

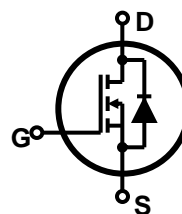
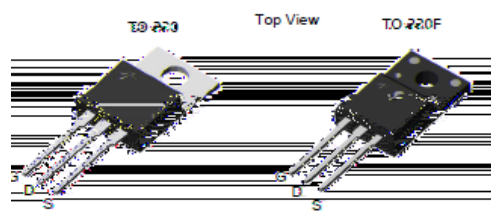
Features

- Low gate charge
- 100% avalanche tested
- Improved dv/dt capability
- RoHS compliant
- Halogen free package
- JEDEC Qualification
- Fast reverse recovery

$$V_{DSS} = 550 \text{ V @ } T_{jmax}$$

$$I_D = 4 \text{ A}$$

$$R_{DS(ON)} = 1.85 \text{ (max) @ } V_{GS} = 10 \text{ V}$$



Device	Package	Marking	Remark
TMP5N50SG / TMPF5N50SG	TO-220 / TO-220F	TMP5N50SG / TMPF5N50SG	Halogen Free

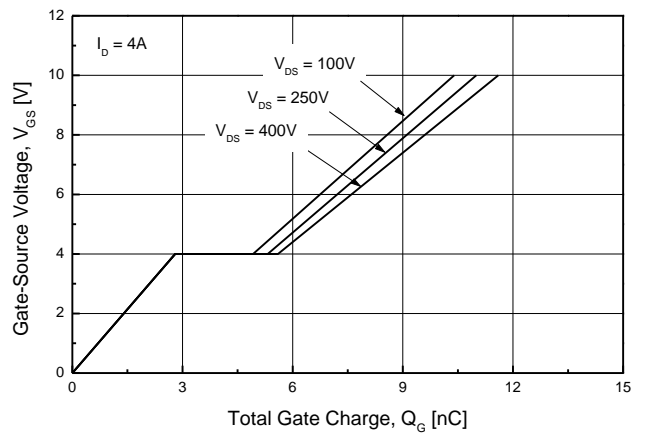
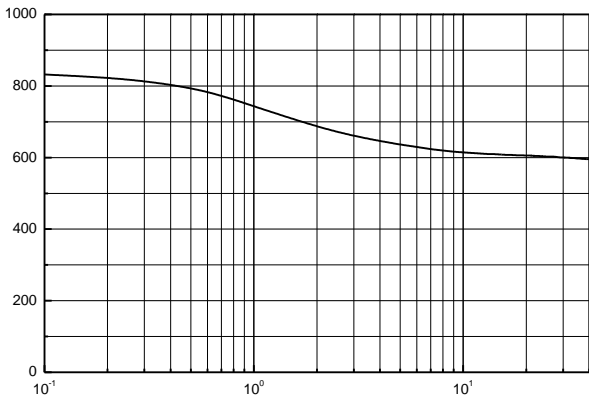
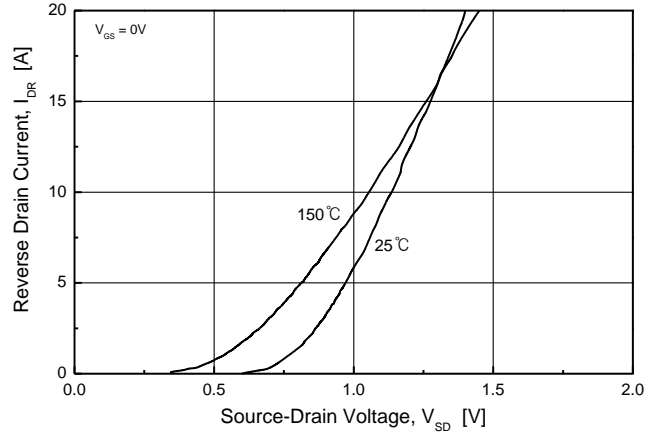
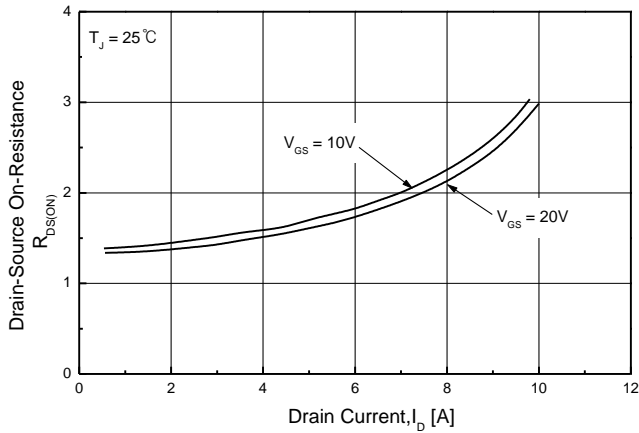
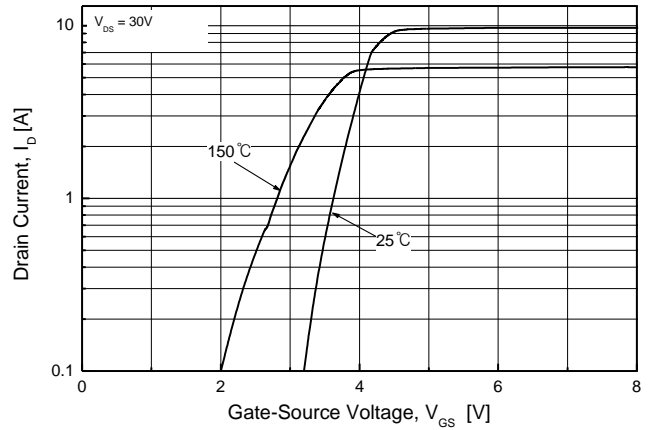
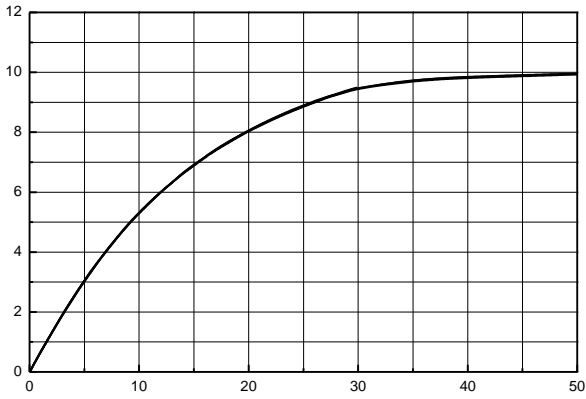
Absolute Maximum Ratings

Parameter	Symbol	TMP5N50SG	TMPF5N50SG	Unit	
Drain-Source Voltage	V_{DSS}	500		V	
Gate-Source Voltage	V_{GS}	±30		V	
Continuous Drain Current	I_D	$T_C = 25 \text{ }^\circ\text{C}$	4 *	A	
		$T_C = 100 \text{ }^\circ\text{C}$	2.8 *	A	
Pulsed Drain Current (Note 1)	I_{DM}	16	16*	A	
Single Pulse Avalanche Energy (Note 2)	E_{AS}	240		mJ	
Repetitive Avalanche Current (Note 1)	I_{AR}	4		A	
Repetitive Avalanche Energy (Note 1)	E_{AR}	9.25		mJ	
Power Dissipation	P_D	$T_C = 25 \text{ }^\circ\text{C}$	92.5	32	W
		Derate above 25 °C	0.74	0.25	W/°C
Peak Diode Recovery dv/dt (Note 3)	dv/dt	4.5		V/ns	
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~150		°C	
Maximum lead temperature for soldering purposes,	T_L	300		°C	

* Limited only by maximum junction temperature

Thermal Characteristics

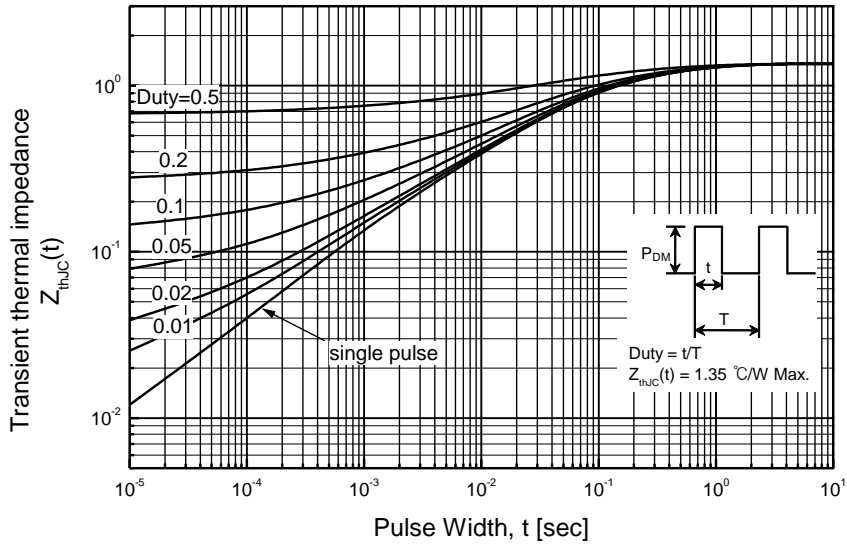
Parameter	Symbol	TMP5N50SG	TMPF5N50SG	Unit
Maximum Thermal resistance, Junction-to-Case	R_{JC}	1.35	3.9	°C/W
Maximum Thermal resistance, Junction-to-Ambient	R_{JA}	62.5	62.5	°C/W





TMP5N50SG

TMP5N50SG



TMPF5N50SG

