

SANYO Semiconductors DATA SHEET

ATP212 — General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · Large current.
- · Slim package.
- 4V drive.
- · Halogen free compliance.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		60	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	ID		35	А
Drain Current (PW≤10μs)	IDP	PW≤10μs, duty cycle≤1%	105	А
Allowable Power Dissipation	PD	Tc=25°C	40	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C
Avalanche Energy (Single Pulse) *1	EAS		19	mJ
Avalanche Current *2	IAV		18	А

Note :*1 VDD=10V, L=100 μ H, IAV=18A *2 L<100 μ H, Single pulse

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max) Ullit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	60			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =60V, V _{GS} =0V			1	μА
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μΑ

Marking: ATP212 Continued on next page.

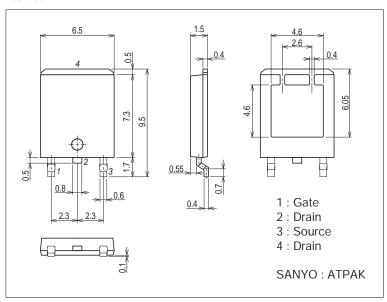
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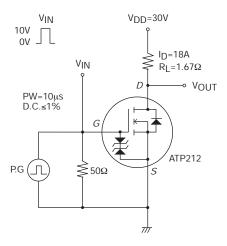
Parameter	Symbol	Symbol Conditions	Ratings			Unit
	Symbol		min	typ	max	Unit
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =18A		35		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=18A, VGS=10V		17	23	mΩ
	R _{DS} (on)2	I _D =9A, V _G S=4.5V		23	33	mΩ
	R _{DS} (on)3	ID=5A, VGS=4V		25	37	mΩ
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		1820		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		150		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		100		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		16		ns
Rise Time	t _r	See specified Test Circuit.		110		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		125		ns
Fall Time	tf	See specified Test Circuit.		87		ns
Total Gate Charge	Qg	V _{DS} =30V, V _{GS} =10V, I _D =35A		34.5		nC
Gate-to-Source Charge	Qgs	V _{DS} =30V, V _{GS} =10V, I _D =35A		6.5		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =30V, V _{GS} =10V, I _D =35A		6.8		nC
Diode Forward Voltage	V _{SD}	I _S =35A, V _{GS} =0V		0.96	1.2	V

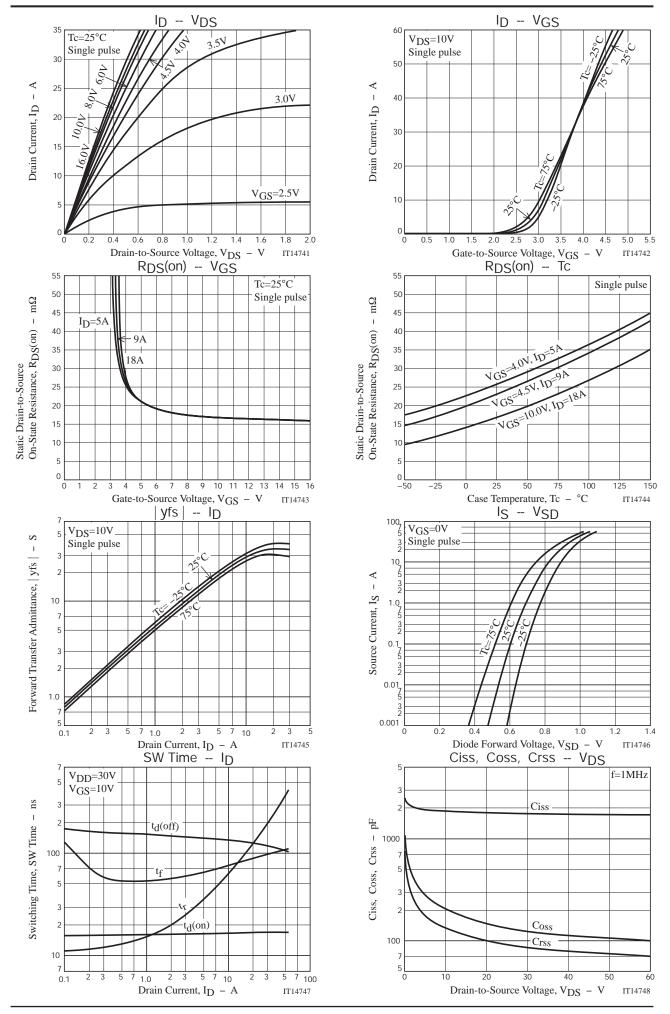
Package Dimensions

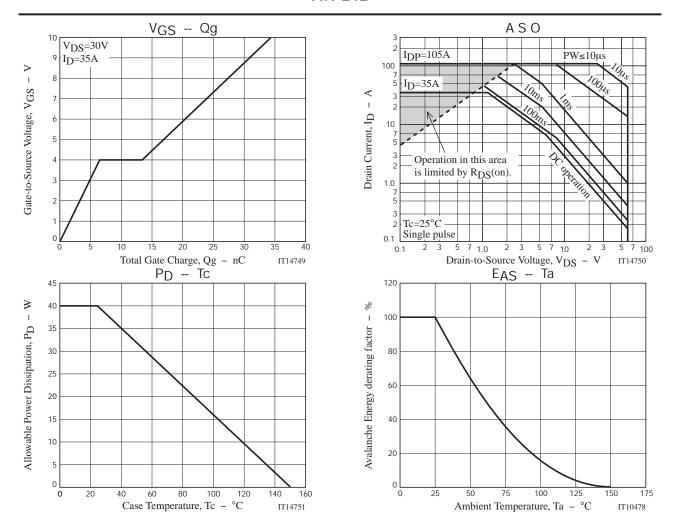
unit : mm (typ) 7057-001



Switching Time Test Circuit







Note on usage: Since the ATP212 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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