Product Specification TYPE NUMBER : M T M F 8 2 3 1 0 B B F *2	Prepared by S.Miyata	Checked by M.Fujisawa	Applied by H.Shidooka	Established by K.Komichi

Type	Silicon Field Effect Transistors							
Application	Li-ion battery							
Structure	N-Channel MOS Type							
Outline	SO8-F1-B				Marking		AA	
Absolute Maximum Ratings	VDSS 30 (V)	VGSS ±20 (V)	ID 18 (A)	IDp 72 (A)	PD*3 1.0 (W)	Tch 150 (°C)	Tstg -55 to +150 (°C)	Avalanche Current 18 (A)

Electrical characteristics (Ta=25 °C ±3 °C)

Item	Symbol	Measuring condition	Limit min.	Limit typ.	Limit max.	Unit
Drain-Source Voltage	VDSS	ID=1mA, VGS=0V	30			V
Drain-Source Cutoff Current	IDSS	VDS=30V, VGS=0V			10	μA
Gate-Source Cutoff Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Gate Threshold Voltage	Vth	ID=1.0mA, VDS=10.0V	1.4		2.5	V
Drain Resistance (ON)	RDS(ON)	ID=5.0A, VGS=4.5V		6.5	9.8	mΩ
Drain Resistance (ON)	RDS(ON)	ID=5.0A, VGS=10V		3.0	4.2	mΩ
Forward Transfer Admittance	|Yfs|	ID=5.0A, VDS=10V	10			S
Small-Signal Short-Circuit Imput Capacitance	Ciss	VDS=10V, VGS=0V, f=1MHz		6000		pF
Small-Signal Short-Circuit Output Capacitance	Coss	VDS=10V, VGS=0V, f=1MHz		690		pF
Small-Signal Reverse Transfer Capacitance	Crss	VDS=10V, VGS=0V, f=1MHz		420		pF
Single-pulse Avalanche Energy	Eas	VDD=24V, VGS=10→0V, ID=18A L=0.5mH,Rg=25Ω,Tch=25° C(initial)		162		mJ
Turn-on Delay Time	td(on) *1	VDD=15V, VGS=0 to 10V, ID=5.0A		20		ns
Rise Time	tr *1	VDD=15V, VGS=0 to 10V, ID=5.0A		30		ns
Turn-off Delay Time	td(off) *1	VDD=15V, VGS=10 to 0V, ID=5.0A		400		ns
Fall Time	tf *1	VDD=15V, VGS=10 to 0V, ID=5.0A		420		ns

Note:

Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

*1 See test circuit

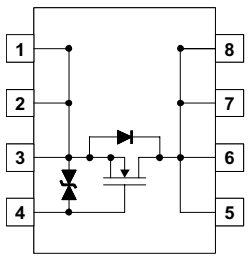
*2 Packing

Embossed type (thermo-compressioon sealing)

*3 Measuring on glass epoxy board at 25.4×25.4×0.8mm. Absolute maximum rating PD without heat sink shall be made 500mW.

Internally connected circuit

1.Source
2.Source
3.Source
4.Gate
5.Drain
6.Drain
7.Drain
8.Drain



2008.01.31	
Established	Revised

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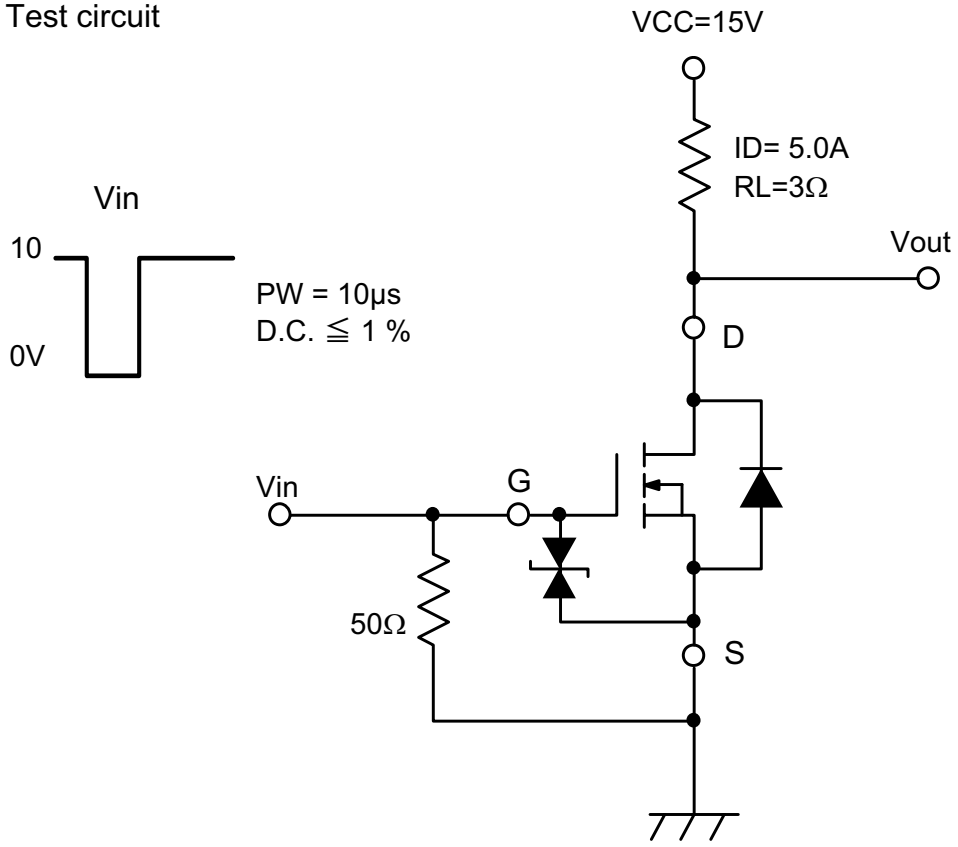
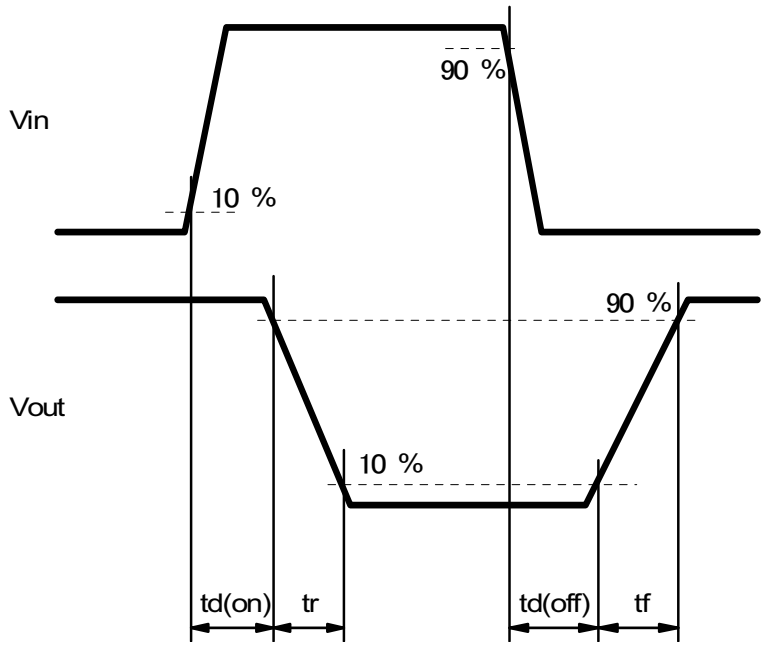
*2

Test circuit





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