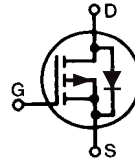


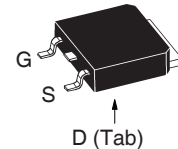
TrenchP™
Power MOSFET
IXTY10P15T
IXTA10P15T
IXTP10P15T
 $V_{DSS} = -150V$
 $I_{D25} = -10A$
 $R_{DS(on)} \leq 350m\Omega$

 P-Channel Enhancement Mode
 Avalanche Rated


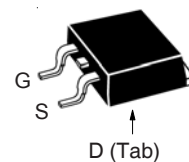
Symbol	Test Conditions	Maximum Ratings	
V_{DSS}	$T_J = 25^\circ C$ to $150^\circ C$	-150	V
V_{DGR}	$T_J = 25^\circ C$ to $150^\circ C$, $R_{GS} = 1M\Omega$	-150	V
V_{GSS}	Continuous	± 15	V
V_{GSM}	Transient	± 25	
I_{D25}	$T_C = 25^\circ C$	-10	A
I_{DM}	$T_C = 25^\circ C$, Pulse Width Limited by T_{JM}	-30	A
I_A	$T_C = 25^\circ C$	-10	A
E_{AS}	$T_C = 25^\circ C$	200	mJ
P_D	$T_C = 25^\circ C$	83	W
T_J		-55 ... +150	$^\circ C$
T_{JM}		150	$^\circ C$
T_{stg}		-55 ... +150	$^\circ C$
T_L	1.6mm (0.062 in.) from Case for 10s	300	$^\circ C$
T_{SOLD}	Plastic Body for 10s	260	$^\circ C$
M_d	Mounting Torque (TO-220)	1.13 / 10	Nm/lb.in.
Weight	TO-252	0.35	g
	TO-263	2.50	g
	TO-220	3.00	g

Symbol	Test Conditions ($T_J = 25^\circ C$, Unless Otherwise Specified)	Characteristic Values		
		Min.	Typ.	Max.
BV_{DSS}	$V_{GS} = 0V$, $I_D = -250\mu A$	-150		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250\mu A$	-2.0		-4.5 V
I_{GSS}	$V_{GS} = \pm 15V$, $V_{DS} = 0V$			± 50 nA
I_{DSS}	$V_{DS} = V_{DSS}$, $V_{GS} = 0V$ $T_J = 125^\circ C$			-3 μA -100 μA
$R_{DS(on)}$	$V_{GS} = -10V$, $I_D = 0.5 \cdot I_{D25}$, Note 1			350 m Ω

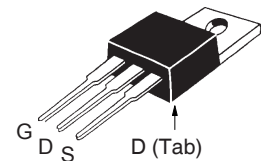
TO-252 (IXTY)



TO-263 AA (IXTA)



TO-220AB (IXTP)


 G = Gate D = Drain
 S = Source Tab = Drain

Features

- International Standard Packages
- Avalanche Rated
- Extended FBSOA
- Fast Intrinsic Diode
- Low $R_{DS(ON)}$ and Q_G

Advantages

- Easy to Mount
- Space Savings
- High Power Density

Applications

- High-Side Switching
- Push Pull Amplifiers
- DC Choppers
- Automatic Test Equipment
- Current Regulators
- Battery Charger Applications

Fig. 1. Output Characteristics @ $T_J = 25^\circ\text{C}$

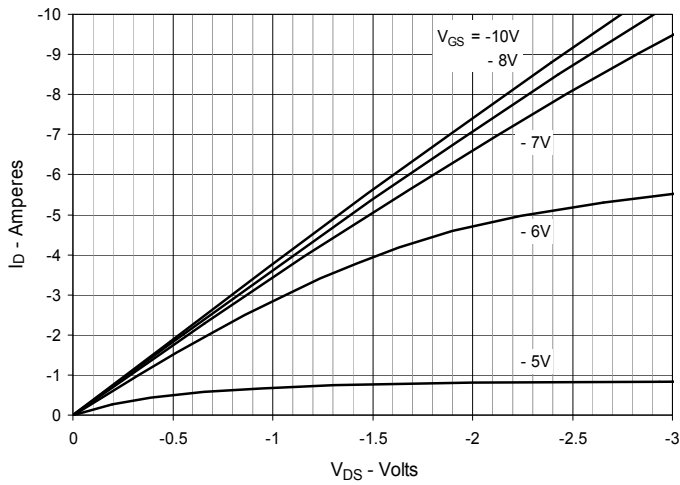


Fig. 2. Extended Output Characteristics @ $T_J = 25^\circ\text{C}$

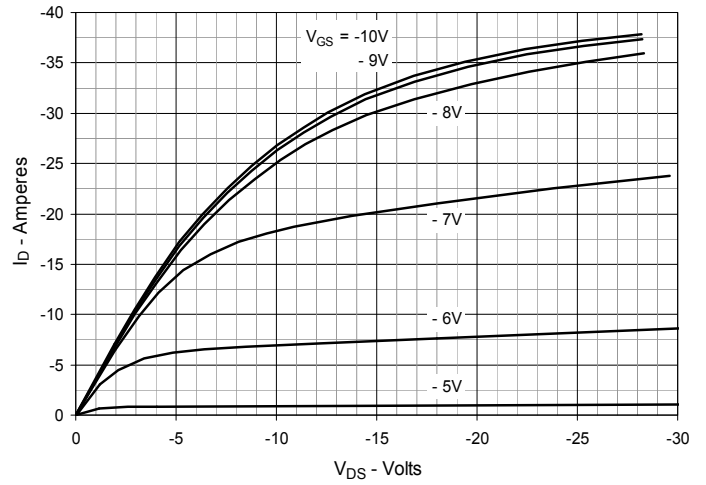


Fig. 3. Output Characteristics @ $T_J = 125^\circ\text{C}$

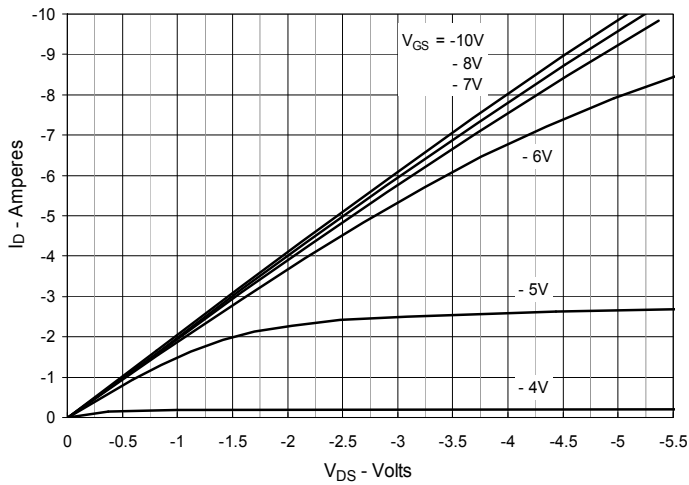


Fig. 4. $R_{DS(on)}$ Normalized to $I_D = -5\text{A}$ vs. Junction Temperature

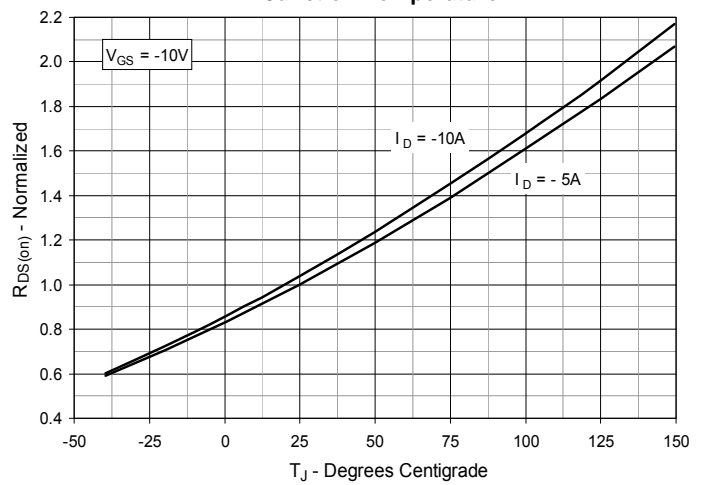


Fig. 5. $R_{DS(on)}$ Normalized to $I_D = -5\text{A}$ vs. Drain Current

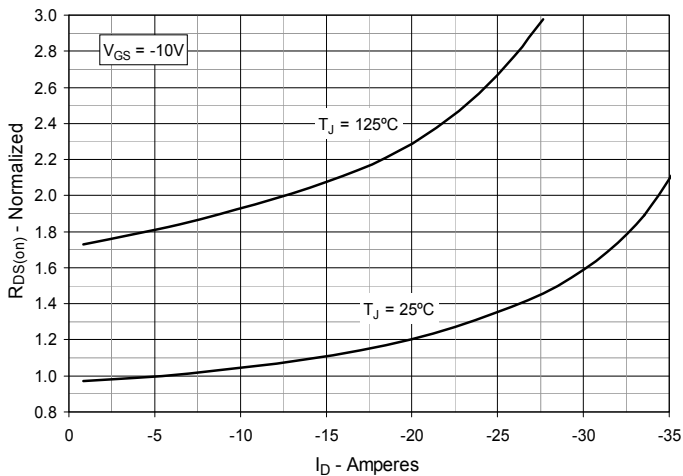


Fig. 6. Maximum Drain Current vs. Case Temperature

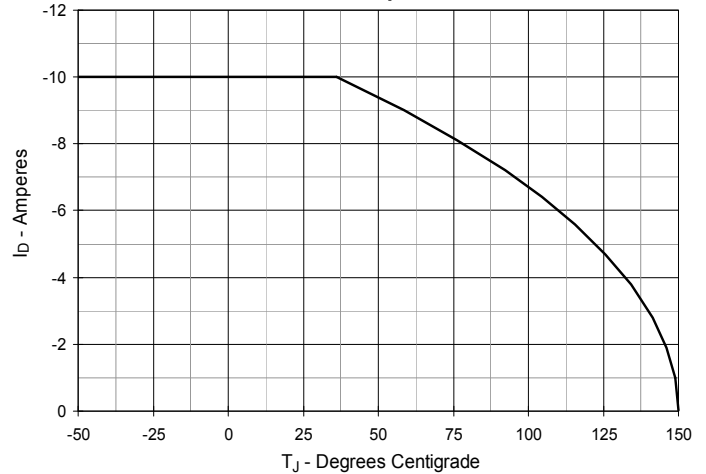


Fig. 7. Input Admittance

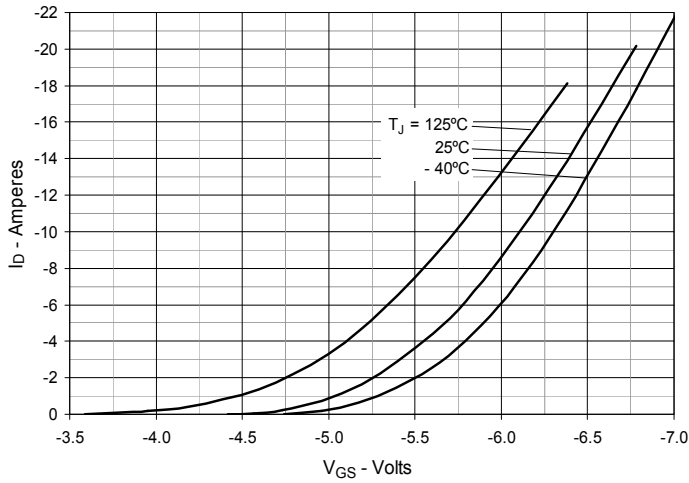


Fig. 8. Transconductance

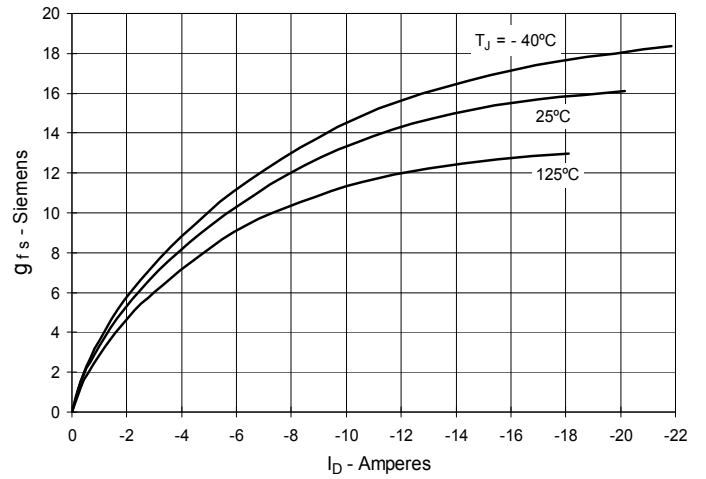


Fig. 9. Forward Voltage Drop of Intrinsic Diode

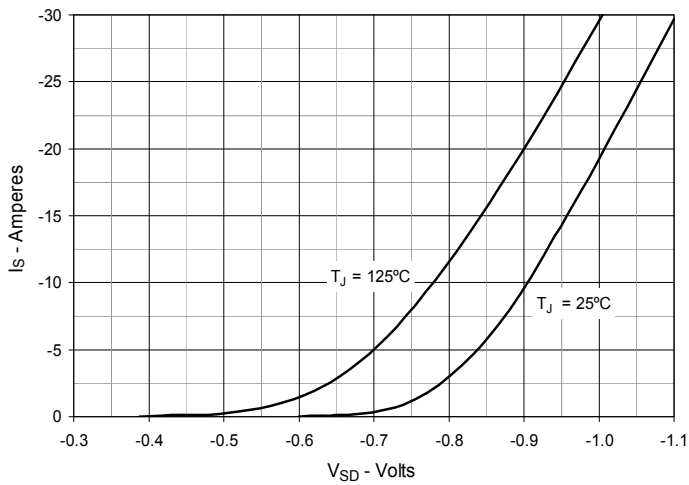


Fig. 10. Gate Charge

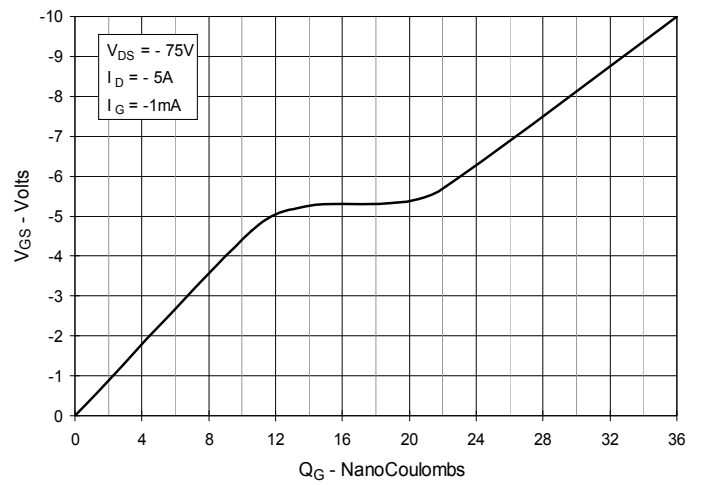


Fig. 11. Capacitance

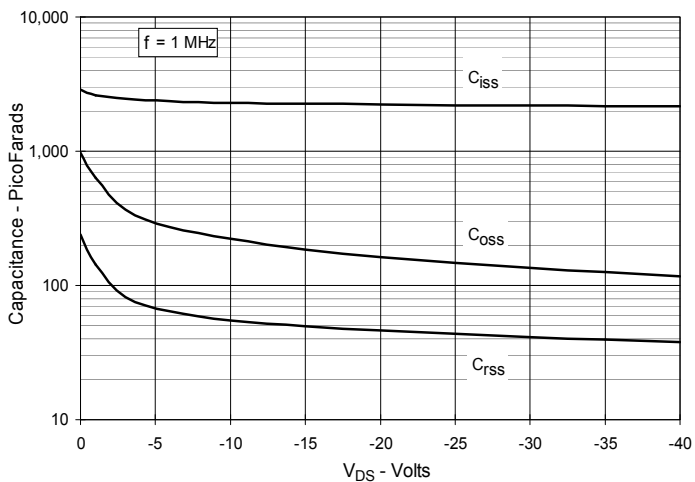


Fig. 12. Forward-Bias Safe Operating Area

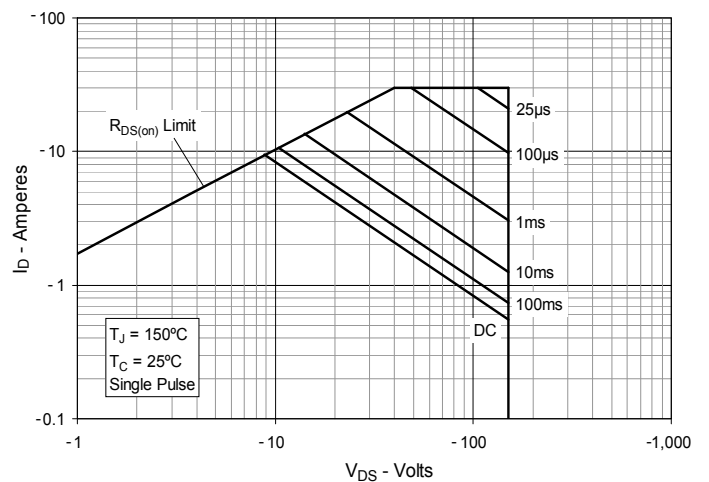


Fig. 13. Resistive Turn-on Rise Time vs. Junction Temperature

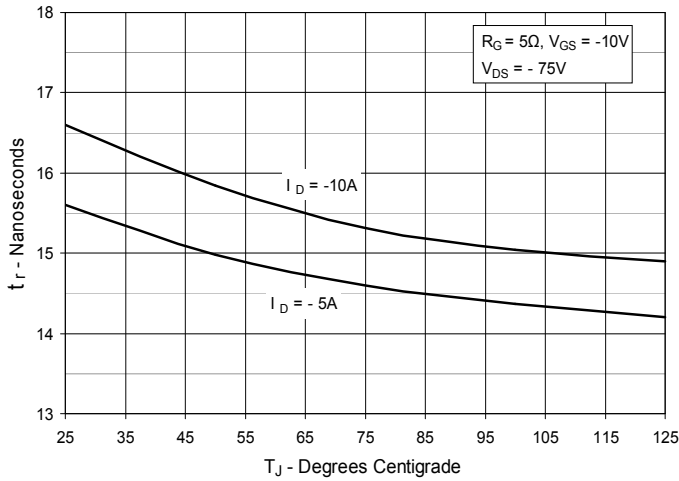


Fig. 14. Resistive Turn-on Rise Time vs. Drain Current

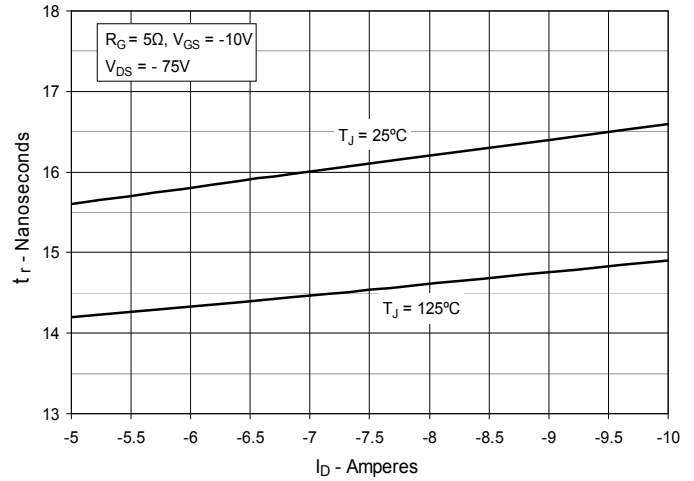


Fig. 15. Resistive Turn-on Switching Times vs. Gate Resistance

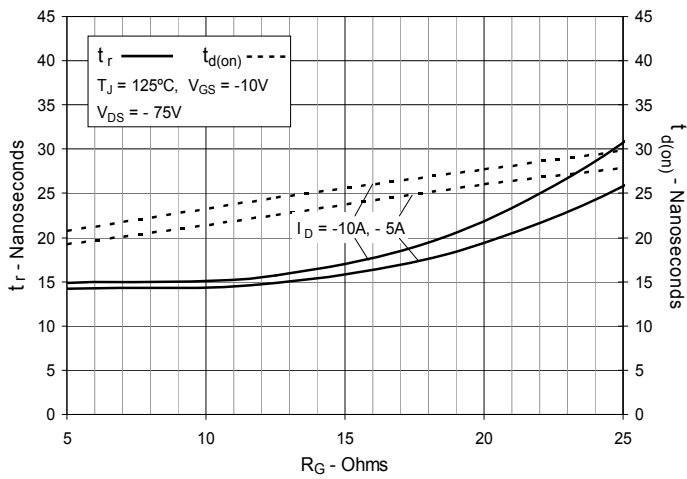


Fig. 16. Resistive Turn-off Switching Times vs. Junction Temperature

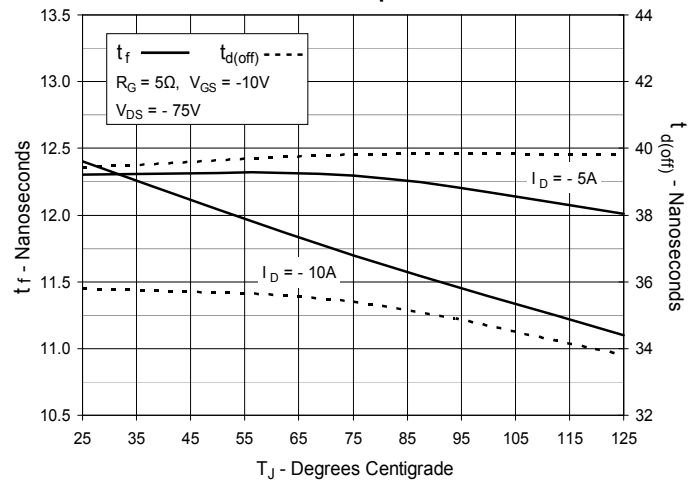


Fig. 17. Resistive Turn-off Switching Times vs. Drain Current

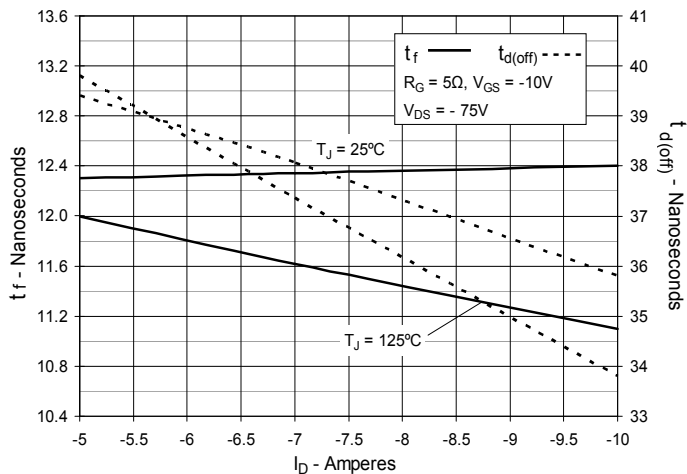


Fig. 18. Resistive Turn-off Switching Times vs. Gate Resistance

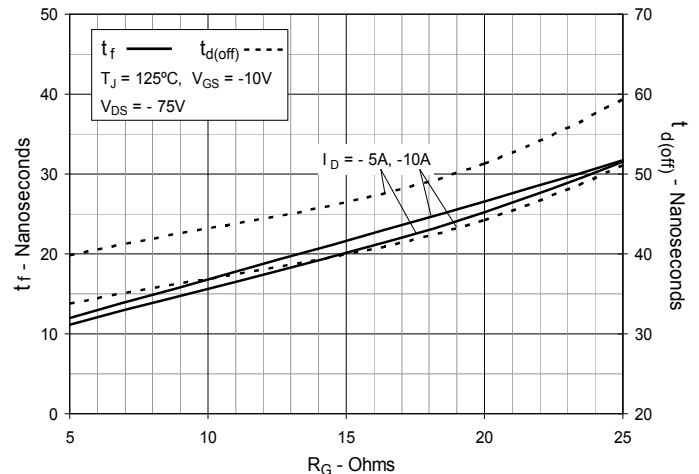


Fig. 19. Maximum Transient Thermal Impedance

