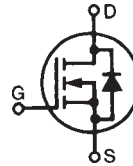


Polar™ Power MOSFET

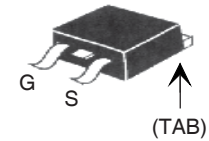
IXTA2R4N120P
IXTH2R4N120P
IXTP2R4N120P

V_{DSS} = 1200V
I_{D25} = 2.4A
R_{DS(on)} ≤ 7.5Ω

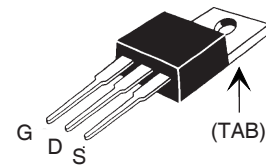
N-Channel Enhancement Mode
Avalanche Rated



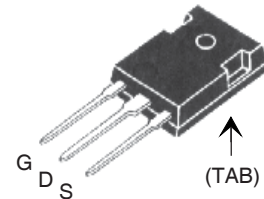
TO-263 (IXTA)



TO-220 (IXTP)



TO-247 (IXTH)



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

Symbol	Test Conditions	Maximum Ratings	
V _{DSS}	T _J = 25°C to 150°C	1200	V
V _{DGR}	T _J = 25°C to 150°C, R _{GS} = 1MΩ	1200	V
V _{GSS}	Continuous	±20	V
V _{GSM}	Transient	±30	V
I _{D25}	T _C = 25°C	2.4	A
I _{DM}	T _C = 25°C, pulse width limited by T _{JM}	6	A
I _A	T _C = 25°C	2.4	A
E _{AS}	T _C = 25°C	200	mJ
dV/dt	I _S ≤ I _{DM} , V _{DD} ≤ V _{DSS} , T _J ≤ 150°C	10	V/ns
P _D	T _C = 25°C	125	W
T _J		-55 ... +150	°C
T _{JM}		150	°C
T _{stg}		-55 ... +150	°C
T _L	1.6mm (0.062) from case for 10s	300	°C
T _{SOLD}	Plastic body for 10s	260	°C
M _d	Mounting torque (TO-220, TO-247)	1.13 / 10	Nm/lb.in.
Weight	TO-263	2.5	g
	TO-220	3.0	g
	TO-247	6.0	g

Features

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

Advantages

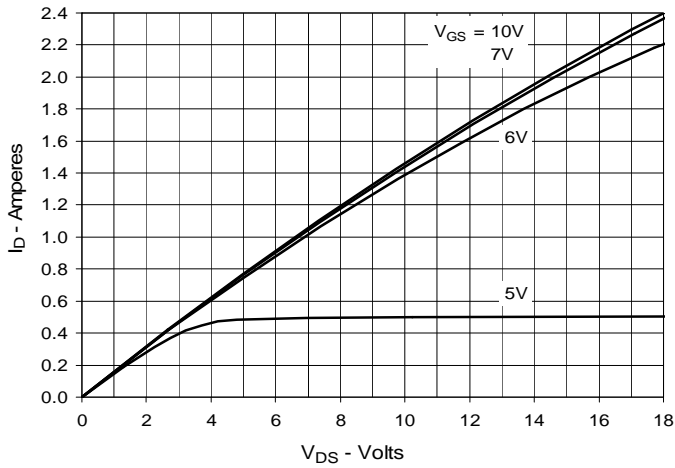
- Easy to mount
- Space savings
- High power density

Applications:

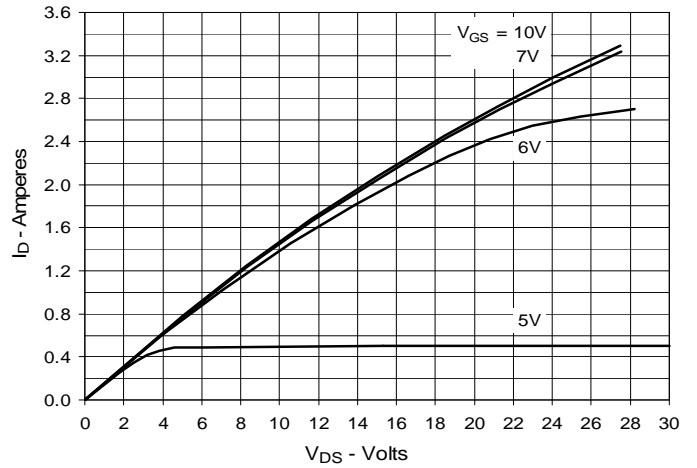
- High Voltage Switched-mode and resonant-mode power supplies
- High Voltage Pulse Power Applications
- High Voltage Discharge circuits in Lasers Pulsers, Spark Igniters, RF Generators
- High Voltage DC-DC converters
- High Voltage DC-AC inverters

Symbol	Test Conditions (T _J = 25°C, unless otherwise specified)	Characteristic Values		
		Min.	Typ.	Max.
BV _{DSS}	V _{GS} = 0V, I _D = 250μA	1200		V
V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	2.5		4.5 V
I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±50 nA
I _{DSS}	V _{DS} = V _{DSS} V _{GS} = 0V T _J = 125°C			5 μA
				300 μA
R _{DS(on)}	V _{GS} = 10V, I _D = 0.5 • I _{D25} , Note 1	6.5	7.5	Ω

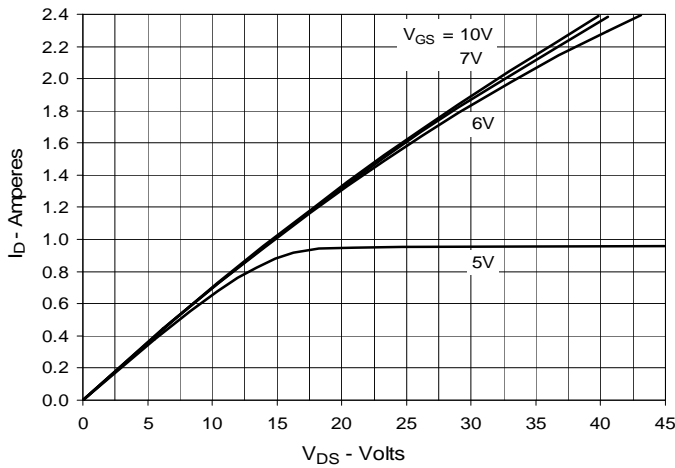
**Fig. 1. Output Characteristics
@ 25°C**



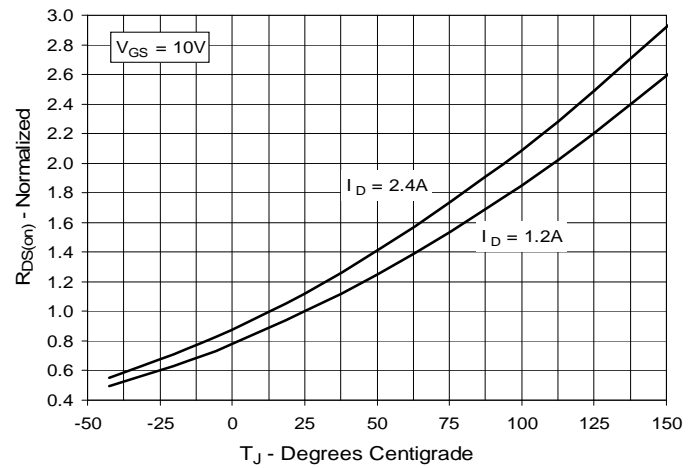
**Fig. 2. Extended Output Characteristics
@ 25°C**



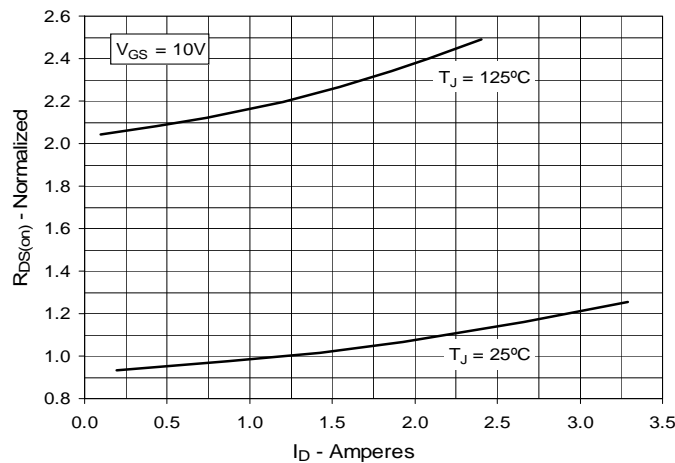
**Fig. 3. Output Characteristics
@ 125°C**



**Fig. 4. $R_{DS(on)}$ Normalized to $I_D = 1.2A$ Value
vs. Junction Temperature**



**Fig. 5. $R_{DS(on)}$ Normalized to $I_D = 1.2A$ Value
vs. Drain Current**



**Fig. 6. Maximum Drain Current vs.
Case Temperature**

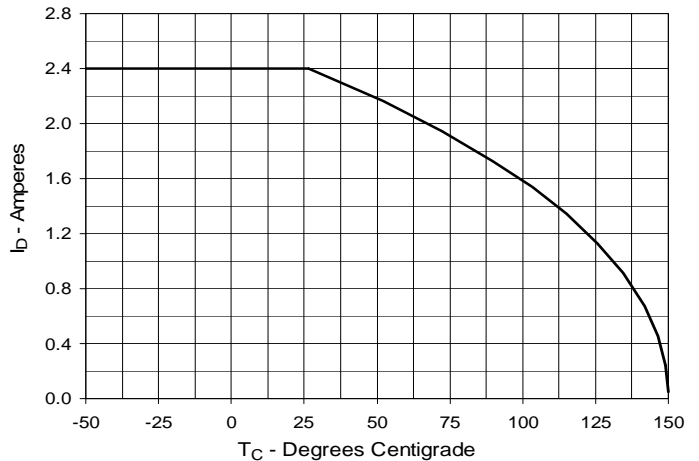


Fig. 7. Input Admittance

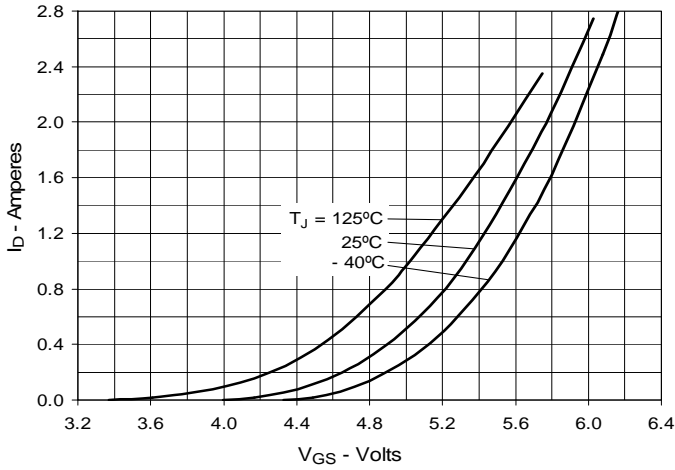


Fig. 8. Transconductance

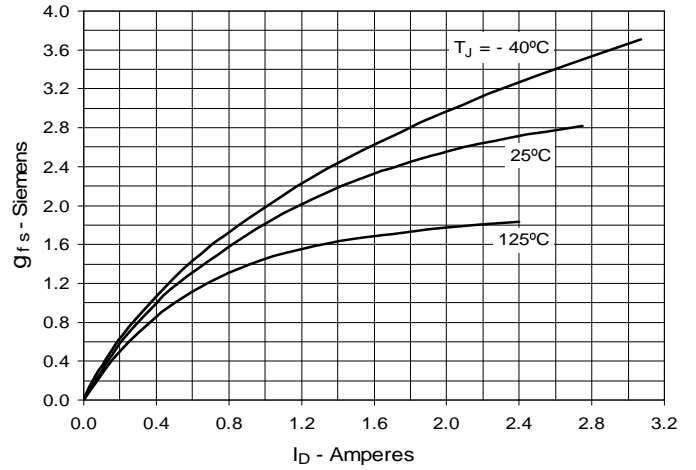


Fig. 9. Forward Voltage Drop of Intrinsic Diode

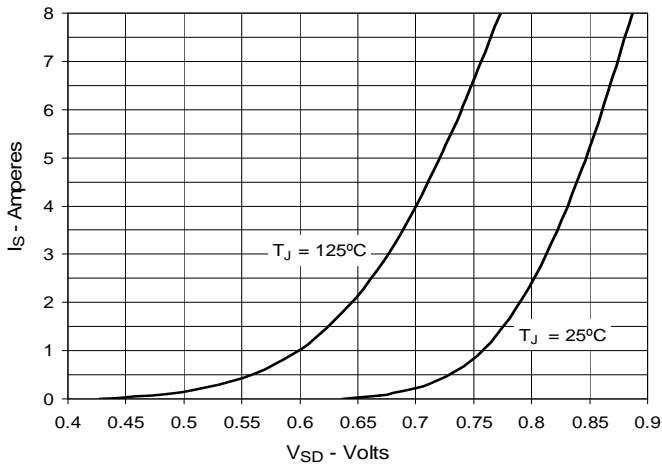


Fig. 10. Gate Charge

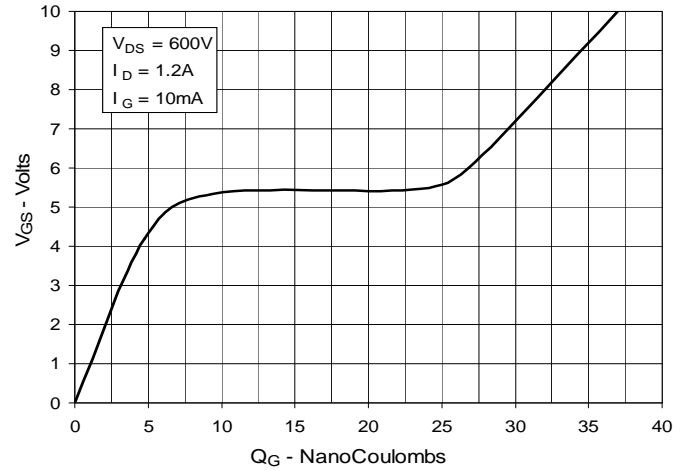


Fig. 11. Capacitance

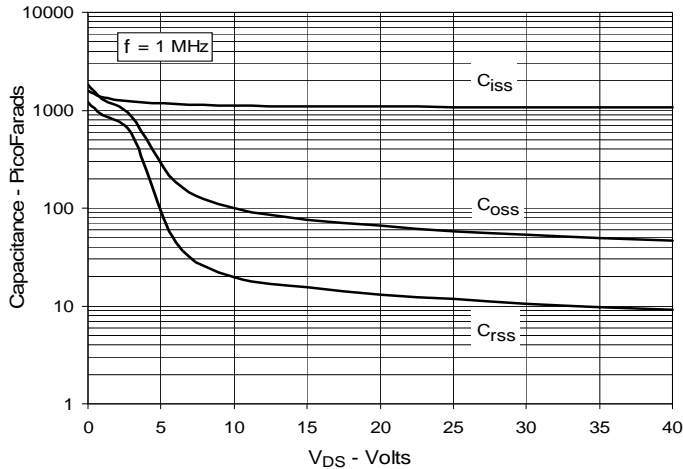


Fig. 12. Maximum Transient Thermal Impedance

