



MTM981400BBF  
 Silicon P-channel MOSFET

For switching

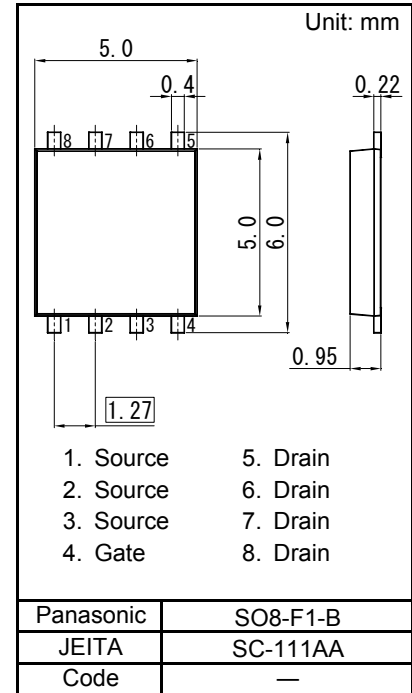
■ Features

- Low drain-source On-state Resistance  
 RDS(on) typ = 28 mΩ (VGS = -4.5 V)
- Halogen-free / RoHS compliant  
 (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol BA

■ Packaging

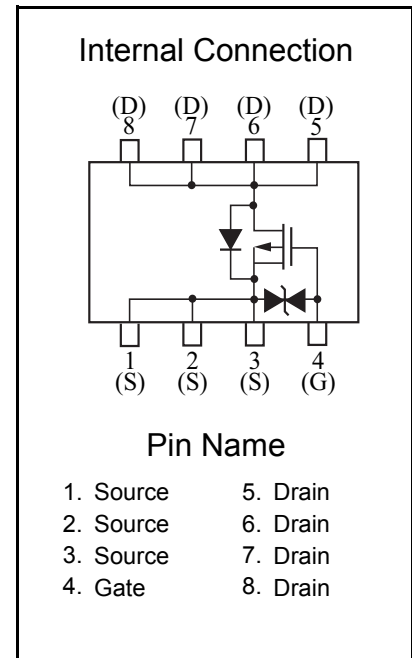
Embossed type (Thermo-compression sealing) 3 000 pcs / reel (standard)



■ Absolute Maximum Ratings Ta = 25 °C

Parameter	Symbol	Rating	Unit
Drain-source Voltage	VDS	-40	V
Gate-source Voltage	VGS	±20	V
Drain Current	ID	-7.0	A
Drain Current (Pulsed)	IDp	-28	A
Total Power dissipation *1	PD	2	W
Channel Temperature	Tch	150	°C
Operating Ambient Temperature	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-55 to +150	°C

Note: \*1 Measuring on ceramic board at 50 mm × 50 mm × 1.0 mm.



■ Electrical Characteristics Ta = 25°C ± 3°C

Static Characteristics

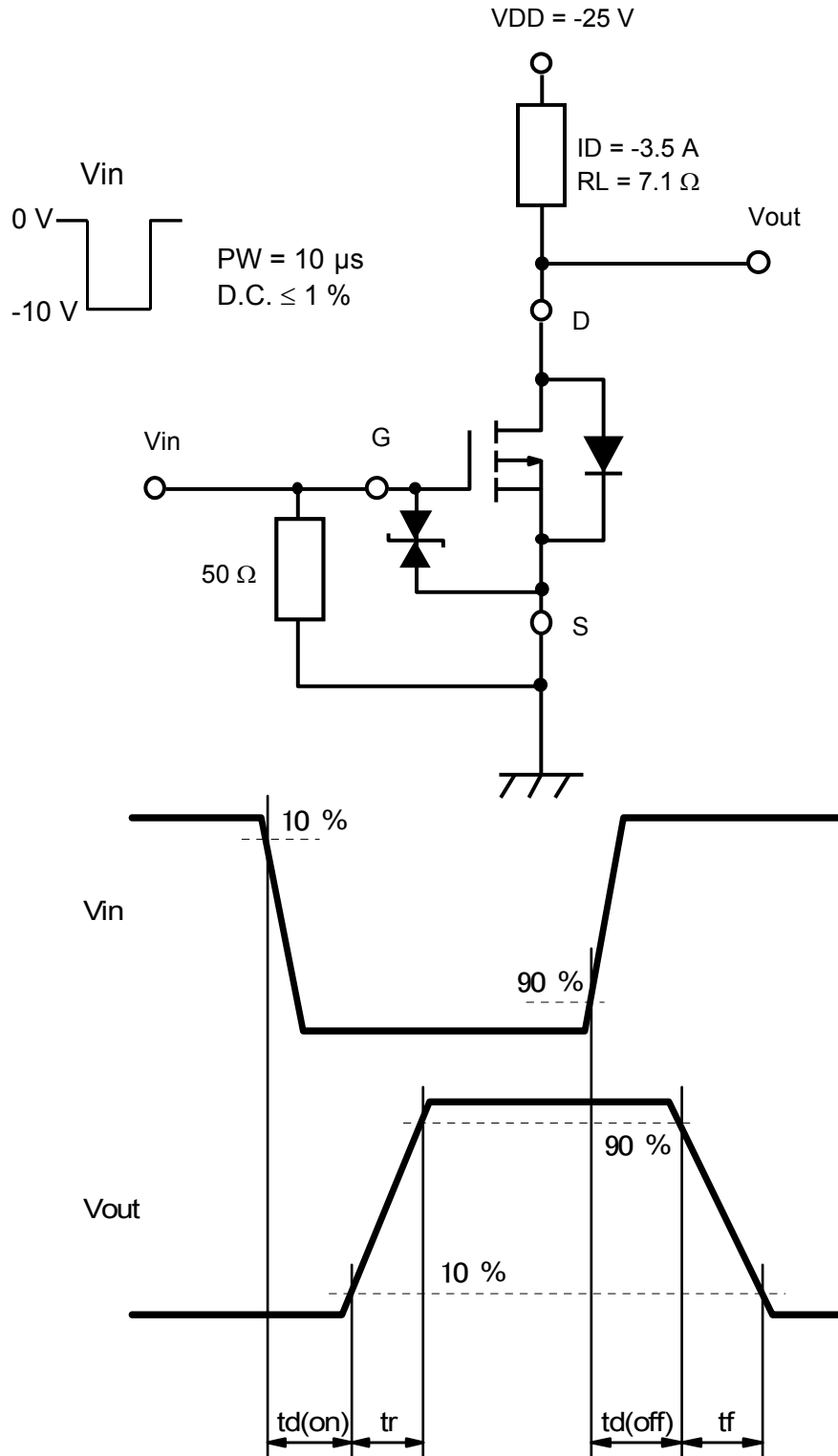
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source Breakdown Voltage	VDSS	ID = -1 mA, VGS = 0 V	-40			V
Zero Gate Voltage Drain Current	IDSS	VDS = -40 V, VGS = 0 V			-10	μA
Gate-source Leakage Current	IGSS	VGS = ±16 V, VDS = 0 V			±10	μA
Gate-source threshold Voltage	Vth	ID = -1.0 mA, VDS = -10.0 V	-1		-2.5	V
Drain-source On-state Resistance *1	RDS(on)1	ID = -7.0 A, VGS = -10 V		19	25	mΩ
	RDS(on)2	ID = -3.5 A, VGS = -4.5 V		28	45	
Forward transfer admittance *1	Yfs	ID = -7.0 A, VDS = -10 V	10			S
Input Capacitance	Ciss	VDS = -10 V, VGS = 0 V, f = 1 MHz		2 700		pF
Output Capacitance	Coss			190		
Reverse Transfer Capacitance	Crss			175		
Turn-on Delay Time *1,*2	td(on)	VDD = -25 V, VGS = 0 V to -10 V		18		ns
Rise Time *1,*2	tr	ID = -3.5 A		15		
Turn-off Delay Time *1,*2	td(off)	VDD = -25 V, VGS = -10 V to 0 V		230		ns
Fall Time *1,*2	tf	ID = -3.5 A		70		

Note: 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

2. \*1 Pulse test

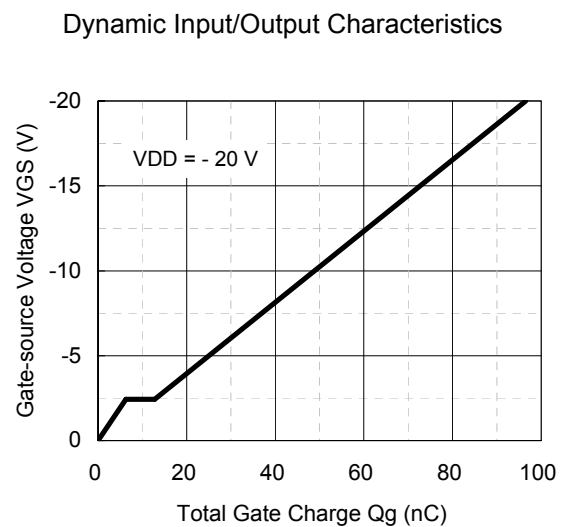
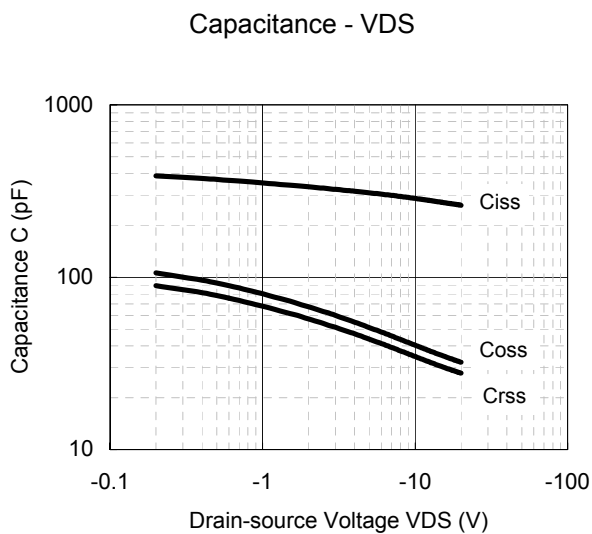
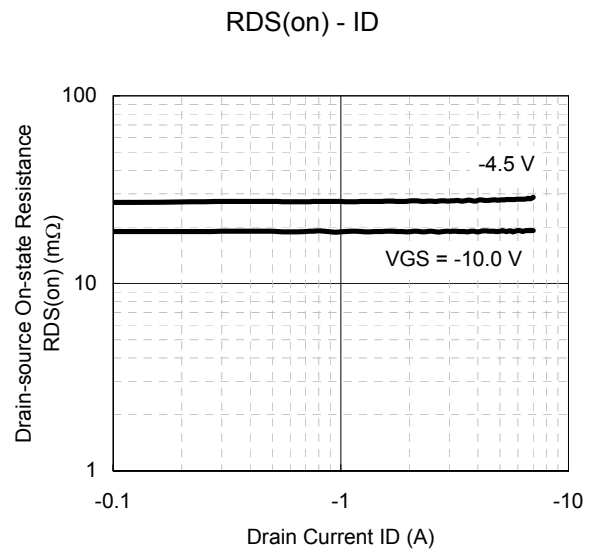
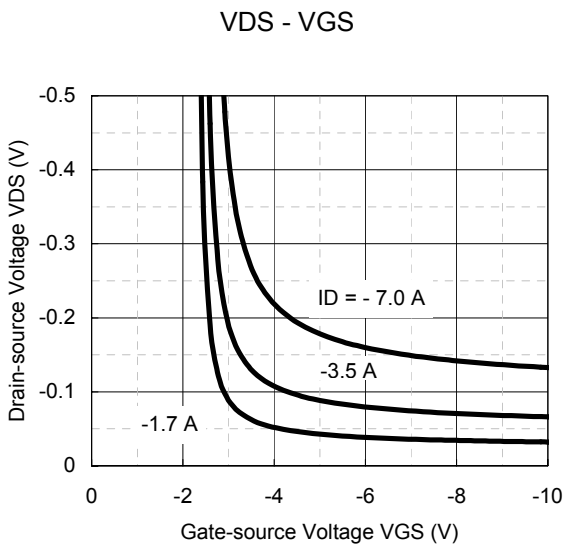
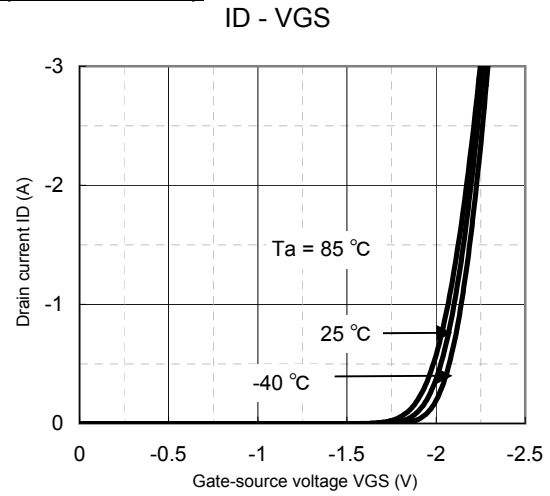
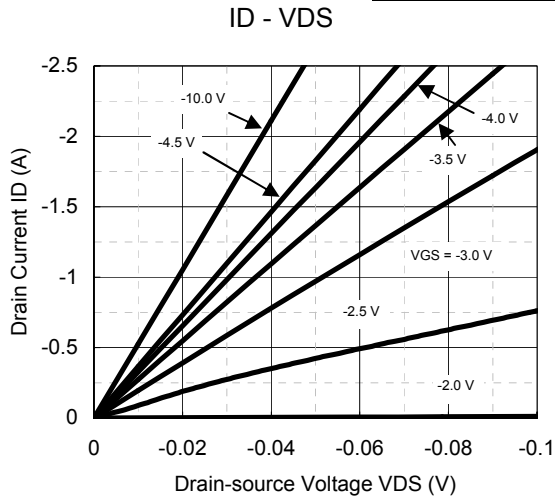
\*2 Measurement circuit for Turn-on Delay Time/Rise Time/Turn-off Delay Time/Fall Time

\*2 Measurement circuit for Turn-on Delay Time/Rise Time/Turn-off Delay Time/Fall Time



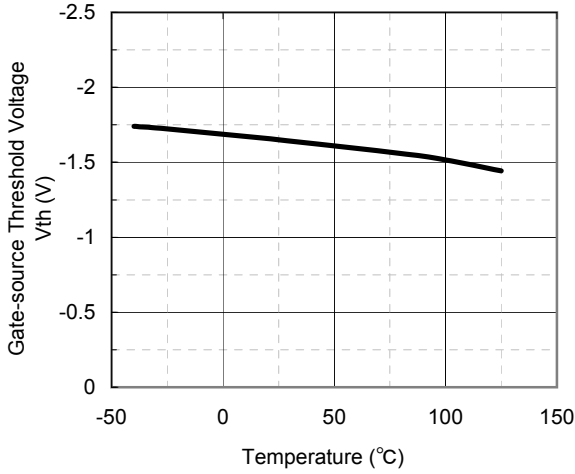


Technical Data ( reference )

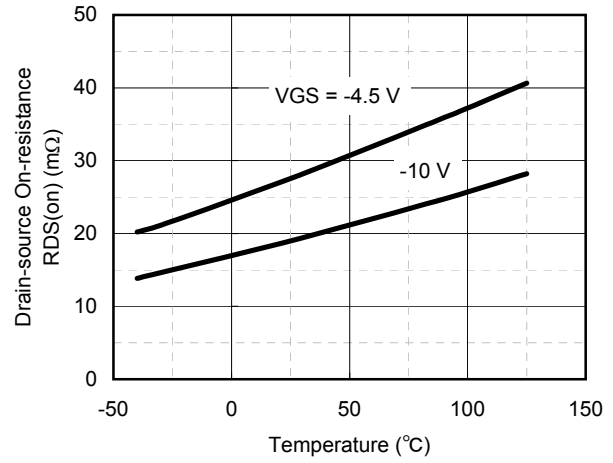


Technical Data ( reference )

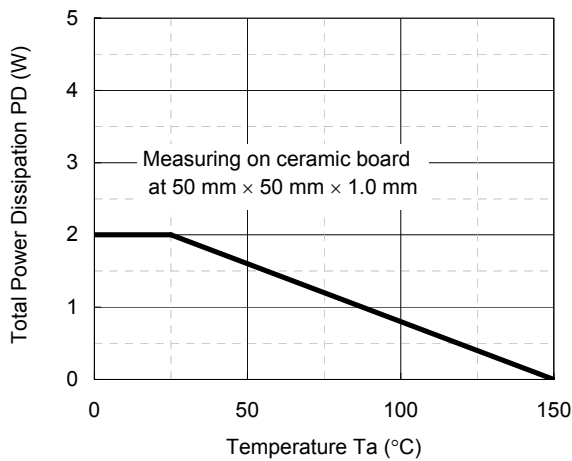
V<sub>th</sub> - T<sub>a</sub>



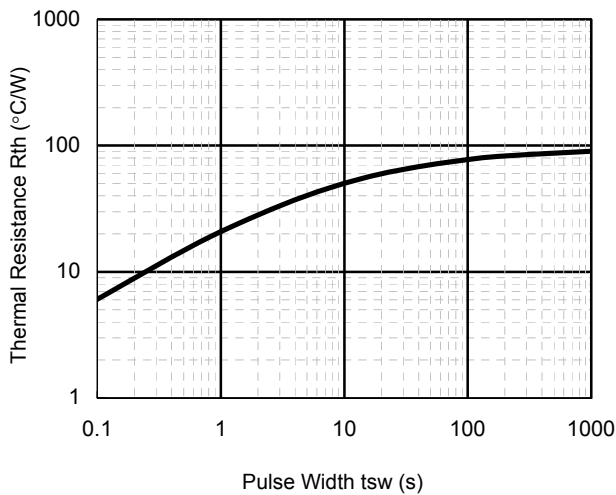
R<sub>DS(on)</sub> - T<sub>a</sub>



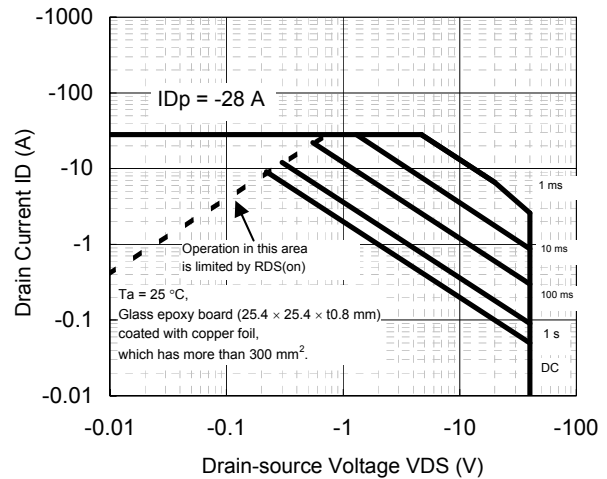
P<sub>D</sub> - T<sub>a</sub>



R<sub>th</sub> - t<sub>sw</sub>

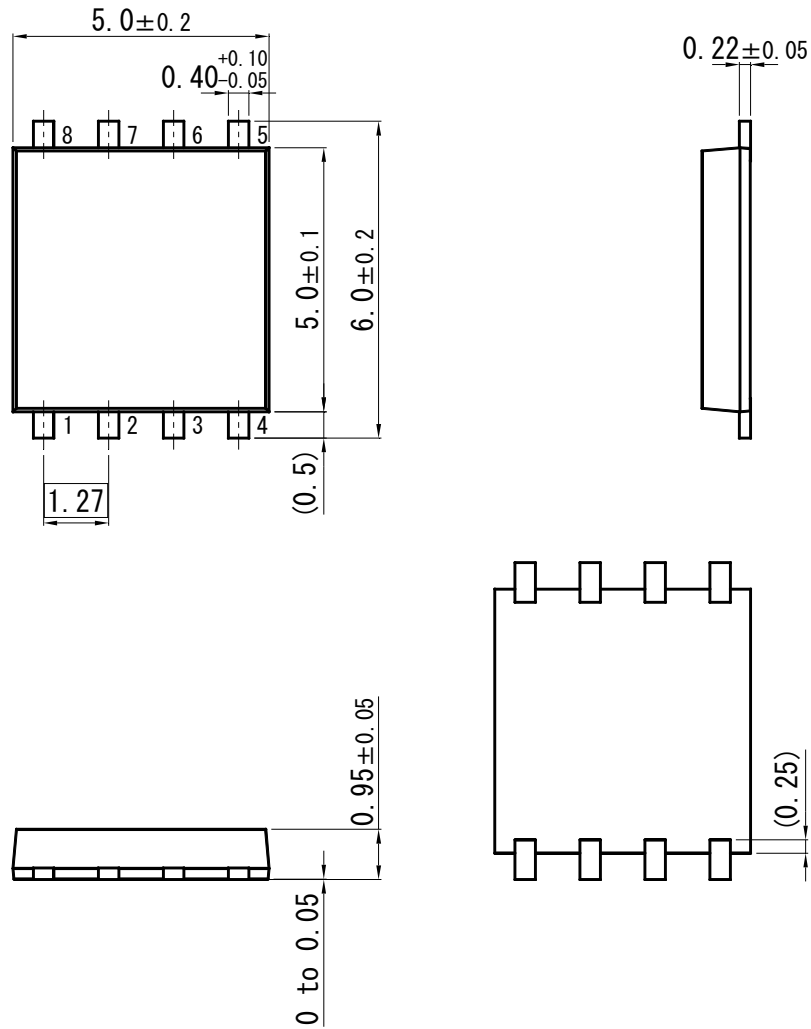


Safe Operating Area

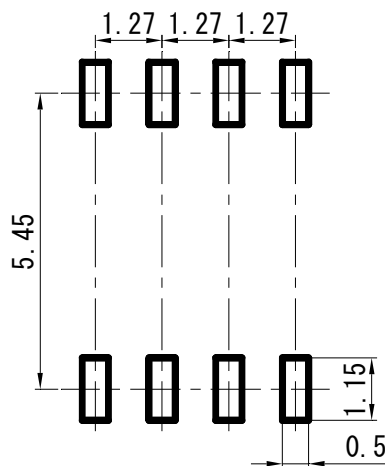


SO8-F1-B

Unit : mm



■ Land Pattern (Reference) (Unit : mm)



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