

SANYO Semiconductors

DATA SHEET

N-Channel Silicon MOSFET ECH8419 — General-Purpose Switching Device **Applications**

Features

- ON-resistance $R_{DS}(on)1=13m\Omega$ (typ.)
- 4V drive
- · Halogen free compliance

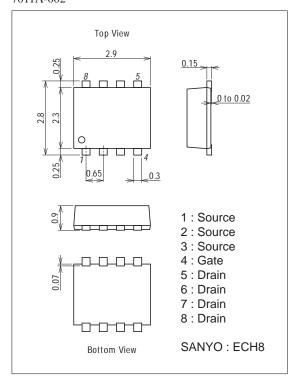
Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		35	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	۱D		9	A
Drain Current (Pulse)	IDP	PW≤10µs, duty cycle≤1%	40	A
Allowable Power Dissipation	PD	When mounted on ceramic substrate (900mm ² x0.8mm)	1.5	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Package Dimensions

unit : mm (typ) 7011A-002



Product & Package Information

- : ECH8 • Package
- JEITA, JEDEC : -
- Minimum Packing Quantity : 3,000 pcs./reel

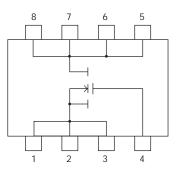
Packing Type : TL

Marking





Electrical Connection

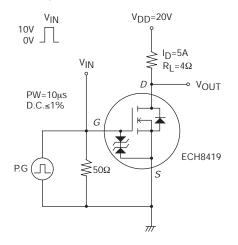


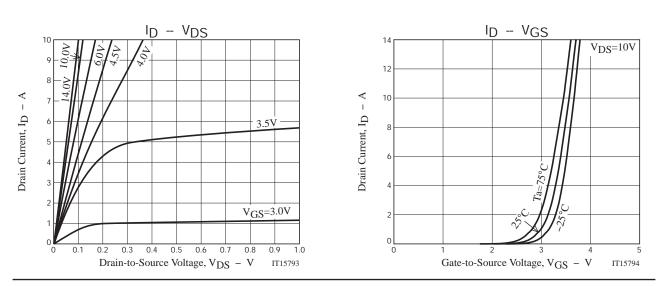
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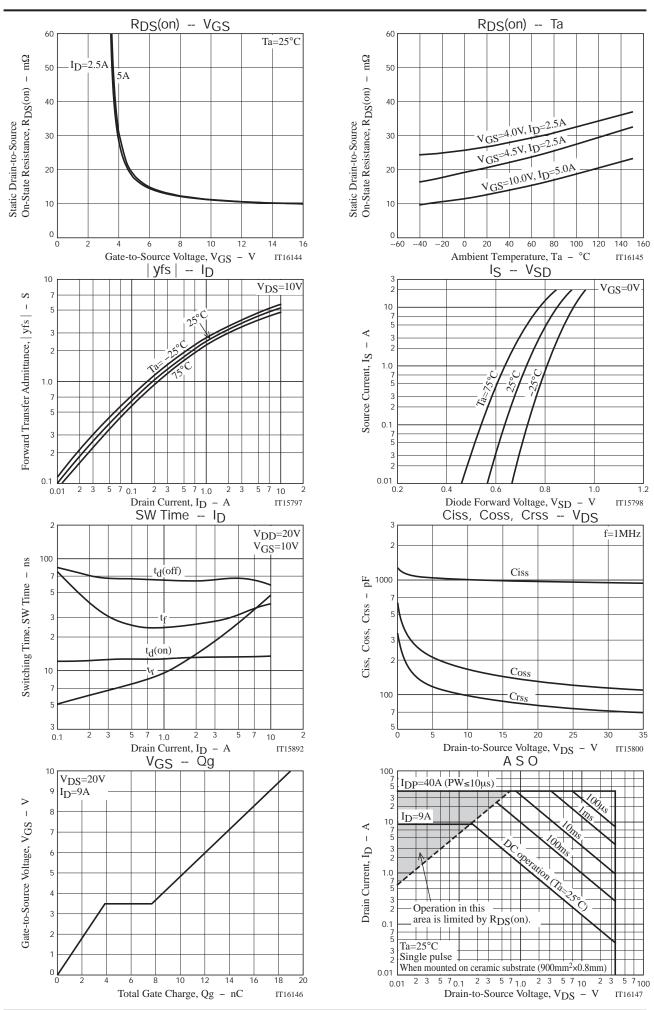
Electrical Characteristics at Ta=25°C

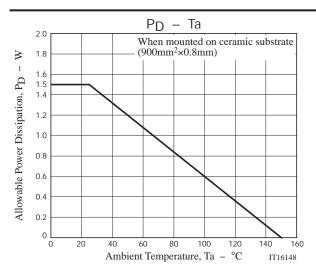
Deveryohan	Symbol	Conditions	Ratings			
Parameter			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	35			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =35V, V _{GS} =0V			1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0V			±10	μΑ
Cutoff Voltage	V _{GS} (off)	V _{DS} =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =5A		4.3		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	ID=5A, VGS=10V		13	17	mΩ
	R _{DS} (on)2	ID=2.5A, VGS=4.5V		21	30	mΩ
	R _{DS} (on)3	ID=2.5A, VGS=4V		27	38	mΩ
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		960		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		130		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		80		рF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		13		ns
Rise Time	tr	See specified Test Circuit.		26		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		66		ns
Fall Time	tf	See specified Test Circuit.		31		ns
Total Gate Charge	Qg	V _{DS} =20V, V _{GS} =10V, I _D =9A		19		nC
Gate-to-Source Charge	Qgs	V _{DS} =20V, V _{GS} =10V, I _D =9A		3.9		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =20V, V _{GS} =10V, I _D =9A		3.8		nC
Diode Forward Voltage	VSD	IS=9A, VGS=0V		0.85	1.2	V

Switching Time Test Circuit









Note on usage : Since the ECH8419 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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