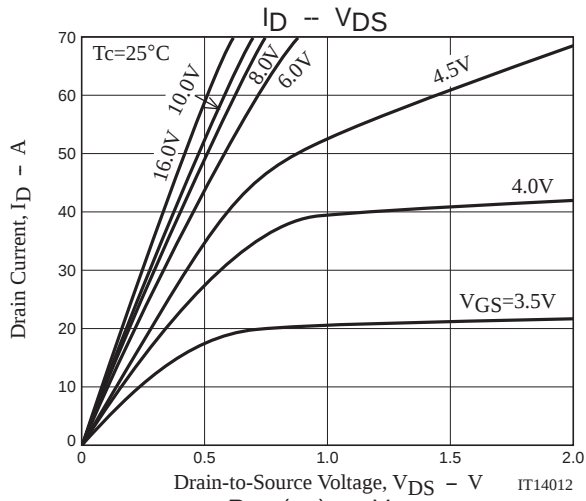
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	30			V
Zero-Gate Voltage Drain Current	IDSS	VDS=30V, VGS=0V			1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=10V, ID=1mA	1.2		2.6	V
Forward 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

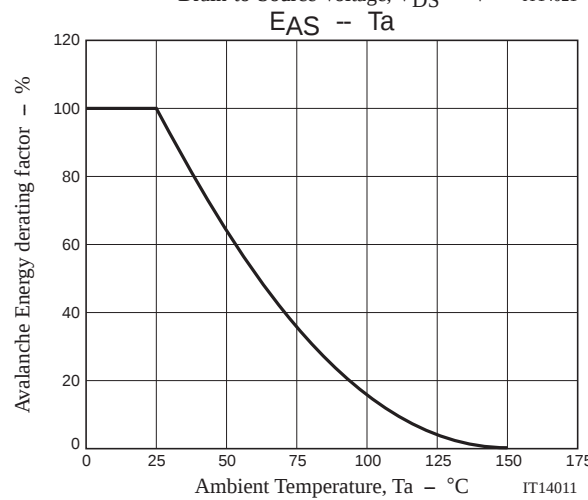
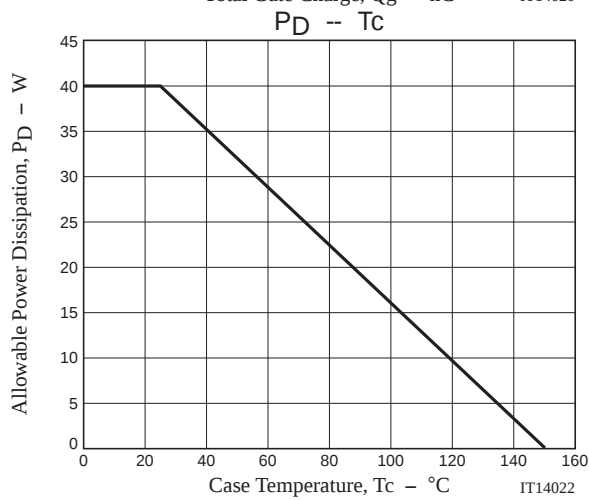
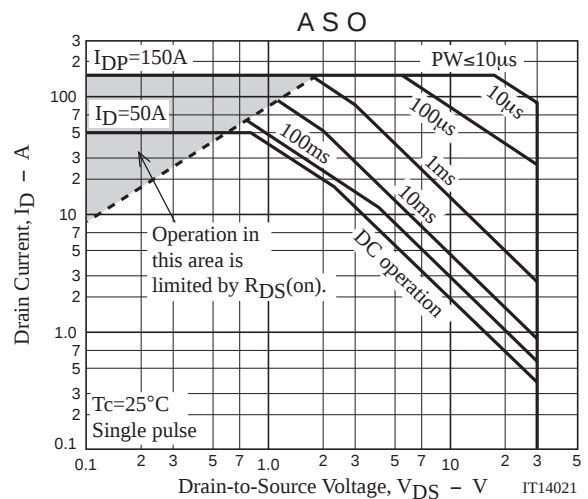
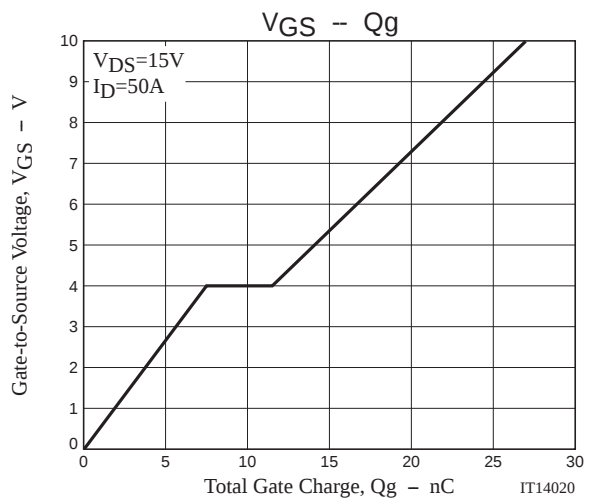
Switching Time Test Circuit



Ordering Information

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



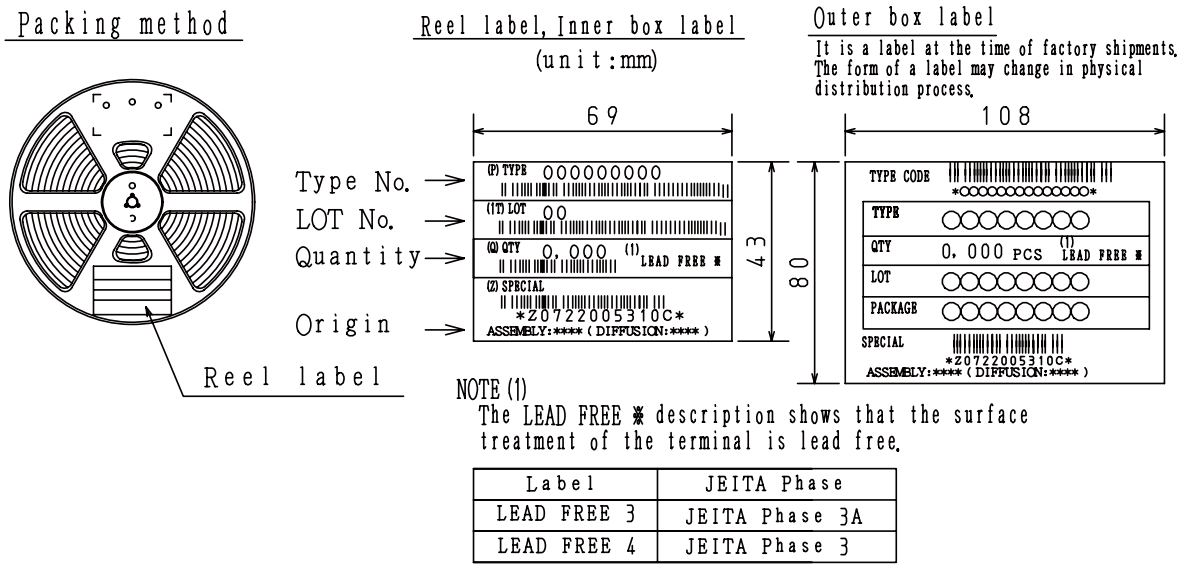


Taping Specification

ATP202-TL-H

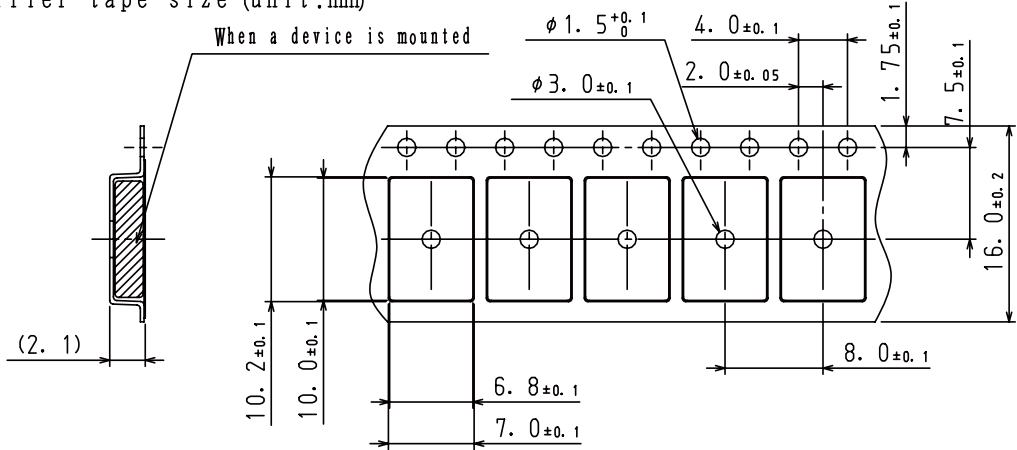
1. Packing Format (TL)

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

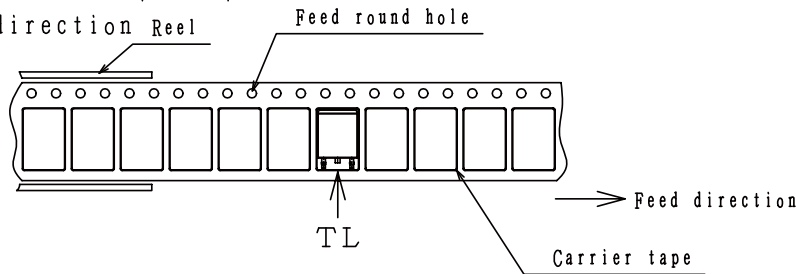


2. Taping configuration

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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