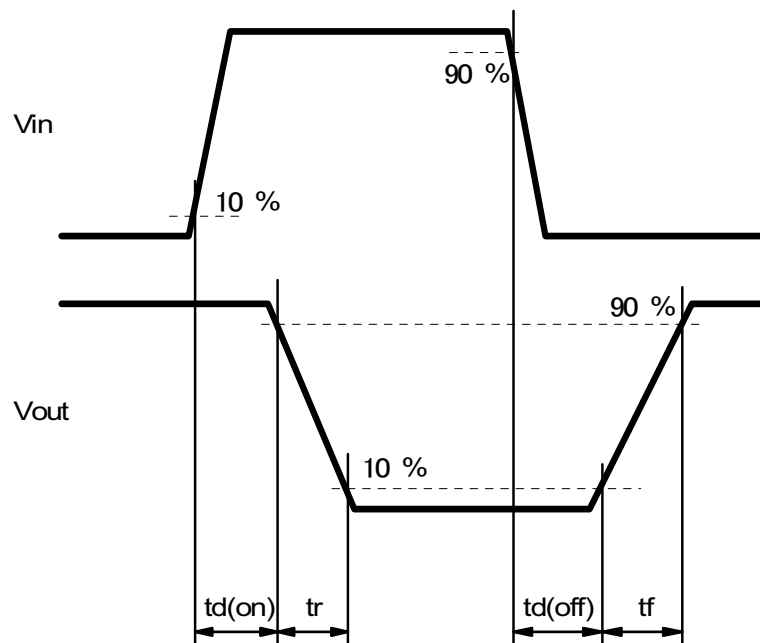
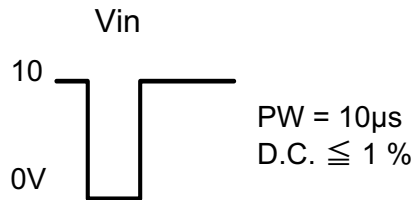
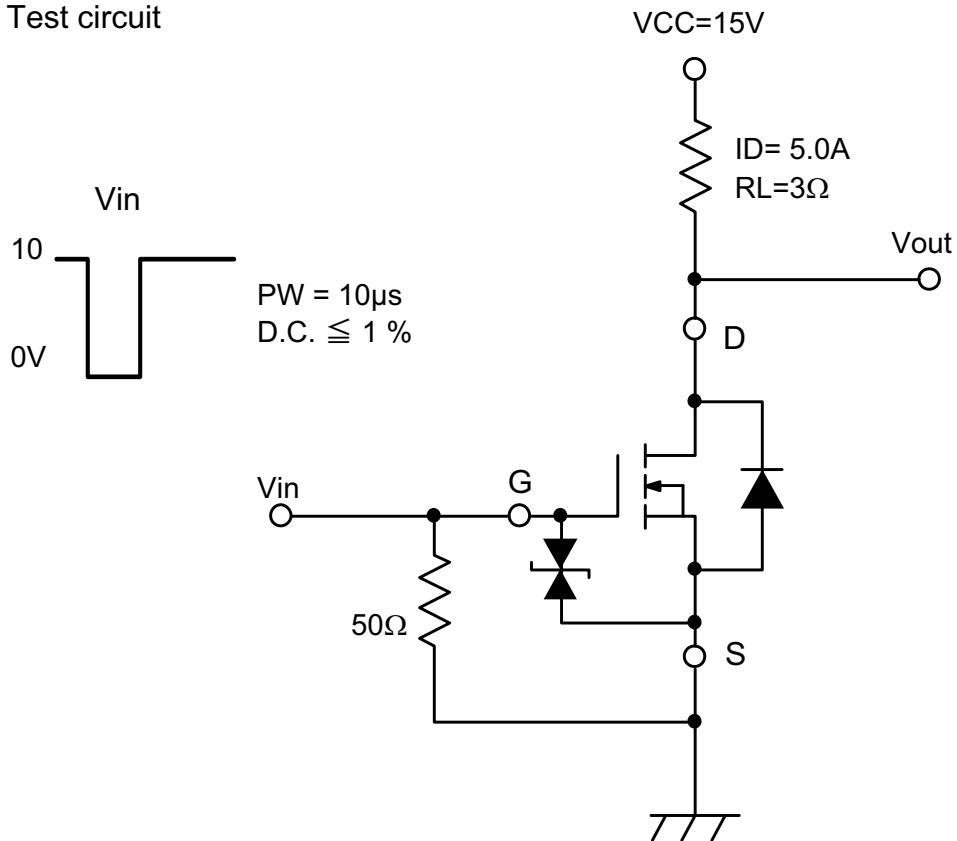


Product Specification TYPE NUMBER : M T M F 8 2 3 1 0 <span style="border: 1px solid black; padding: 0 2px;">B</span> B F *2		Prepared by S.Miyata	Checked by M.Fujisawa	Applied by H.Shidooka	Established by K.Kemichi			
Type	Silicon Field Effect Transistors							
Application	Li-ion battery							
Structure	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 <sup>*3</sup> 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			Unit		
			min.	typ.	max.			
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 Input 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		
<p>Note:</p> <p>Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.</p> <p>*1 See test circuit</p> <p>*2 Packing Embossed type (thermo-compression sealing)</p> <p>*3 Measuring on glass epoxy board at 25.4×25.4×0.8mm. Absolute maximum rating PD without heat sink shall be made 500mW.</p>								
			Internally connected circuit					
			<p>1.Source 2.Source 3.Source 4.Gate 5.Drain 6.Drain 7.Drain 8.Drain</p>					
2008.01.31								
Established	Revised							

Product Specification  
 TYPE NUMBER : M T M F 8 2 3 1 0 **B** B F  
 \*2

Test circuit



2008.01.31

Established

Revised