



# ECH8667 — P-Channel Silicon MOSFET

## General-Purpose Switching Device Applications

### Features

- ON-resistance  $R_{DS(on)1}=30m\Omega$ (typ.)
- 4V drive
- Halogen free compliance

### Specifications

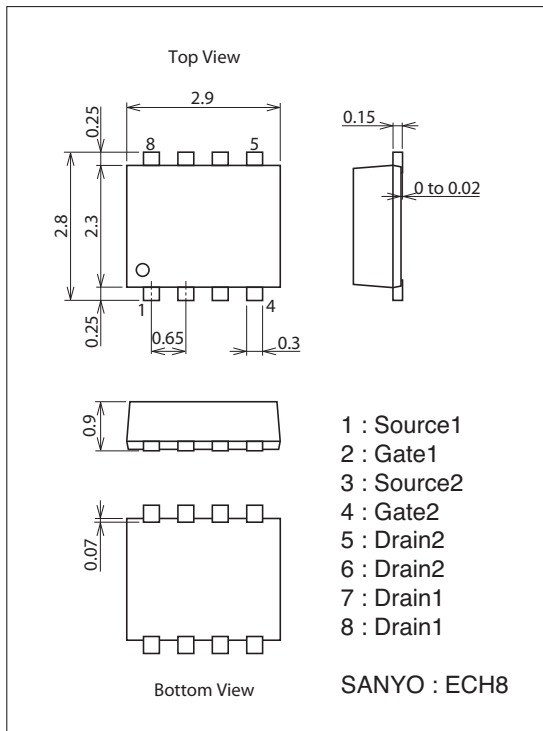
Absolute Maximum Ratings at  $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSS}$		-30	V
Gate-to-Source Voltage	$V_{GSS}$		$\pm 20$	V
Drain Current (DC)	$I_D$		-5.5	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu s$ , duty cycle $\leq 1\%$	-40	A
Allowable Power Dissipation	$P_D$	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm) 1unit	1.3	W
Total Dissipation	$P_T$	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)	1.5	W
Channel Temperature	$T_{ch}$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

### Package Dimensions

unit : mm (typ)

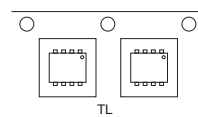
7011A-001



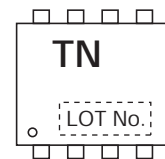
### Product & Package Information

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

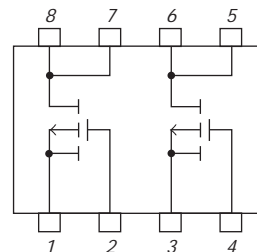
### Packing Type : TL



### Marking



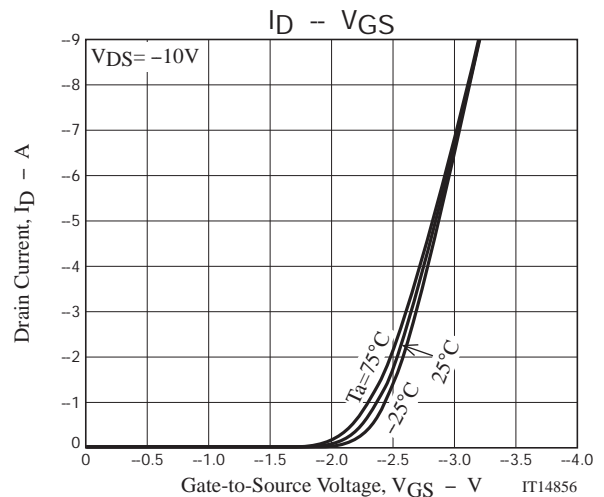
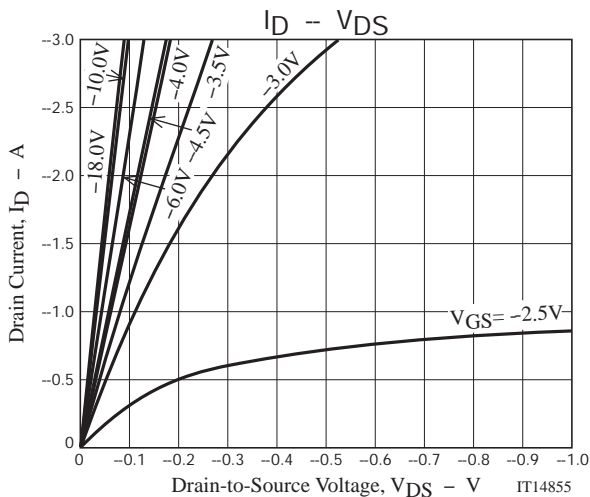
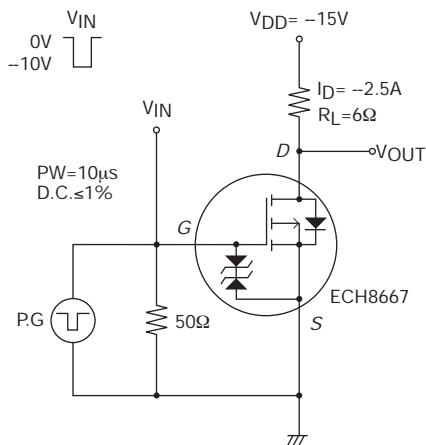
### Electrical Connection

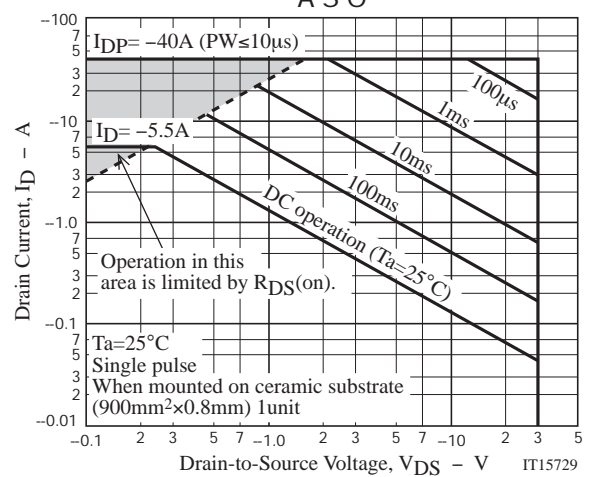
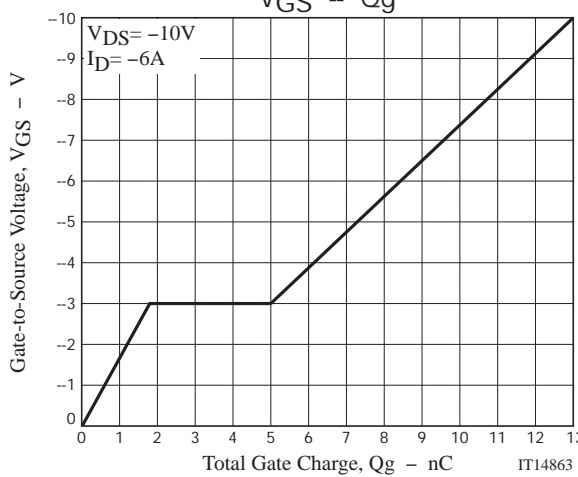
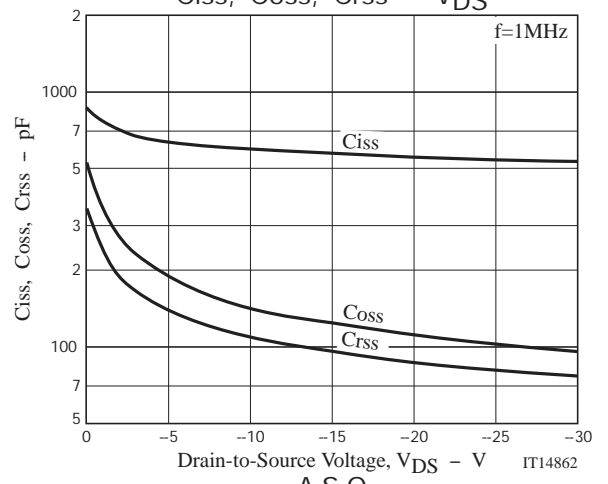
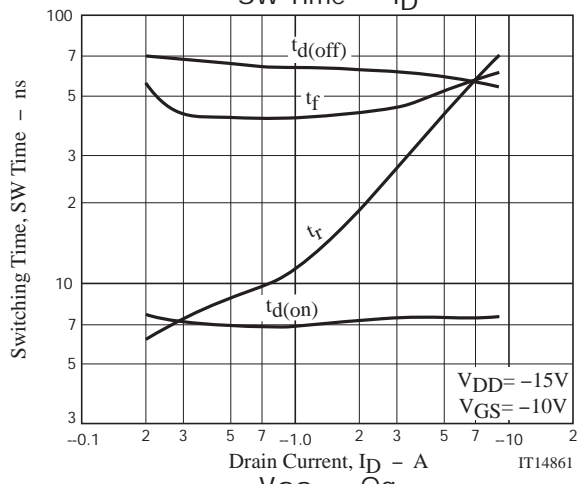
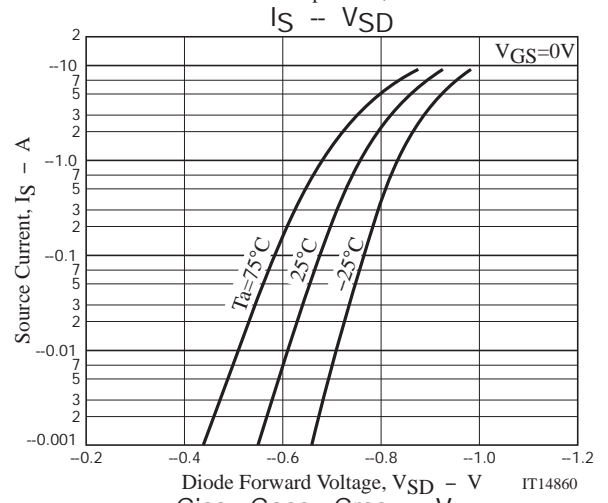
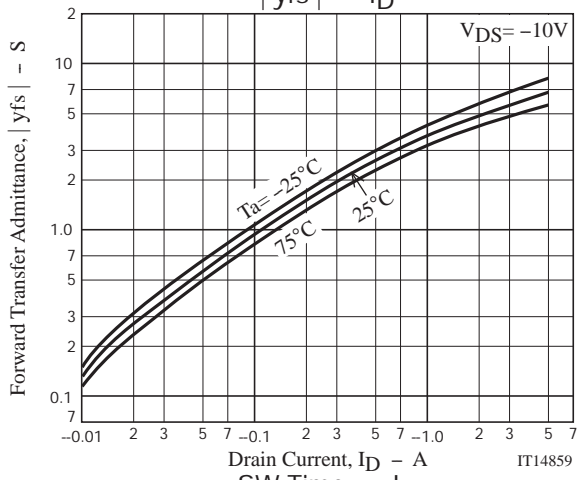
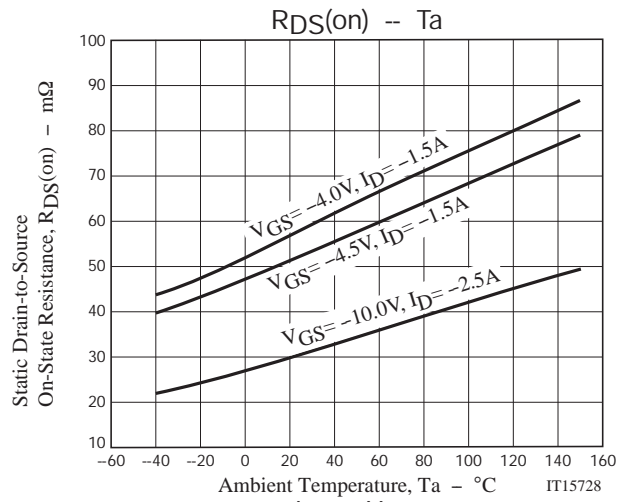
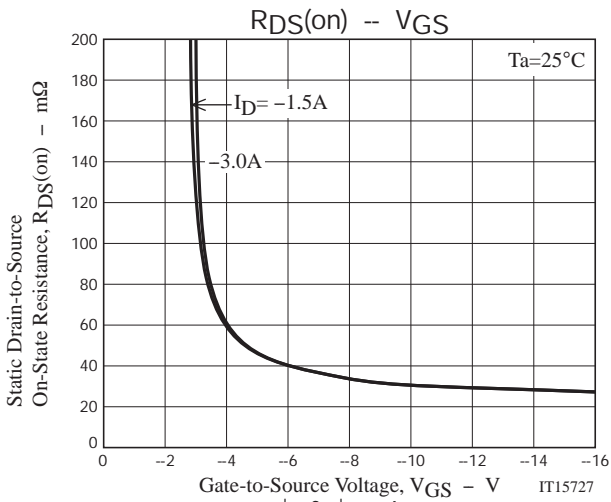


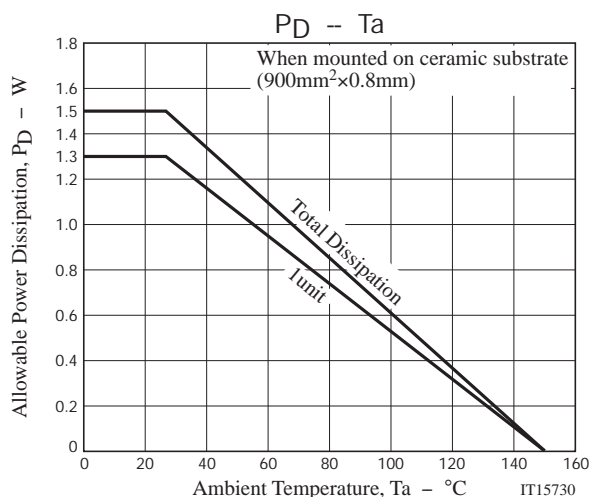
Electrical Characteristics at Ta=25°C

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=-2.5A		5.2		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=-2.5A, VGS=-10V		30	39	mΩ
	RDS(on)2	ID=-1.5A, VGS=-4.5V		55	77	mΩ
	RDS(on)3	ID=-1.5A, VGS=-4V		58	82	mΩ
Input Capacitance	Ciss	VDS=-10V, f=1MHz		600		pF
Output Capacitance	Coss	VDS=-10V, f=1MHz		145		pF
Reverse Transfer Capacitance	Crss	VDS=-10V, f=1MHz		110		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		7.2		ns
Rise Time	tr	See specified Test Circuit.		23		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		63		ns
Fall Time	tf	See specified Test Circuit.		42		ns
Total Gate Charge	Qg	VDS=-15V, VGS=-10V, ID=-5.5A		13		nC
Gate-to-Source Charge	Qgs	VDS=-15V, VGS=-10V, ID=-5.5A		1.8		nC
Gate-to-Drain "Miller" Charge	Qgd	VDS=-15V, VGS=-10V, ID=-5.5A		3.2		nC
Diode Forward Voltage	VSD	IS=-5.5A, VGS=0V		-0.82	-1.2	V

Switching Time Test Circuit







Note on usage : Since the ECH8667 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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