



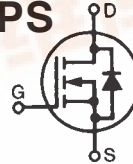
Advance Technical Information

**PolarHV™
Power MOSFET**

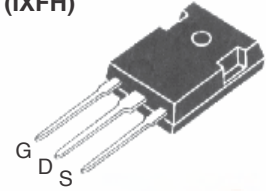
N-Channel Enhancement Mode
Fast Recovery Diode
Avalanche Rated

IXFH 26N60P
IXFQ 26N60P
IXFT 26N60P
IXFV 26N60P
IXFV 26N60PS

V_{DSS} = 600 V
I_{D25} = 26 A
R_{DS(on)} ≤ 270 mΩ
t_{rr} ≤ 200 ns



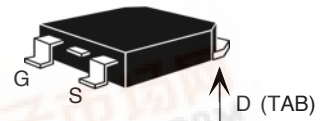
TO-247 (IXFH)



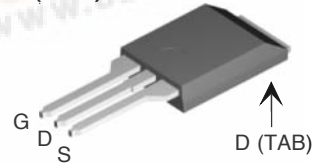
TO-3P (IXFQ)



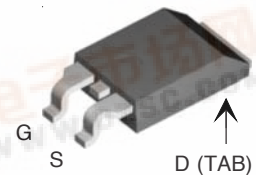
TO-268 (IXFT)



PLUS220 (IXFV)



PLUS220SMD (IXFV_S)



G = Gate D = Drain
S = Source TAB = Drain

Symbol	Test Conditions	Maximum Ratings	
V _{DSS}	T _J = 25°C to 150°C	600	V
V _{DGR}	T _J = 25°C to 150°C; R _{GS} = 1 MΩ	600	V
V _{GSS}	Continuous	±30	V
V _{GSM}	Transient	±40	V
I _{D25}	T _C = 25°C	26	A
I _{DM}	T _C = 25°C, pulse width limited by T _{JM}	65	A
I _{AR}	T _C = 25°C	26	A
E _{AR}	T _C = 25°C	40	mJ
E _{AS}	T _C = 25°C	1.2	J
dv/dt	I _S ≤ I _{DM} , di/dt ≤ 100 A/μs, V _{DD} ≤ V _{DSS} T _J ≤ 150°C, R _G = 5 Ω	10	V/ns
P _D	T _C = 25°C	460	W
T _J		-55 ... +150	°C
T _{JM}		150	°C
T _{stg}		-55 ... +150	°C
T _L	1.6 mm (0.062 in.) from case for 10 s Plastic body	300 250	°C °C
M _d	Mounting torque (TO-3P&TO-247)	1.13/10	Nm/lb.in.
F _C	Mounting force (PLUS220)	11..65/2.5..15	N/lb
Weight	TO-3P	5.5	g
	TO-248	6.0	g
	TO-268	5.0	g
	PLUS220 & PLUS220SMD	4.0	g

Symbol	Test Conditions	Characteristic Values		
		Min.	Typ.	Max.
V _{DSS}	V _{GS} = 0 V, I _D = 250 μA	600		V
V _{GS(th)}	V _{DS} = V _{GS} , I _D = 4 mA	2.5		5.0 V
I _{GSS}	V _{GS} = ±30 V, V _{DS} = 0			±100 nA
I _{DSS}	V _{DS} = V _{DSS} V _{GS} = 0 V T _J = 125°C			25 μA
				250 μA
	V _{GS} = 10 V, I _D = 0.5 I _{D25} Pulse test, t ≤ 300 μs, duty cycle d ≤ 2 %			270 mΩ

Features

- Fast Recovery diode
- Unclamped Inductive Switching (UIS) rated
- International standard packages
- Low package inductance
- easy to drive and to protect

Advantages

- Easy to mount
- Space savings
- High power density



Symbol	Test Conditions	Characteristic Values		
		$(T_J = 25^\circ\text{C}, \text{ unless otherwise specified})$		
		Min.	Typ.	Max.
g_{fs}	$V_{DS} = 20 \text{ V}; I_D = 0.5 I_{D25}$, pulse test	16	26	S
C_{iss}	$V_{GS} = 0 \text{ V}, V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$		4150	pF
C_{oss}			400	pF
C_{rss}			27	pF
$t_{d(on)}$	$V_{GS} = 10 \text{ V}, V_{DS} = 0.5 I_{D25}$ $R_G = 5 \Omega$ (External)		25	ns
t_r			27	ns
$t_{d(off)}$			75	ns
t_f			21	ns
$Q_{g(on)}$	$V_{GS} = 10 \text{ V}, V_{DS} = 0.5 V_{DSS}, I_D = 0.5 I_{D25}$		72	nC
Q_{gs}			27	nC
Q_{gd}			24	nC
R_{thJC}	TO-3P, PLUS220 & TO-247			0.27 K/W
R_{thCK}			0.21	K/W

Symbol	Test Conditions	Characteristic Values		
		$(T_J = 25^\circ\text{C}, \text{ unless otherwise specified})$		
		Min.	Typ.	Max.
I_S	$V_{GS} = 0 \text{ V}$			26 A
I_{SM}	Repetitive			78 A
V_{SD}	$I_F = I_S, V_{GS} = 0 \text{ V}$, pulse test			1.5 V
t_{rr}	$I_F = 25 \text{ A}, -di/dt = 100 \text{ A}/\mu\text{s}$		150	250 ns
I_{RM}	$V_R = 100 \text{ V}; V_{GS} = 0 \text{ V}$		7	A
Q_{RM}			0.7	μC

Characteristic Curves

Fig. 1. Output Characteristics
@ 25°C

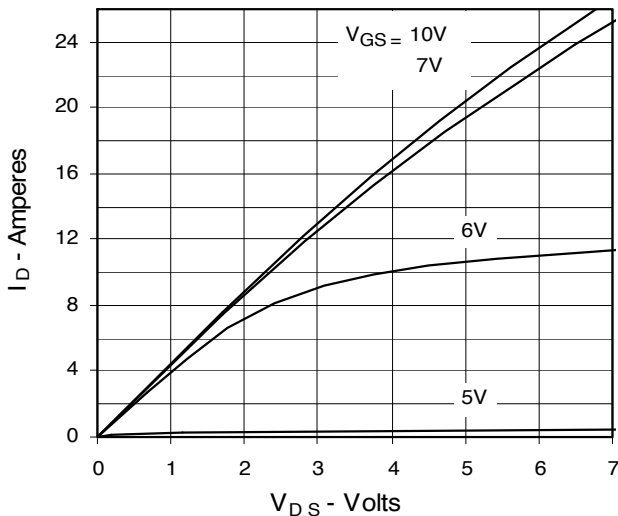


Fig. 2. Extended Output Characteristics
@ 25°C

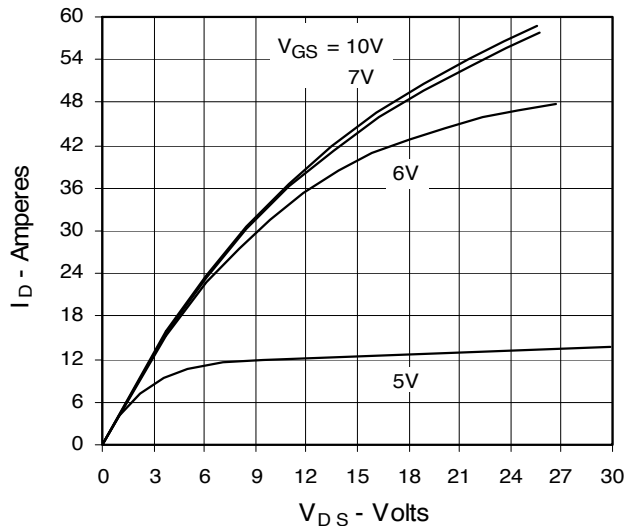


Fig. 3. Output Characteristics @ 125°C

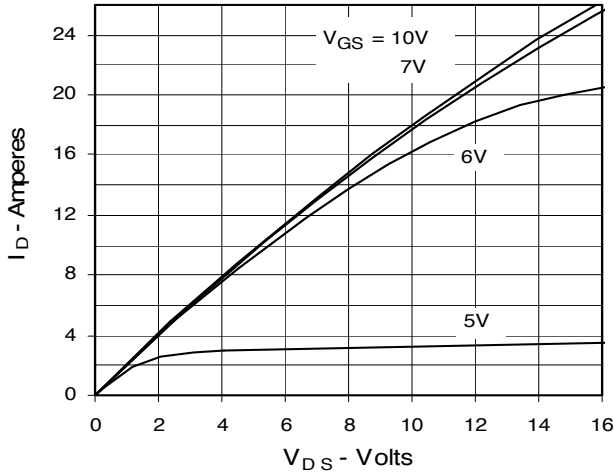


Fig. 4. $R_{DS(on)}$ Normalized to 0.5 I_{D25} Value vs. Junction Temperature

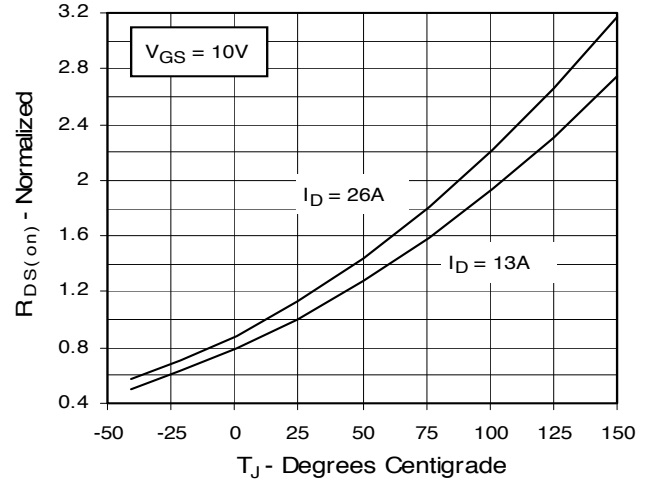


Fig. 5. $R_{DS(on)}$ Normalized to 0.5 I_{D25} Value vs. I_D

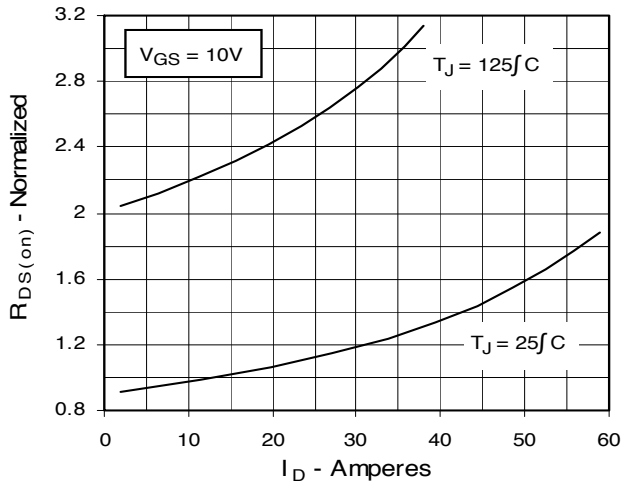


Fig. 6. Drain Current vs. Case Temperature

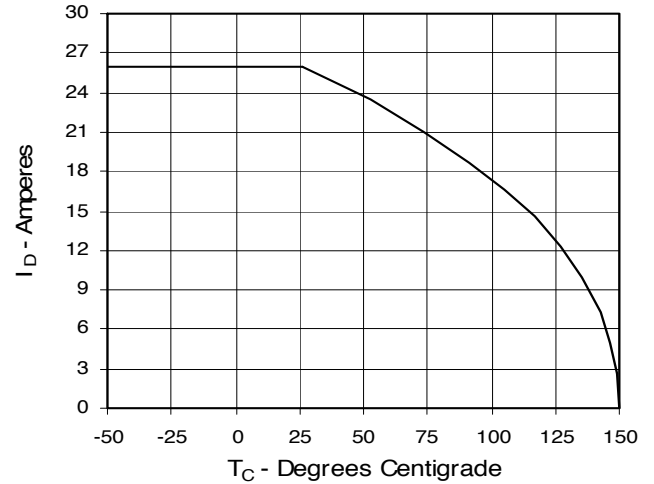


Fig. 7. Input Admittance

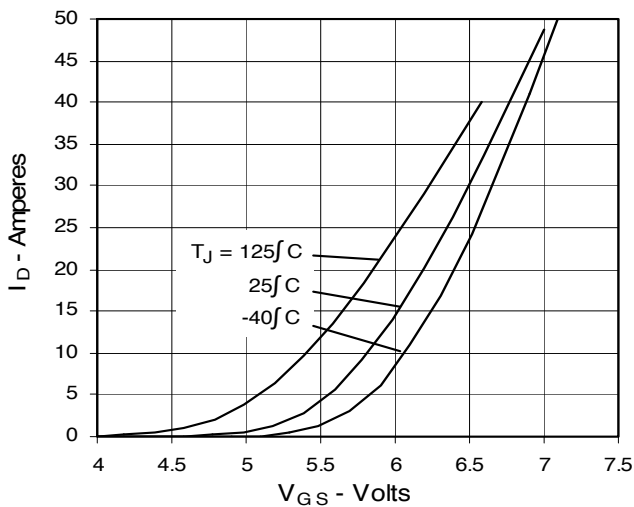


Fig. 8. Transconductance

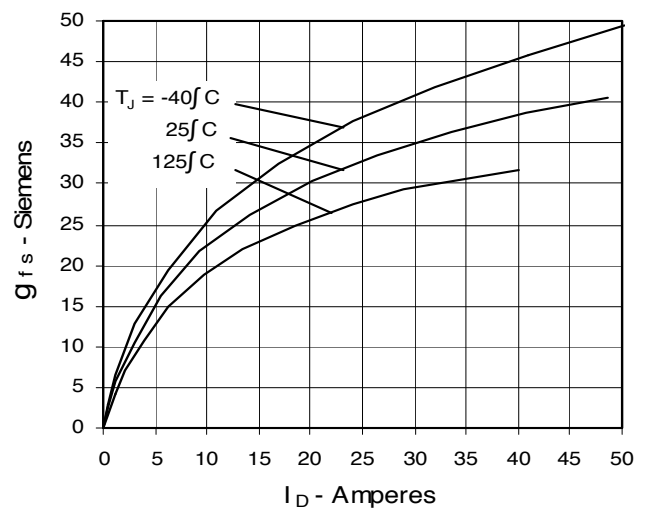


Fig. 9. Source Current vs. Source-To-Drain Voltage

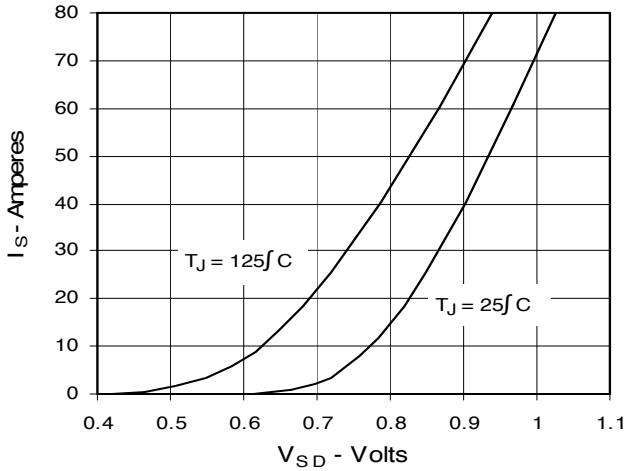


Fig. 10. Gate Charge

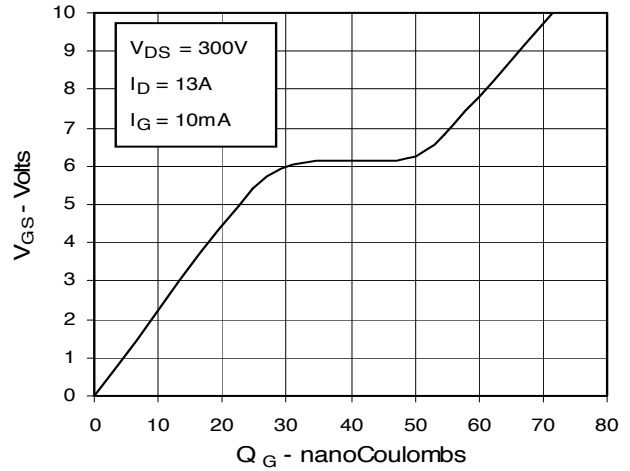


Fig. 11. Capacitance

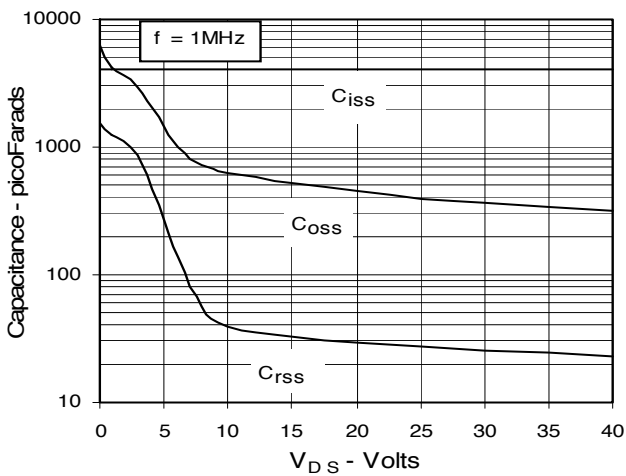


Fig. 12. Maximum Transient Thermal Resistance

