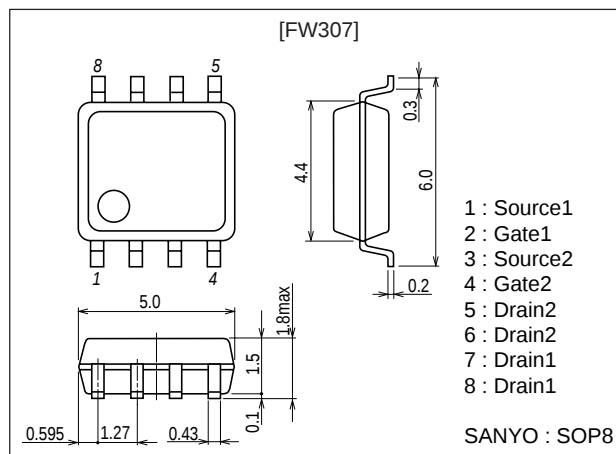


SANYO**Ultrahigh-Speed Switching Applications****Features**

- The FW307 incorporates an N-channel MOSFET and a P-channel MOSFET that feature low ON-resistance and high-speed switching, thereby enabling high-density mounting.
- Excellent ON-resistance characteristic.

Package Dimensionsunit : mm
2129**Specifications****Absolute Maximum Ratings** at Ta=25°C

Parameter	Symbol	Conditions	Ratings		Unit
			N-channel	P-channel	
Drain-to-Source Voltage	V _{DSS}		250	-250	V
Gate-to-Source Voltage	V _{GSS}		±30	±30	V
Drain Current (DC)	I _D		1	-0.7	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	5	-3	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm²×0.8mm)1unit	1.7		W
Total Dissipation	P _T	Mounted on a ceramic board (900mm²×0.8mm)	2.0		W
Channel Temperature	T _{ch}		150		°C
Storage Temperature	T _{stg}		-55 to +150		°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
[N-channel]						
Drain-to-Source Breakdown Voltage	V _(BR) DSS	I _D =1mA, V _{GS} =0	250			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =250V, V _{GS} =0			100	μA
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =15V, V _{GS} =0, Ta=0 to 60°C			4	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±25V, V _{DS} =0			±10	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±15V, V _{DS} =0, Ta=0 to 60°C			±1.2	μA

Continued on next page.

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- SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

SANYO Electric Co.,Ltd. Semiconductor Company

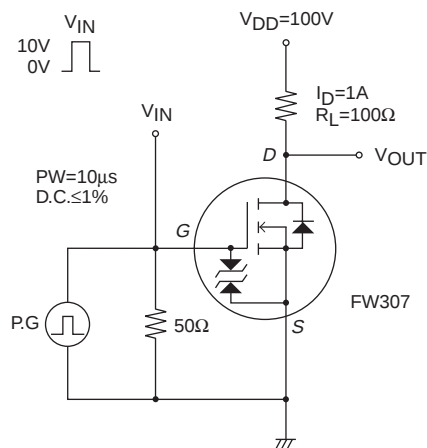
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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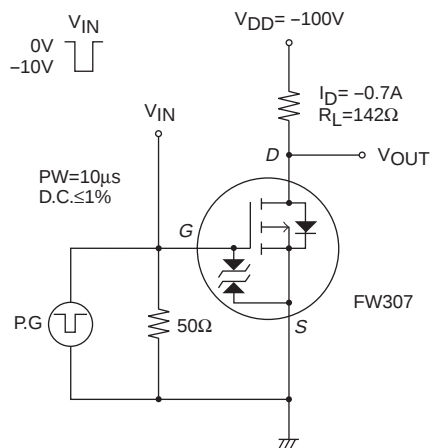
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.5		2.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=1A$	1.4	2.1		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=1A, V_{GS}=10V$		1.2	1.6	Ω
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		160		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		40		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		15		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		10		ns
Rise Time	t_r	See specified Test Circuit.		15		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		80		ns
Fall Time	t_f	See specified Test Circuit.		30		ns
Diode Forward Voltage	V_{SD}	$I_S=1A, V_{GS}=0$		1.0	1.2	V
[P-channel]						
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=-1mA, V_{GS}=0$	-250			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-250V, V_{GS}=0$			-100	μA
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=15V, V_{GS}=0, T_a=0 \text{ to } 60^\circ C$			-4	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 25V, V_{DS}=0$			± 10	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 15V, V_{DS}=0, T_a=0 \text{ to } 60^\circ C$			± 1.2	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=-10V, I_D=-1mA$	-1.5		-2.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=-10V, I_D=-0.7A$	0.7	1.1		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=-0.7A, V_{GS}=-10V$		3	4	Ω
Input Capacitance	C_{iss}	$V_{DS}=-20V, f=1MHz$		160		pF
Output Capacitance	C_{oss}	$V_{DS}=-20V, f=1MHz$		45		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=-20V, f=1MHz$		20		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		12		ns
Rise Time	t_r	See specified Test Circuit.		15		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		90		ns
Fall Time	t_f	See specified Test Circuit.		40		ns
Diode Forward Voltage	V_{SD}	$I_S=-1A, V_{GS}=0$		-1.0	-1.2	V

Switching Time Test Circuit

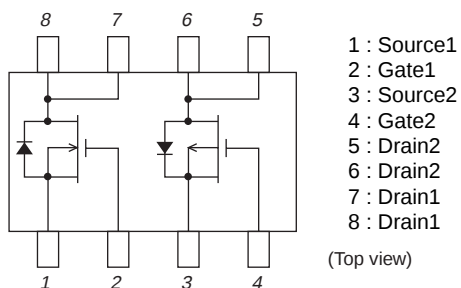
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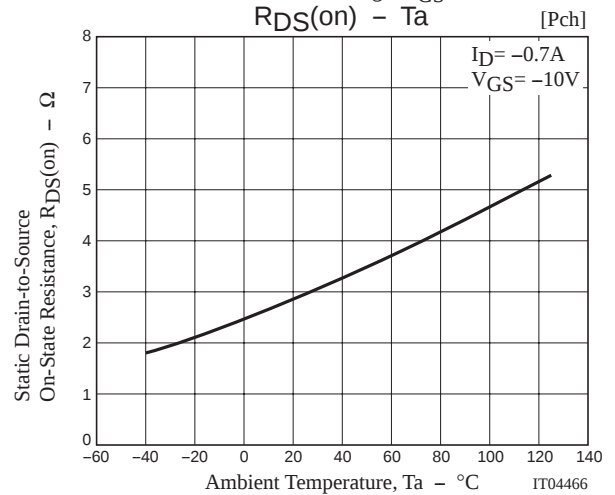
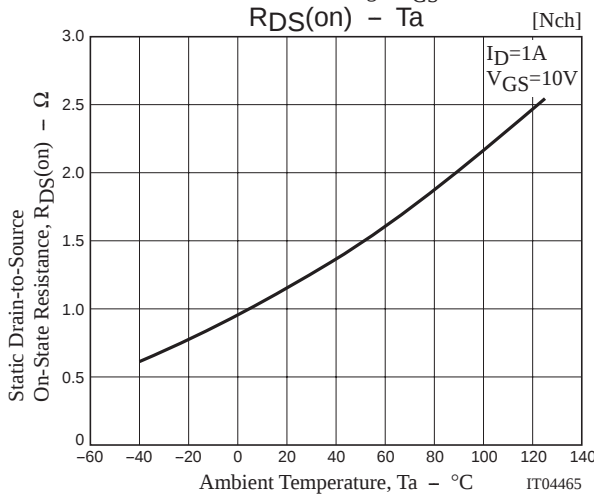
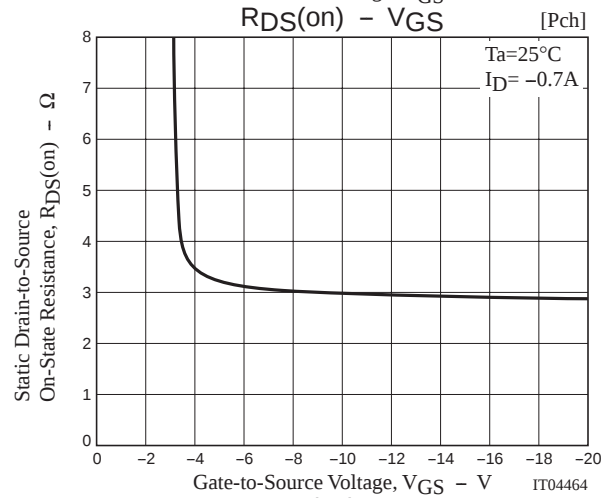
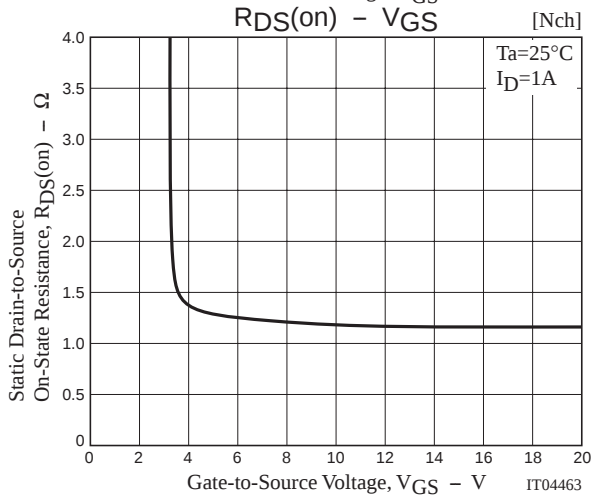
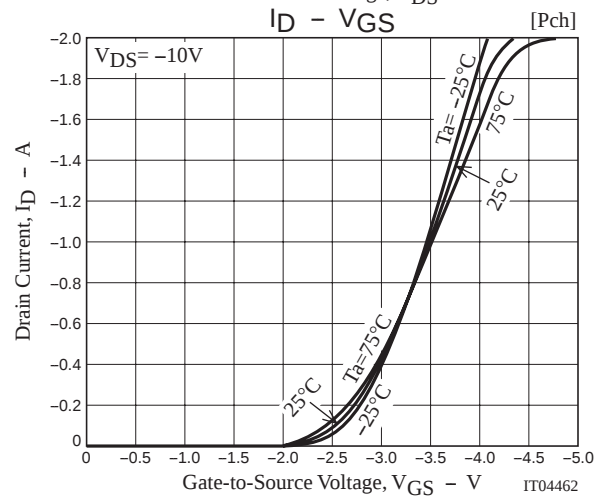
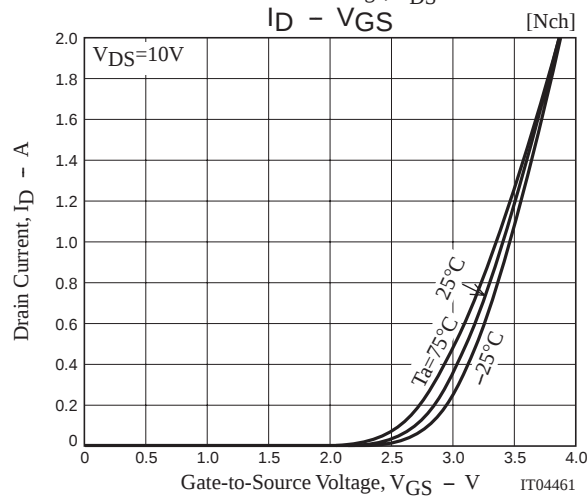
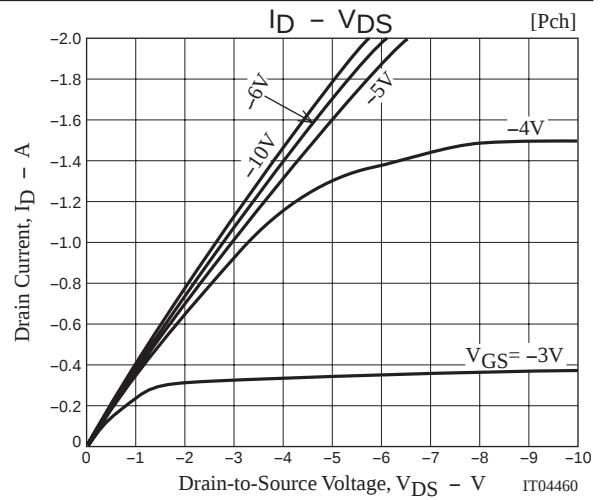
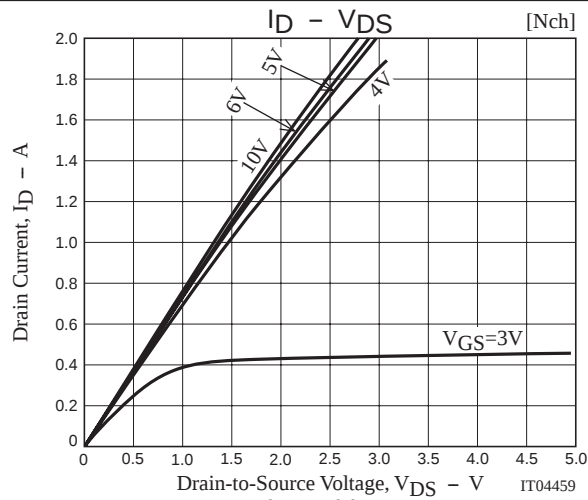


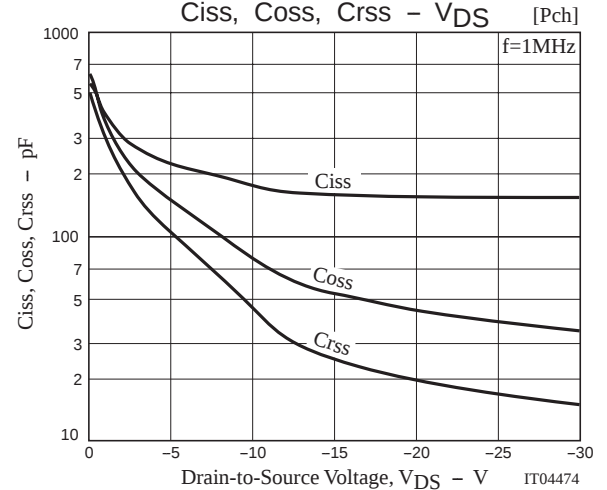
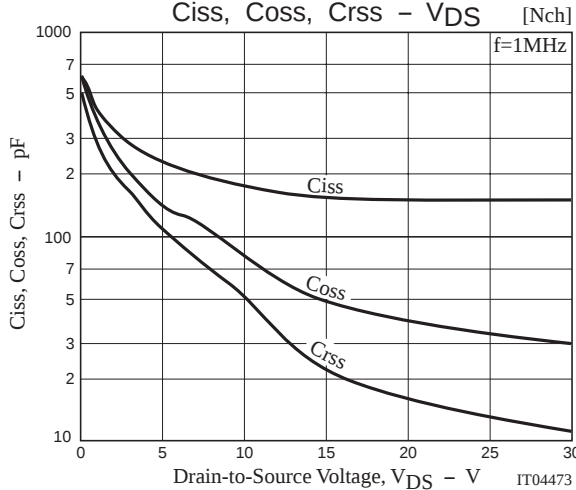
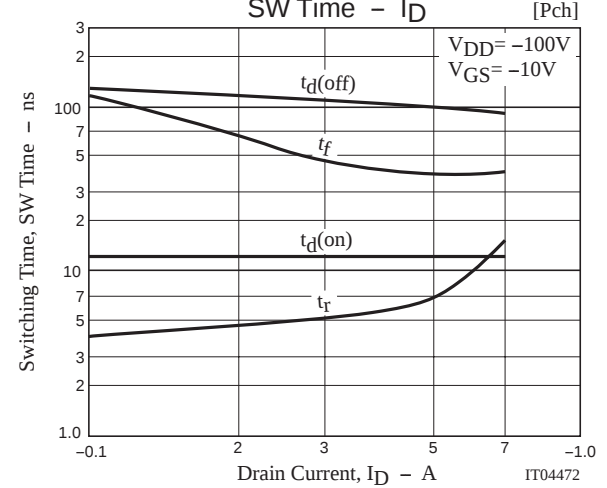
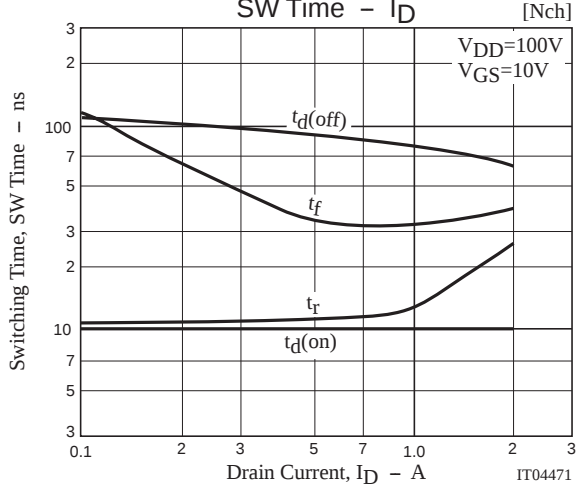
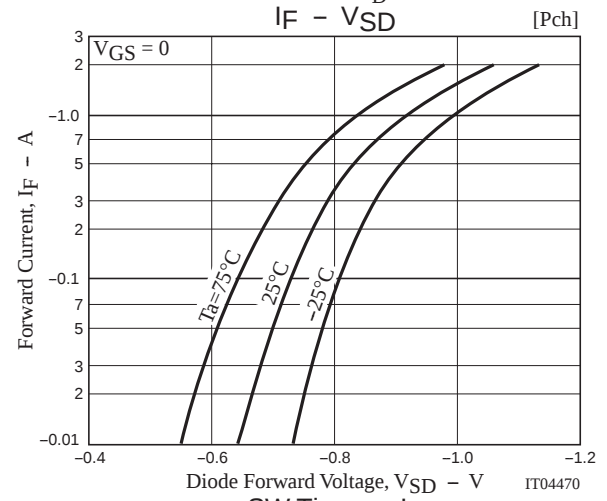
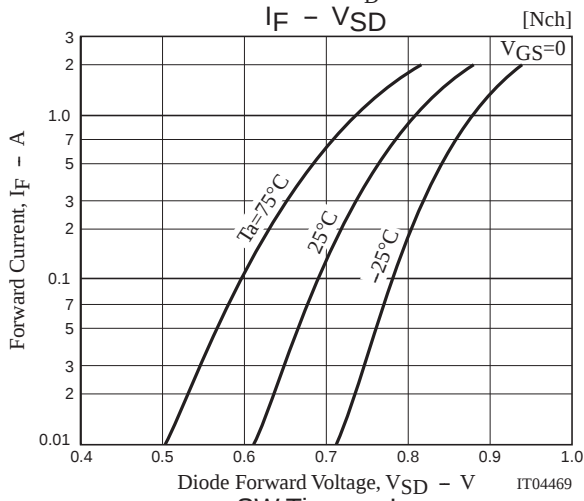
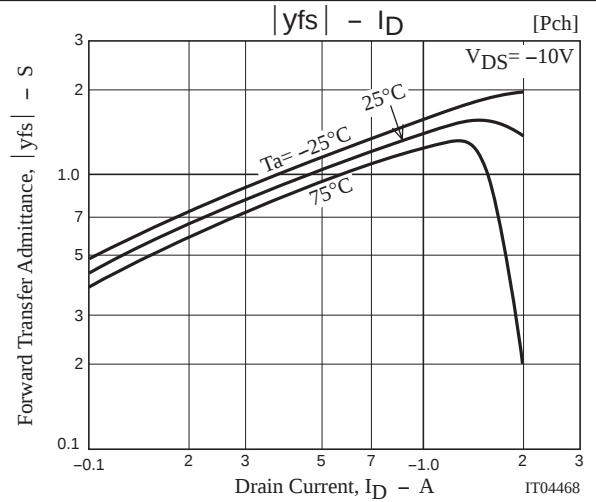
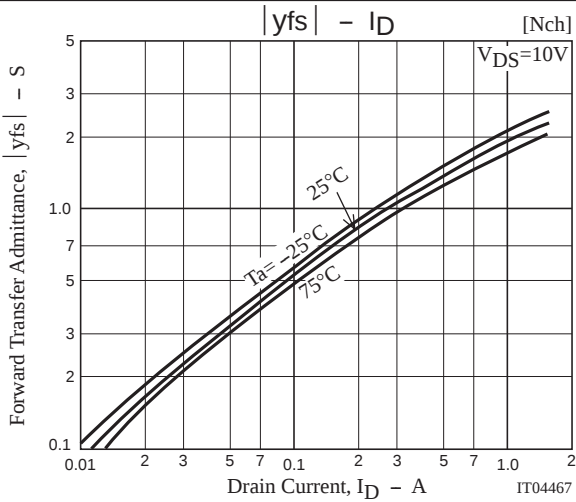
[P-channel]

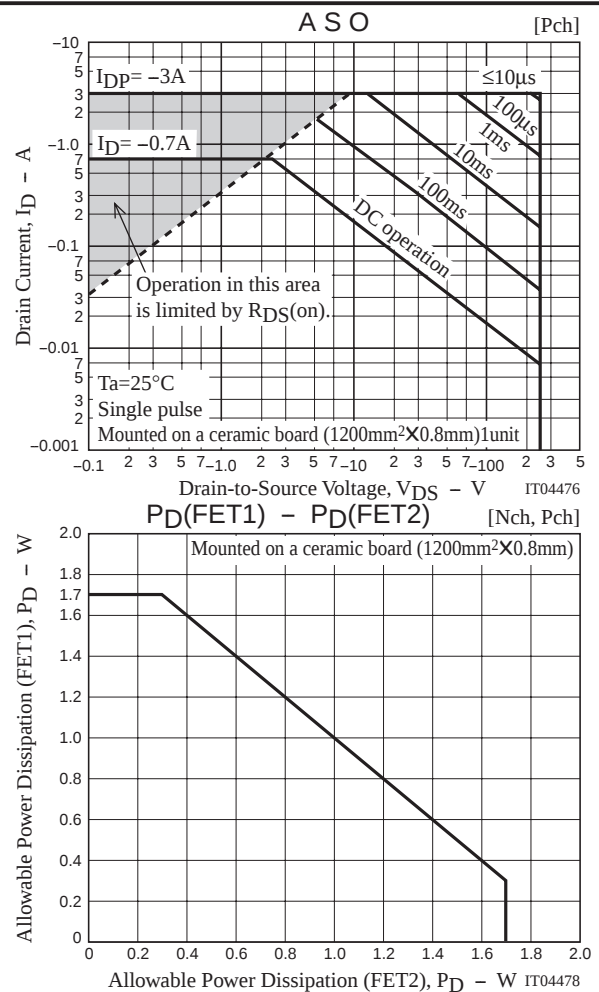
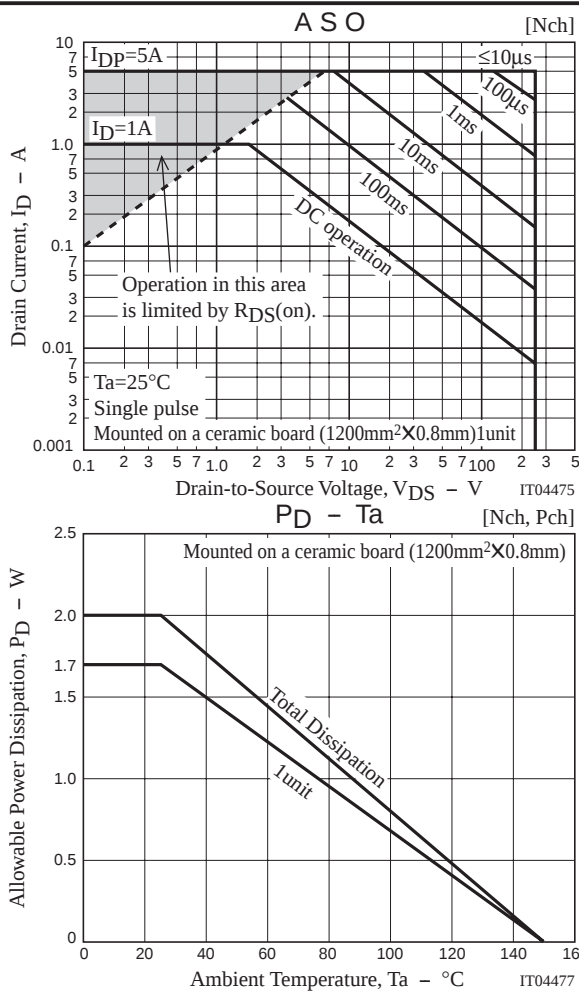


Electrical Connection









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