



# FW216A

## N-Channel Power MOSFET 35V, 4.5A, 64mΩ, Dual SOIC8

ON Semiconductor®

<http://onsemi.com>

### Features

- ON-resistance  $N_{ch}$  :  $R_{DS(on)1}=49m\Omega$  (typ.)
- 4.0V drive
- Halogen free compliance
- Protection diode in

### Specifications

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

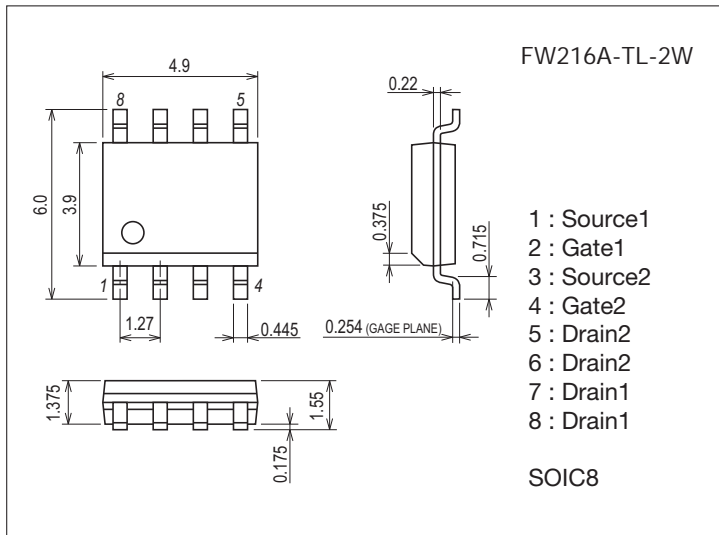
Parameter	Symbol	Conditions	Ratings	Unit
Drain to Source Voltage	$V_{DSS}$		35	V
Gate to Source Voltage	$V_{GSS}$		$\pm 20$	V
Drain Current (DC)	$I_D$		4.5	A
Drain Current ( $PW \leq 10\mu s$ )	$I_{DP}$	Duty cycle $\leq 1\%$	18	A
Allowable Power Dissipation	$P_D$	When mounted on ceramic substrate (2000mm <sup>2</sup> ×0.8mm) 1unit, $PW \leq 10s$	1.6	W
Total Dissipation	$P_T$	When mounted on ceramic substrate (2000mm <sup>2</sup> ×0.8mm), $PW \leq 10s$	2.2	W
Channel Temperature	$T_{ch}$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

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)

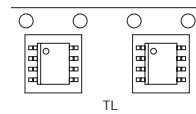
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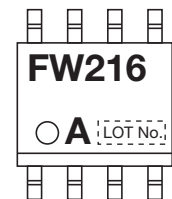
### Product & Package Information

- Package : SOIC8
- JEITA, JEDEC : SC-87, SOT-96
- Minimum Packing Quantity : 2,500 pcs./reel

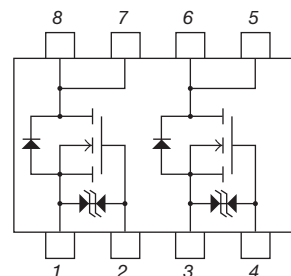
Packing Type : TL



Marking



### Electrical Connection

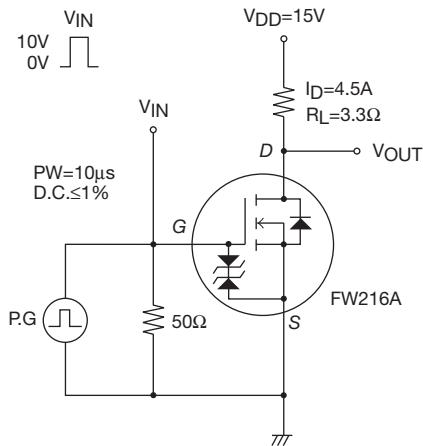


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## Electrical Characteristics at Ta=25°C

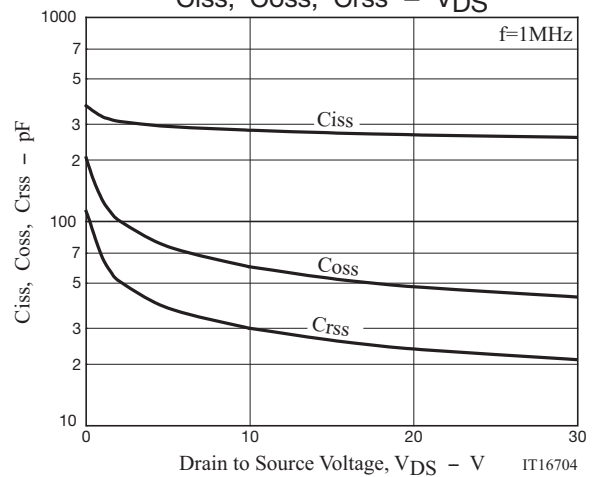
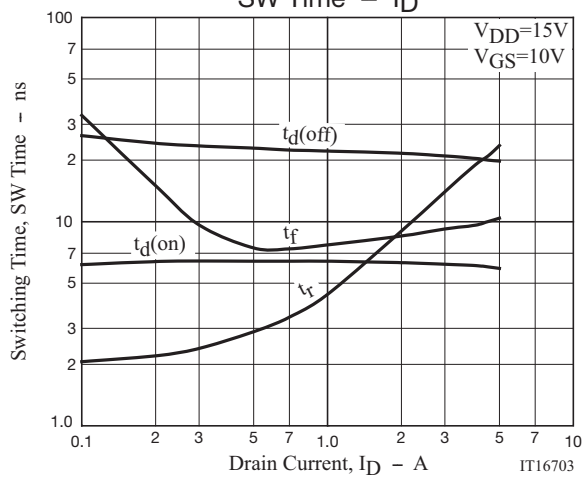
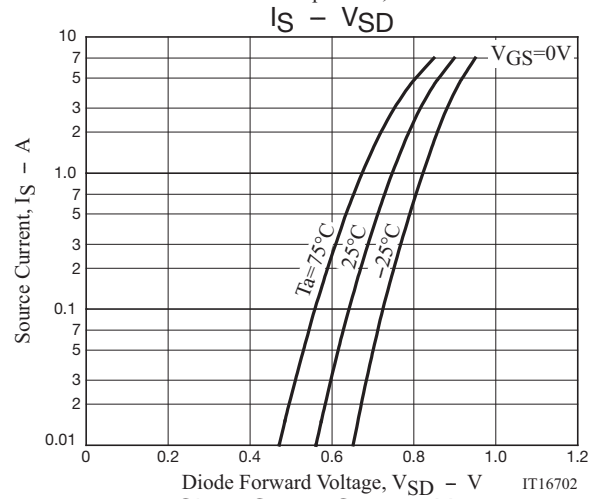
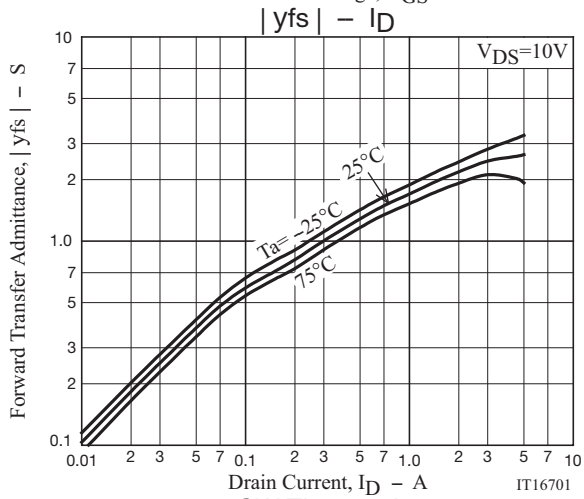
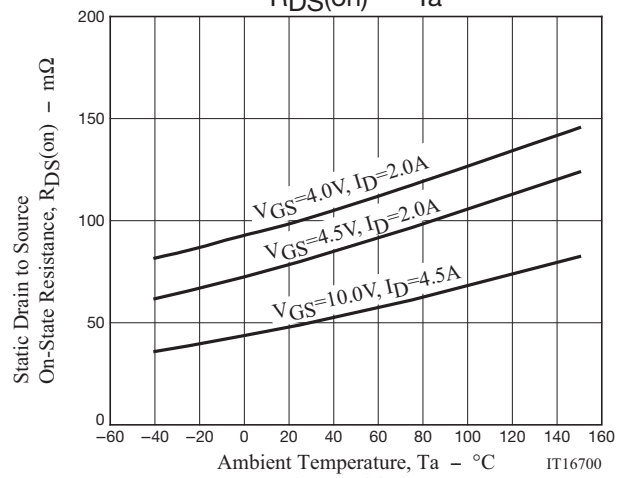
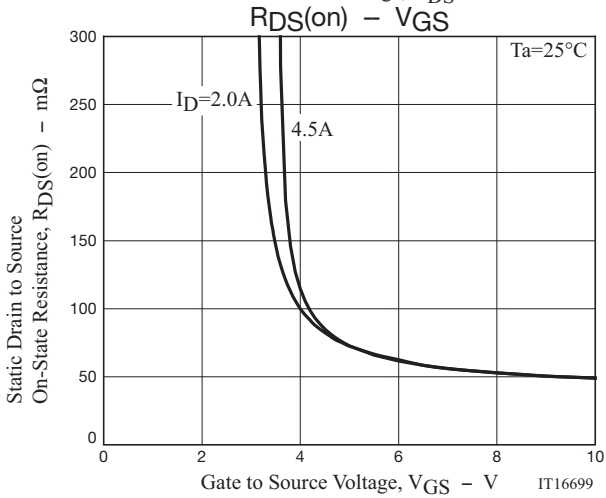
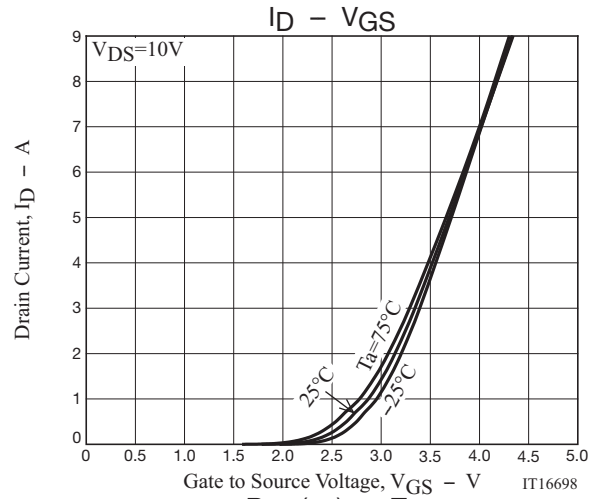
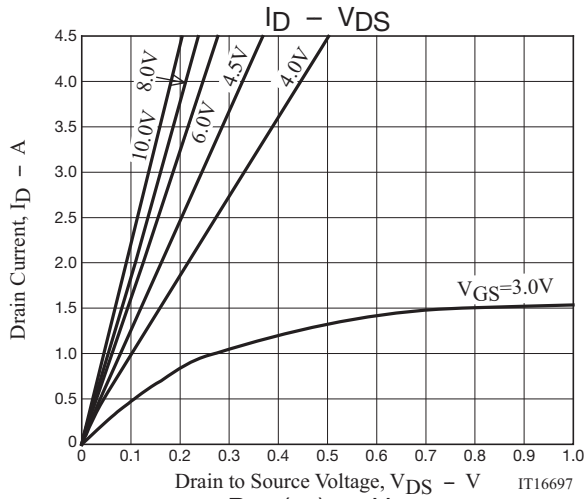
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	35			V
Zero-Gate Voltage Drain Current	IDSS	VDS=35V, VGS=0V			1	μA
Gate to Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=10V, ID=1mA	1.5		2.5	V
Forward Transfer Admittance	yfs	VDS=10V, ID=4.5A		2.6		S
Static Drain to Source On-State Resistance	RDS(on)1	ID=4.5A, VGS=10V		49	64	mΩ
	RDS(on)2	ID=2A, VGS=4.5V		80	112	mΩ
	RDS(on)3	ID=2A, VGS=4.0V		100	140	mΩ
Input Capacitance	Ciss	VDS=10V, f=1MHz		280		pF
Output Capacitance	Coss			60		pF
Reverse Transfer Capacitance	Crss			30		pF
Turn-ON Delay Time	td(on)		See specified Test Circuit.		6	
Rise Time	tr			21		ns
Turn-OFF Delay Time	td(off)			20		ns
Fall Time	tf			10		ns
Total Gate Charge	Qg	VDS=10V, VGS=10V, ID=4.5A			5.6	
Gate to Source Charge	Qgs			1.2		nC
Gate to Drain "Miller" Charge	Qgd			0.8		nC
Diode Forward Voltage	VSD	IS=4.5A, VGS=0V		0.85	1.2	V

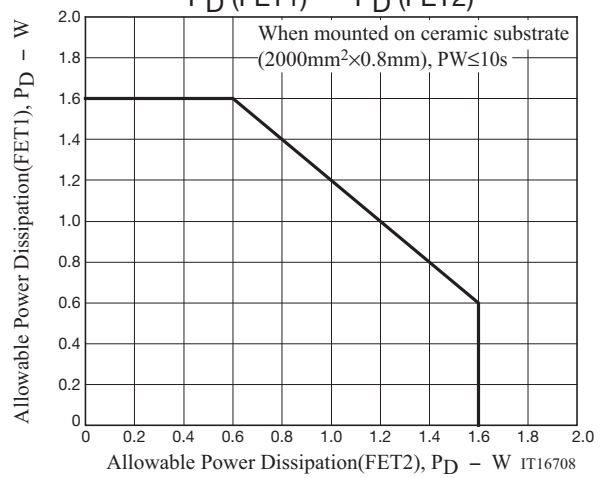
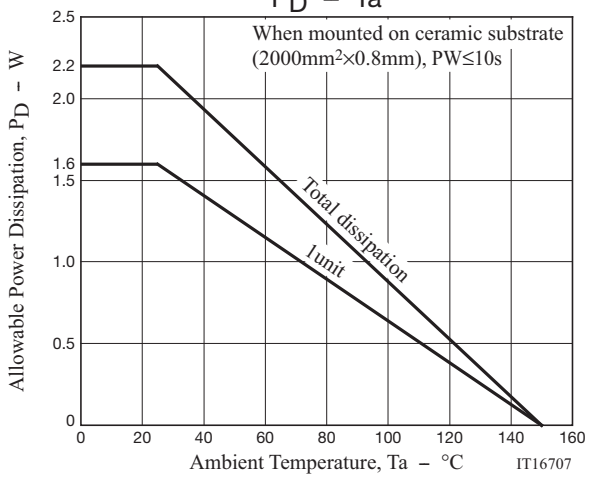
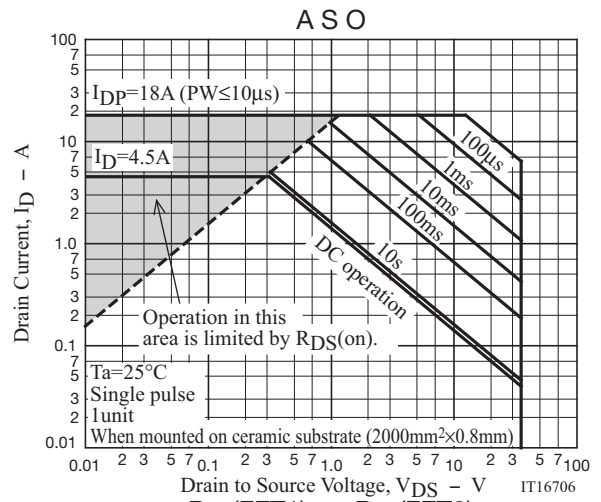
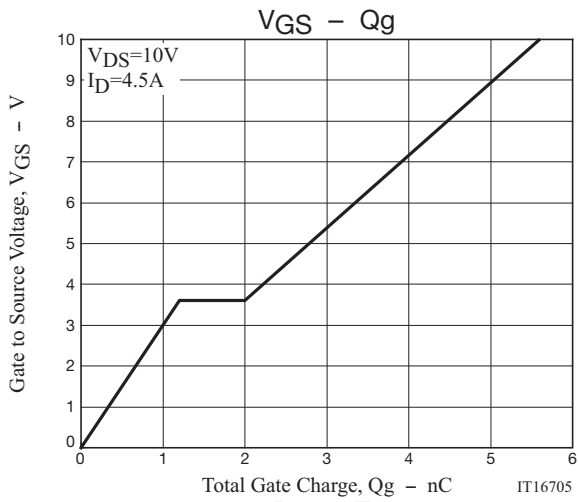
## Switching Time Test Circuit



## Ordering Information

Device	Package	Shipping	memo
FW216A-TL-2W	SOIC8	2,500pcs./reel	Pb Free and Halogen Free

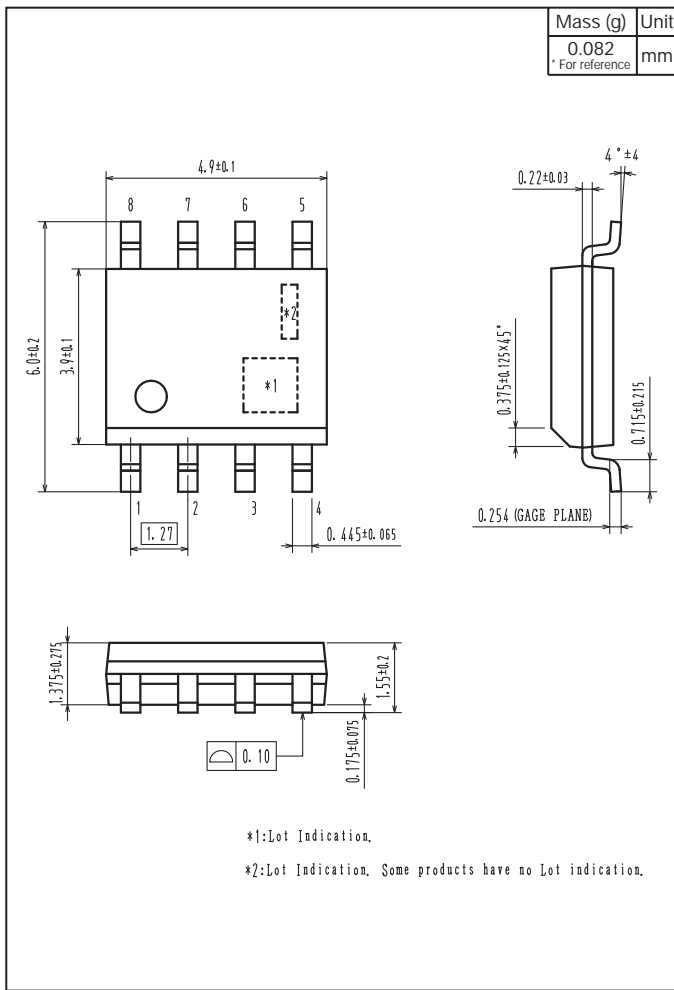




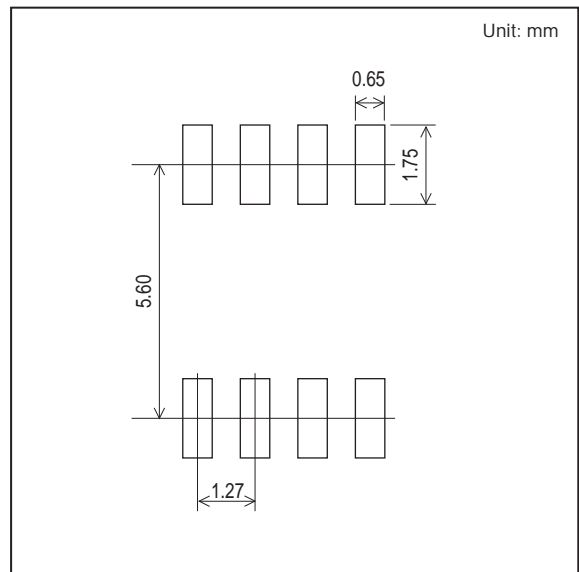
# FW216A

## Outline Drawing

FW216A-TL-2W



## Land Pattern Example



Note on usage : Since the FW216A is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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