

P26B10SL

Power MOSFETs
100V, 26A, N-channel

Feature

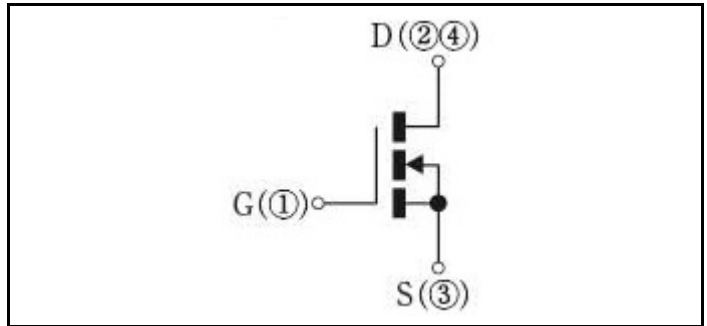
- N-channel
- SMD
- Low Ron
- 4.5V Gate Drive
- Low Capacitance
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FB
Package (JEDEC Code): TO-252AA



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-55 to 150	°C
Channel temperature	Tch		-55 to 150	°C
Drain-source voltage	V _{DSS}		100	V
Gate-source voltage	V _{GSS}		±20	V
Continuous drain current(DC)	I _D		26	A
Continuous drain current(Peak)	I _{DP}	Pulse width 10µs, duty=1/100	78	A
Total power dissipation	P _T		44	W
Single avalanche current	I _{AS}	Starting Tch=25°C Tch≤150°C	19	A
Single avalanche energy	E _{AS}	Starting Tch=25°C Tch≤150°C	40	mJ

※ :See the original Specifications

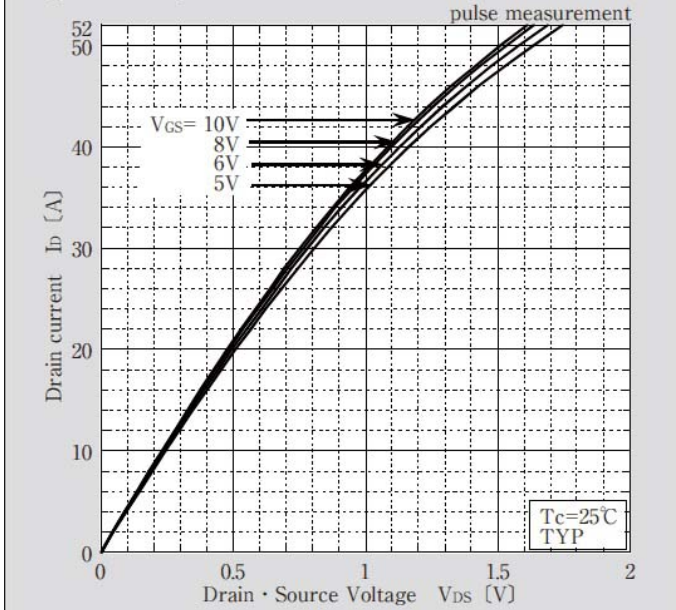
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Drain-Source breakdown voltage	$V_{(BR)DSS}$	ID=1mA, VGS=0V	100			V
Zero gate voltage drain current	I_{DSS}	VDS=100V, VGS=0V			1	μA
Gate-source leakage current	I_{GSS}	VGS=±20V, VDS=0V			±0.1	μA
Forward transconductance	g_{fs}	ID=13A, VDS=10V	8	16		S
Static drain-source on-state resistance	$R_{DS(ON)}$	ID=13A, VGS=10V		0.024	0.03	Ω
Static drain-source on-state resistance	$R_{DS(ON)}$	ID=13A, VGS=4.5V		0.026	0.035	Ω
Gate threshold voltage	V_{th}	ID=1mA, VDS=10V	1.5	2	2.5	V
Source-drain diode forward voltage	V_{SD}	IS=26A, VGS=0V			1.5	V
Thermal resistance	$R_{th(j-c)}$	Junction to case, with heatsink ※			2.84	°C/W
Total gate charge	Q_g	VDD=80V, VGS=10V, ID=26A		43		nC
Gate to source charge	Q_{gs}	VDD=80V, VGS=10V, ID=26A		9		nC
Gate to drain charge	Q_{gd}	VDD=80V, VGS=10V, ID=26A		12		nC
Input capacitance	C_{iss}	VDS=25V, VGS=0V, f=1MHz		1975		pF
Reverse transfer capacitance	C_{rss}	VDS=25V, VGS=0V, f=1MHz		76		pF
Output capacitance	C_{oss}	VDS=25V, VGS=0V, f=1MHz		158		pF
Turn-on delay time	$t_{d(on)}$	ID=13A, RL=3.85Ω, VDD=50V, Rg=0Ω, VGS(+)=10V, VGS(-)=0V		6		ns
Rise time	t_r	ID=13A, RL=3.85Ω, VDD=50V, Rg=0Ω, VGS(+)=10V, VGS(-)=0V		10		ns
Turn-off delay time	$t_{d(off)}$	ID=13A, RL=3.85Ω, VDD=50V, Rg=0Ω, VGS(+)=10V, VGS(-)=0V		30		ns
Fall time	t_f	ID=13A, RL=3.85Ω, VDD=50V, Rg=0Ω, VGS(+)=10V, VGS(-)=0V		17		ns
Diode reverse recovery time	t_{rr}	IF=26A, VGS=0V, di/dt=100A/μs		53		ns
Diode reverse recovery charge	Q_{rr}	IF=26A, VGS=0V, di/dt=100A/μs		100		nC

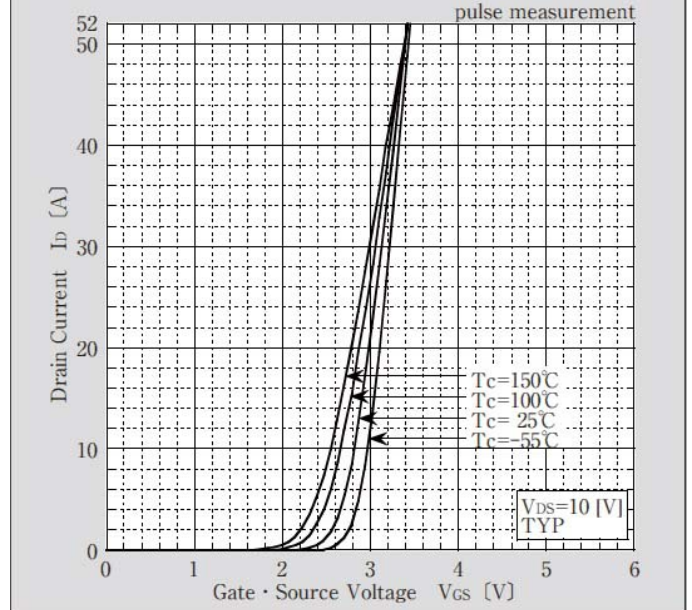
※ : See the original Specifications

CHARACTERISTIC DIAGRAMS

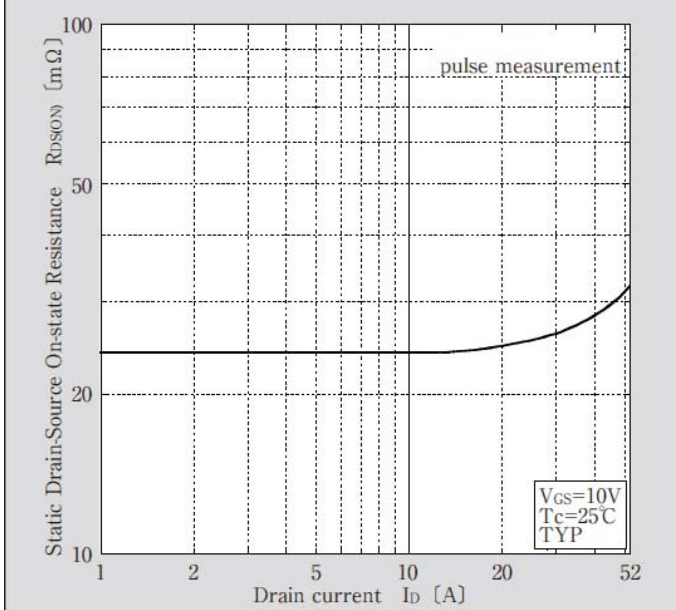
Typical Output Characteristics



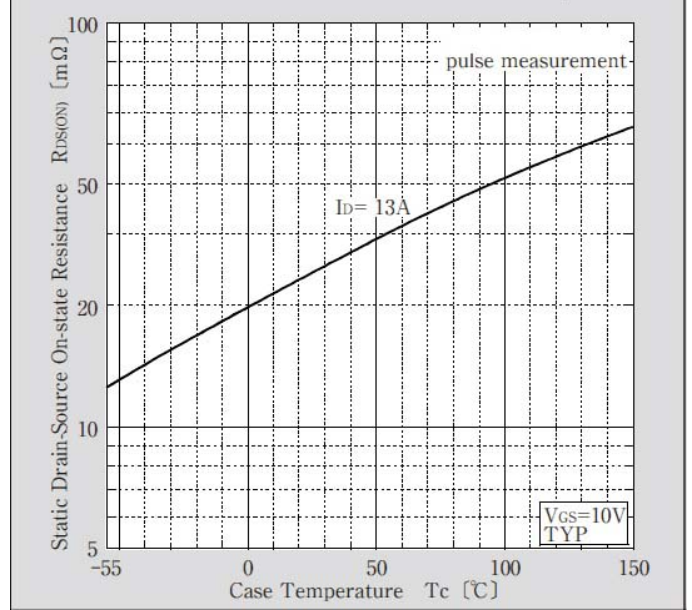
Transfer Characteristics



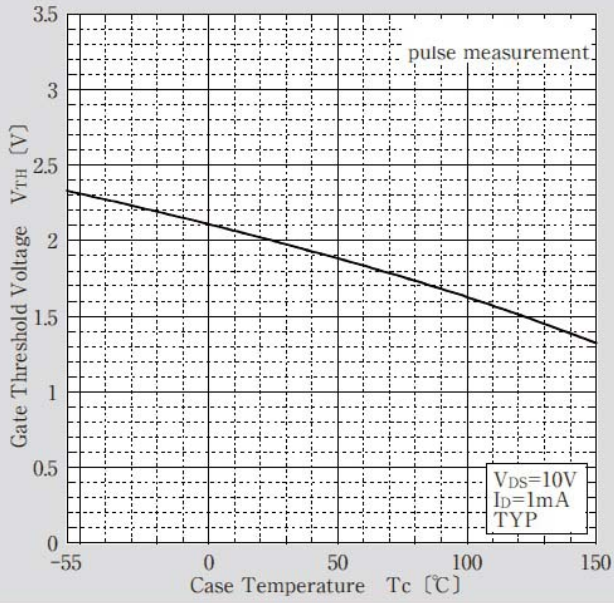
Static Drain-Source On-state Resistance vs Drain Current



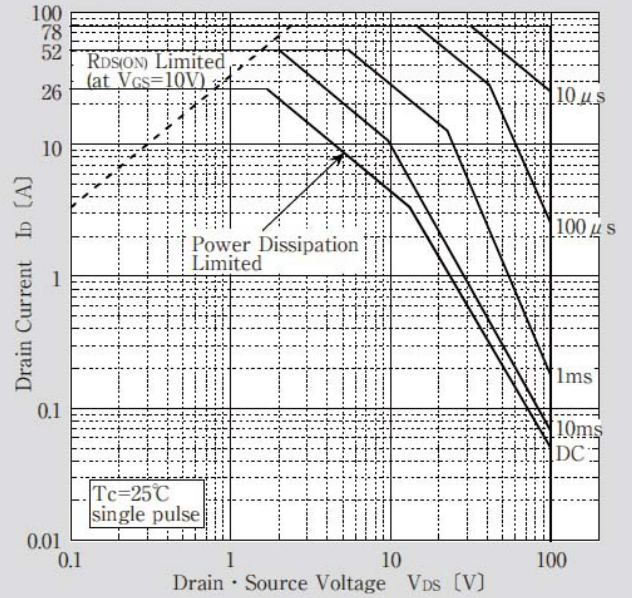
Static Drain-Source On-state Resistance vs Case Temperature



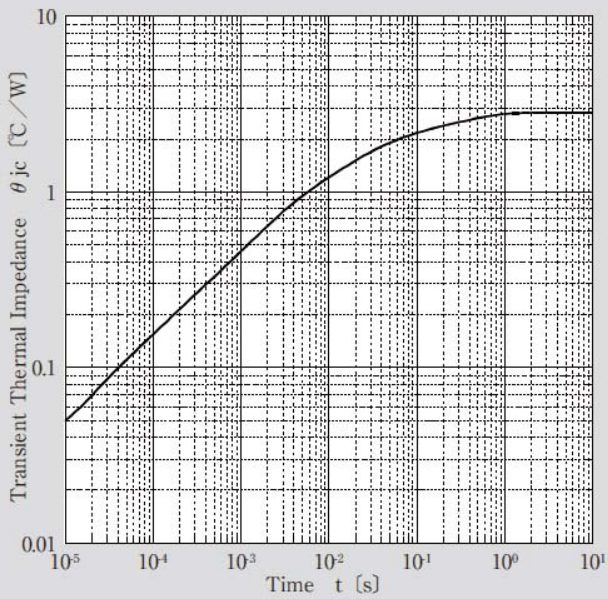
Gate Threshold Voltage vs Case Temperature



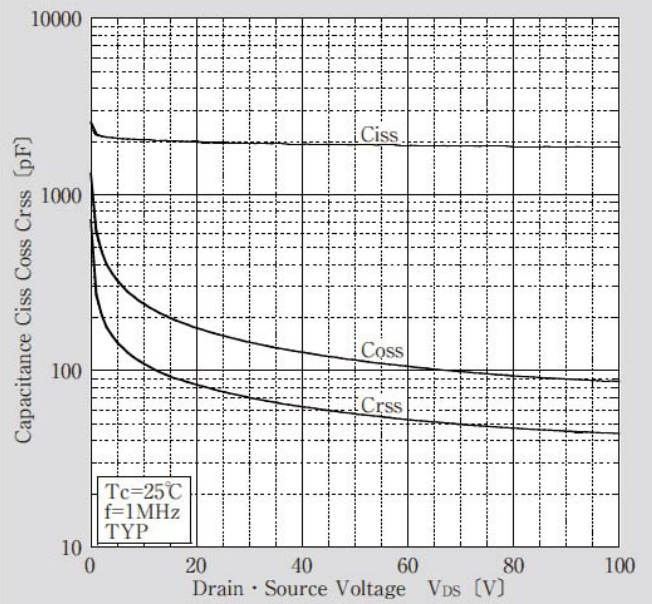
Safe Operating Area



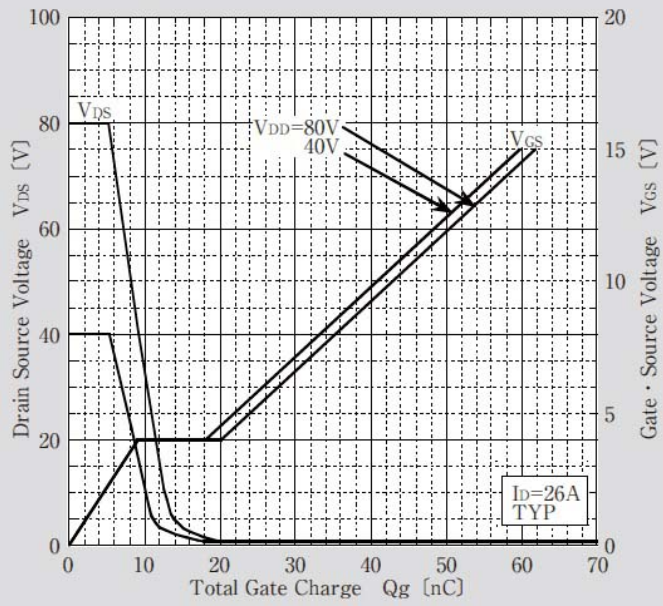
Transient Thermal Impedance



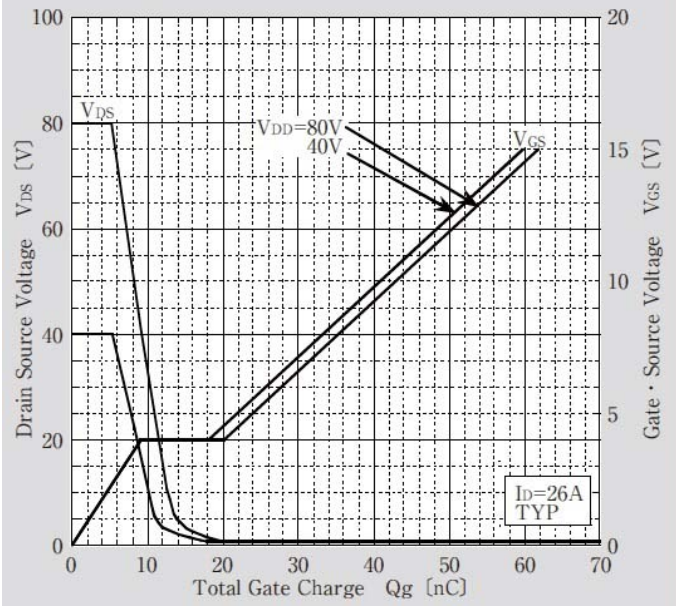
Capacitance Characteristics



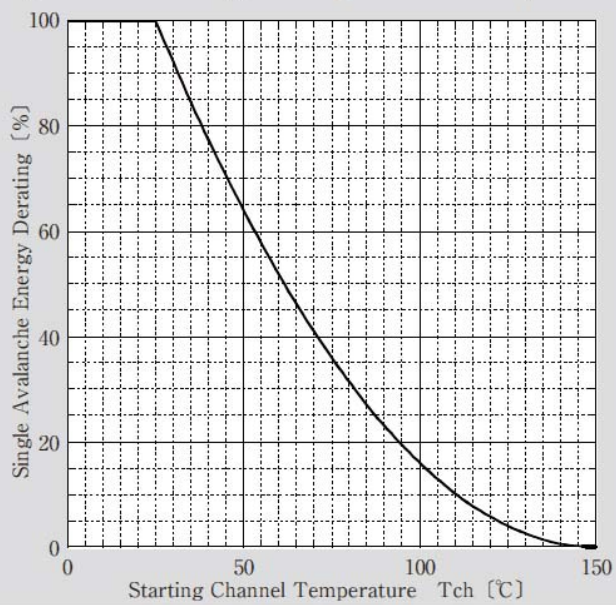
Gate Charge Characteristics



Gate Charge Characteristics

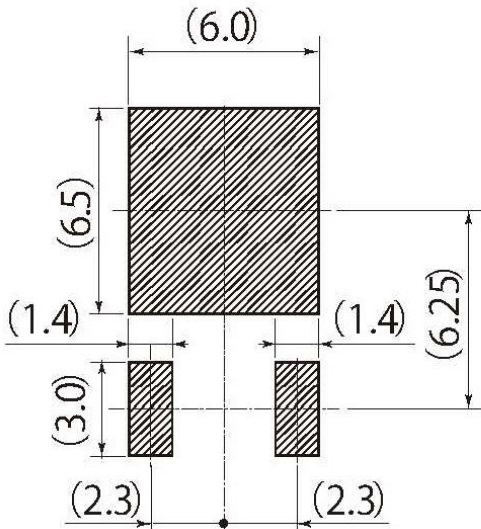
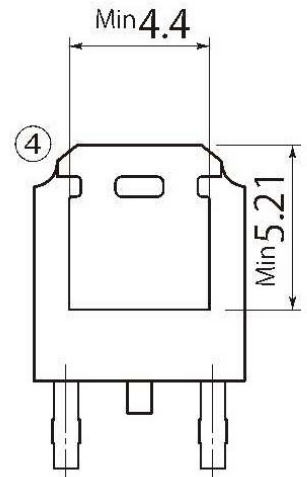
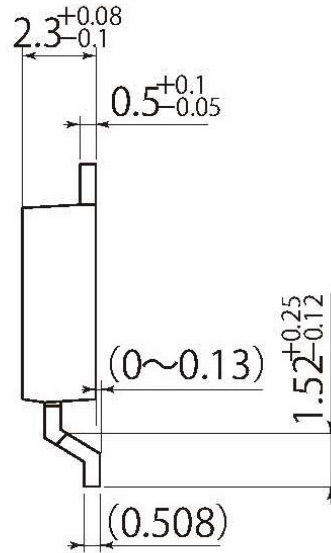
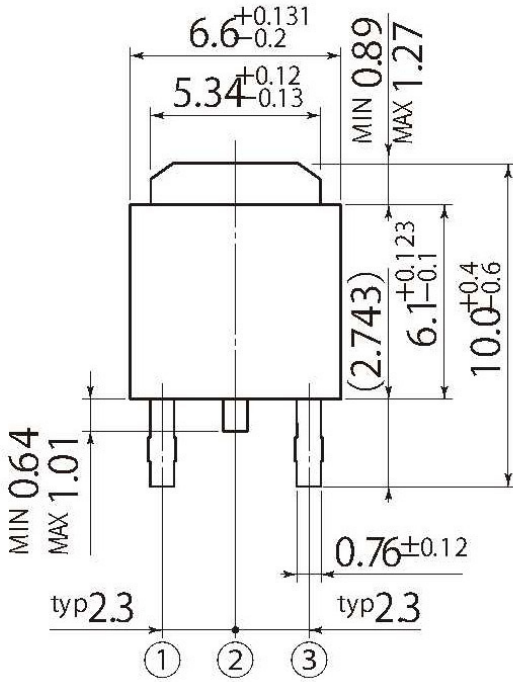


Single Avalanche Energy Derating vs Channel Temperature



G2

JEDEC Code	TO-252AA
JEITA Code	-
House Name	FB



Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condition.

Notes

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