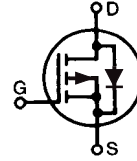


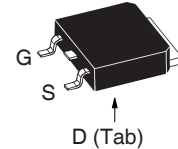
**TrenchP™**  
**Power MOSFET**
**IXTY15P15T**  
**IXTA15P15T**  
**IXTP15P15T**
 $V_{DSS} = -150V$   
 $I_{D25} = -15A$   
 $R_{DS(on)} \leq 240m\Omega$ 

 P-Channel Enhancement Mode  
 Avalanche Rated


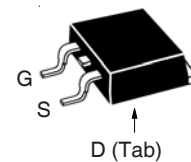
Symbol	Test Conditions	Maximum Ratings	
$V_{DSS}$	$T_J = 25^\circ C$ to $150^\circ C$	-150	V
$V_{DGR}$	$T_J = 25^\circ C$ to $150^\circ C$ , $R_{GS} = 1M\Omega$	-150	V
$V_{GSS}$	Continuous	$\pm 15$	V
$V_{GSM}$	Transient	$\pm 25$	V
$I_{D25}$	$T_C = 25^\circ C$	-15	A
$I_{DM}$	$T_C = 25^\circ C$ , Pulse Width Limited by $T_{JM}$	-45	A
$I_A$	$T_C = 25^\circ C$	-15	A
$E_{AS}$	$T_C = 25^\circ C$	300	mJ
$P_D$	$T_C = 25^\circ C$	150	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.
<b>Weight</b>	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
$I_{GSS}$	$V_{GS} = \pm 15V$ , $V_{DS} = 0V$			$\pm 50$ nA
$I_{DSS}$	$V_{DS} = V_{DSS}$ , $V_{GS} = 0V$ $T_J = 125^\circ C$			-10 $\mu A$ -250 $\mu A$
$R_{DS(on)}$	$V_{GS} = -10V$ , $I_D = 0.5 \cdot I_{D25}$ , Note 1			240 m $\Omega$

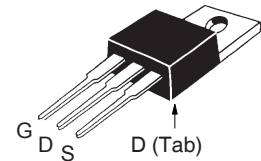
TO-252 (IXTY)



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**

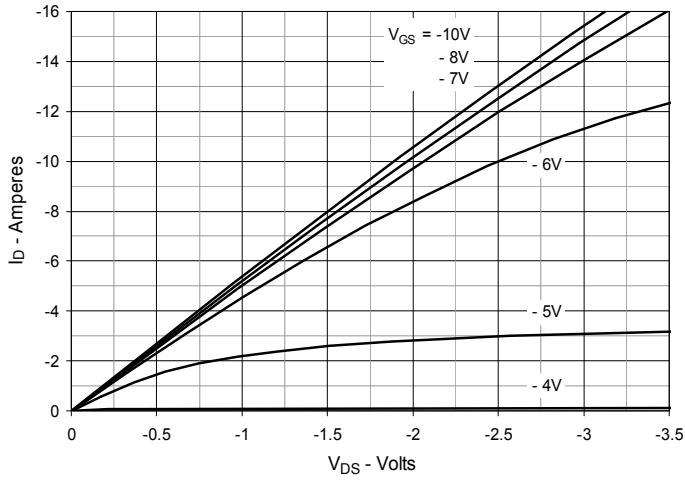
- Easy to Mount
- Space Savings
- High Power Density

**Applications**

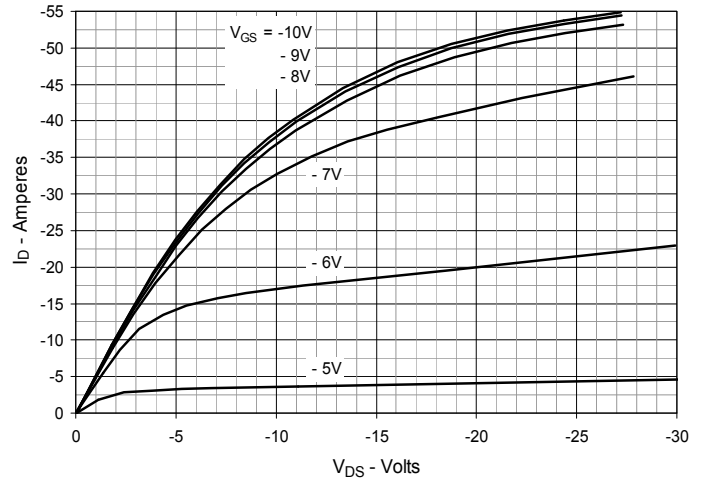
- High-Side Switching
- Push Pull Amplifiers
- DC Choppers
- Automatic Test Equipment
- Current Regulators
- Battery Charger Applications



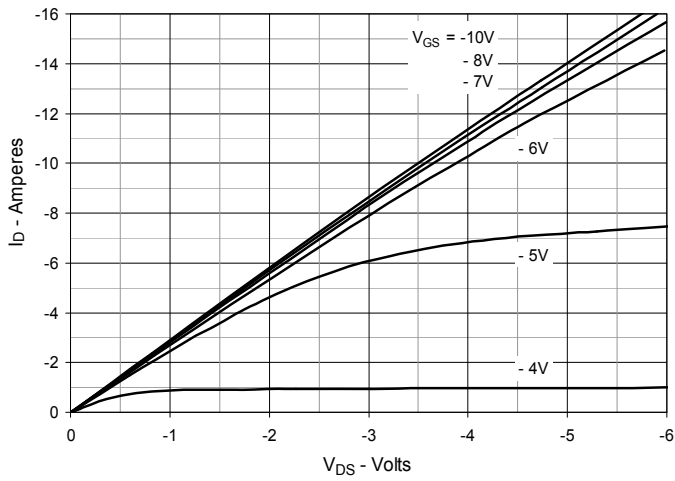
**Fig. 1. Output Characteristics @  $T_J = 25^\circ\text{C}$**



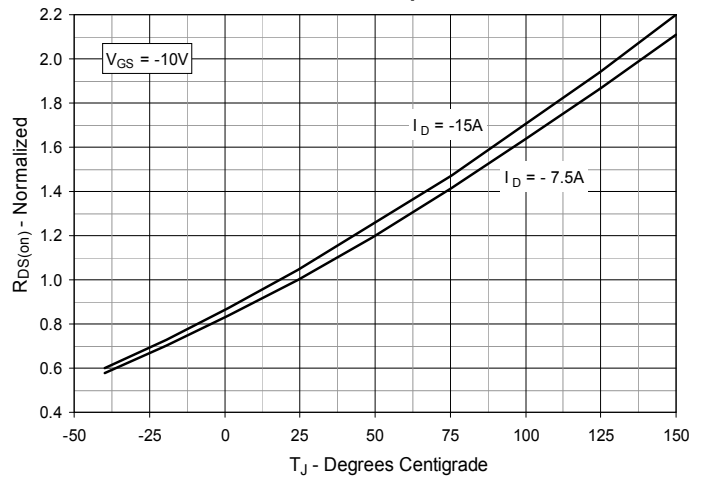
**Fig. 2. Extended Output Characteristics @  $T_J = 25^\circ\text{C}$**



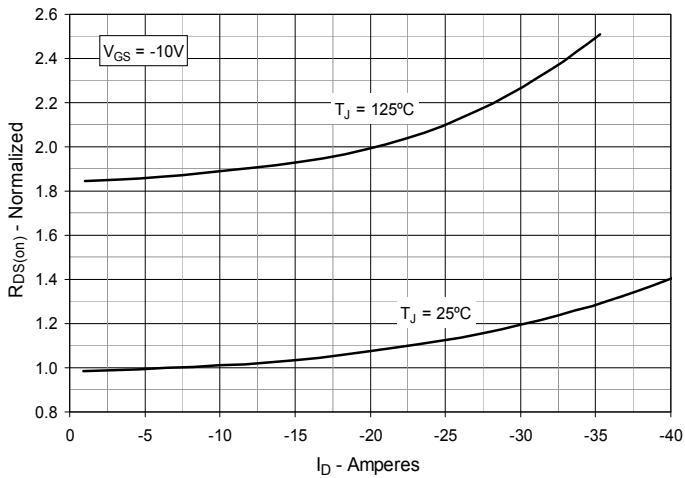
**Fig. 3. Output Characteristics @  $T_J = 125^\circ\text{C}$**



**Fig. 4.  $R_{DS(on)}$  Normalized to  $I_D = -7.5\text{A}$  vs. Junction Temperature**



**Fig. 5.  $R_{DS(on)}$  Normalized to  $I_D = -7.5\text{A}$  vs. Drain Current**



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

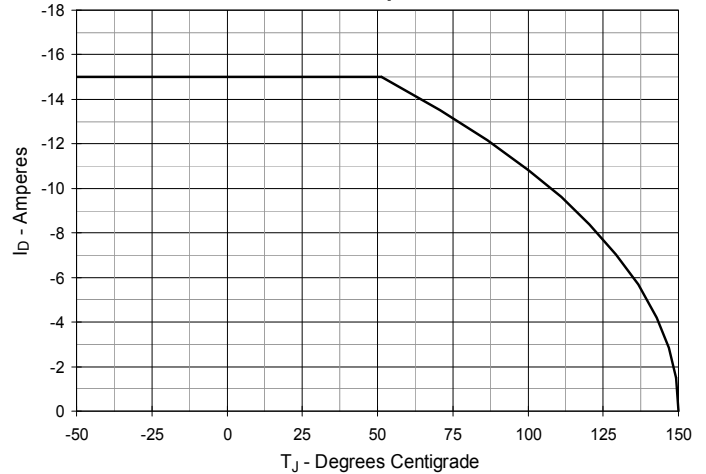


Fig. 7. Input Admittance

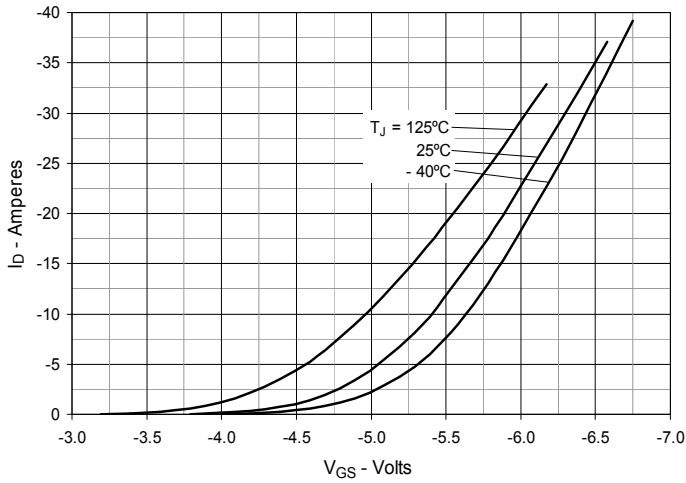


Fig. 8. Transconductance

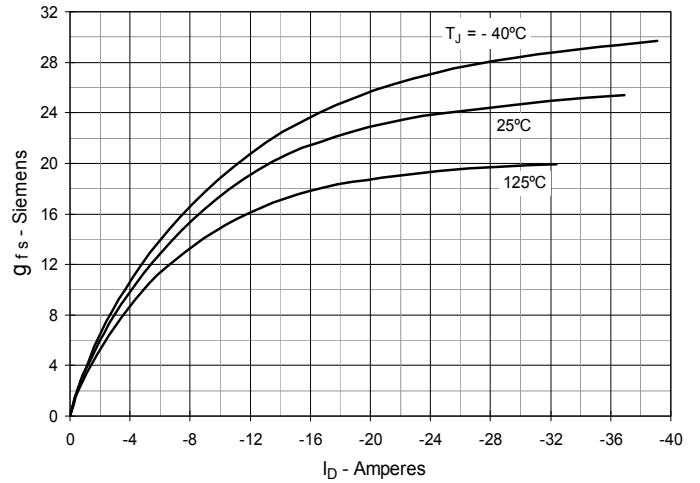


Fig. 9. Forward Voltage Drop of Intrinsic Diode

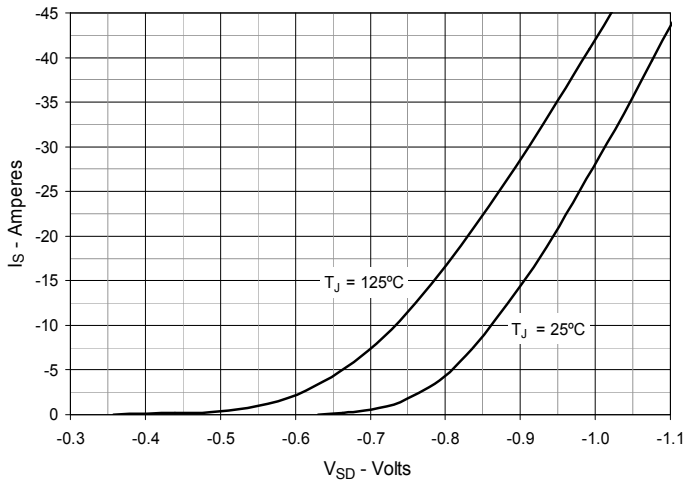


Fig. 10. Gate Charge

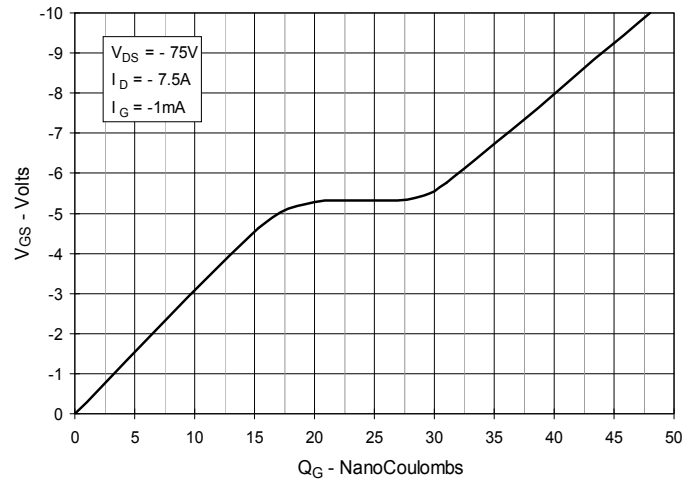


Fig. 11. Capacitance

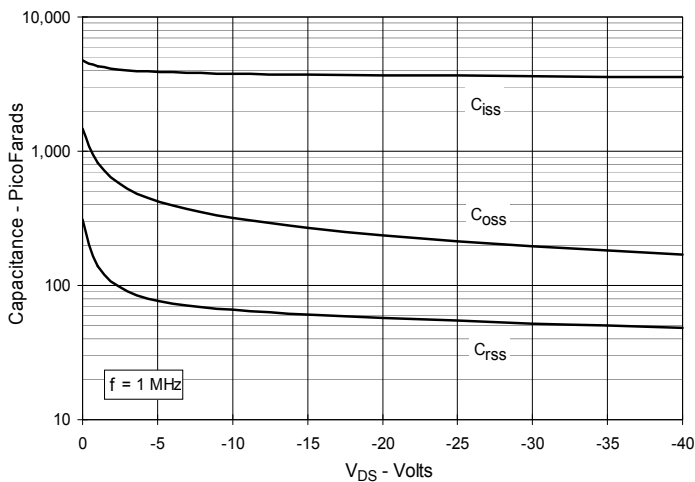
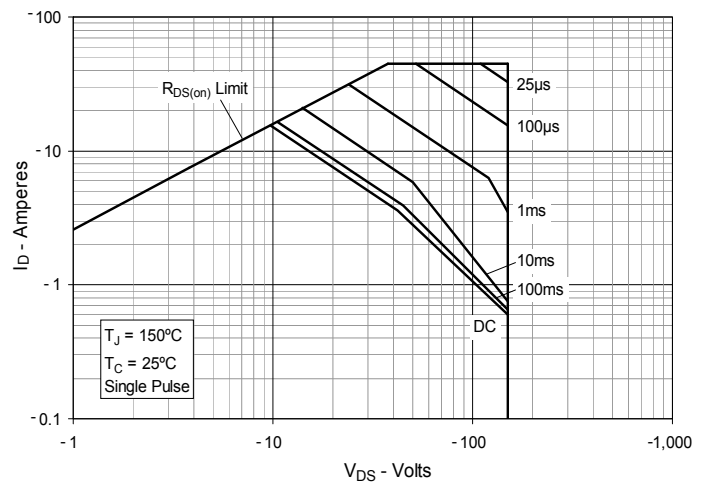
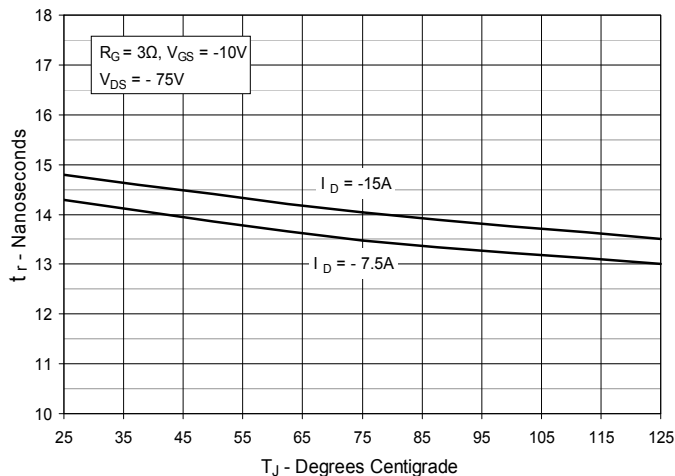


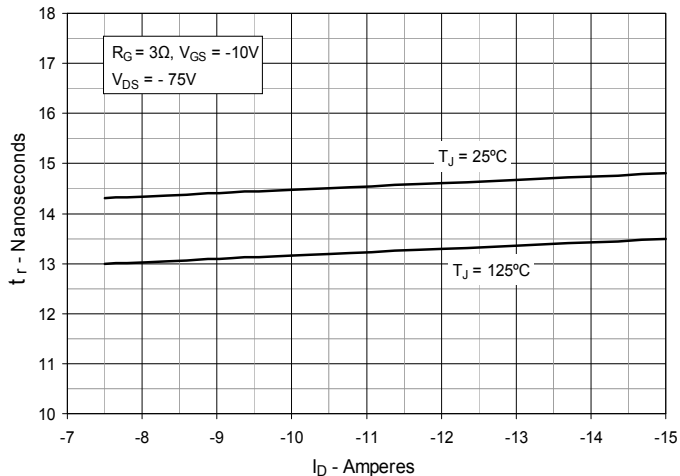
Fig. 12. Forward-Bias Safe Operating Area



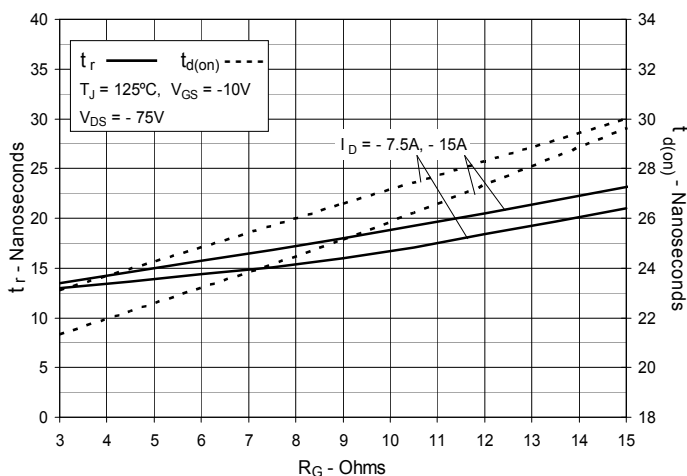
**Fig. 13. Resistive Turn-on Rise Time vs. Junction Temperature**



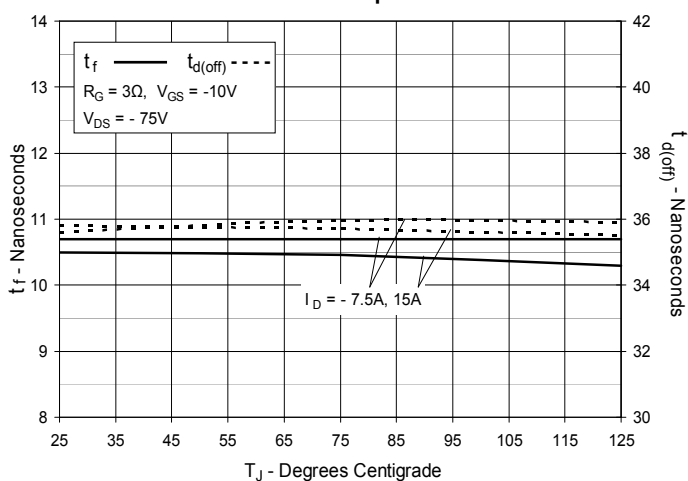
**Fig. 14. Resistive Turn-on Rise Time vs. Drain Current**



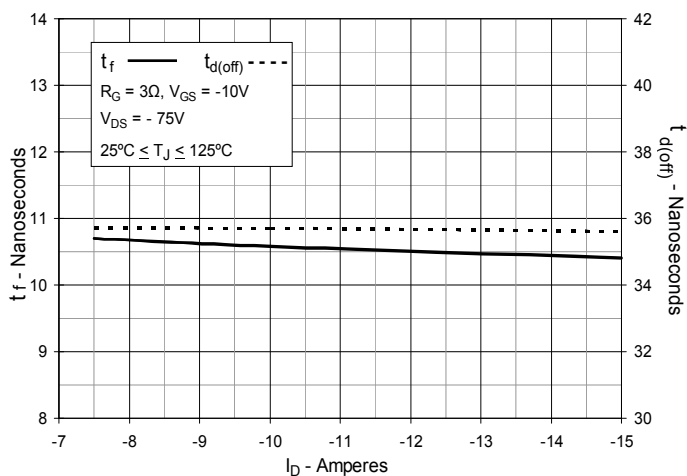
**Fig. 15. Resistive Turn-on Switching Times vs. Gate Resistance**



**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**

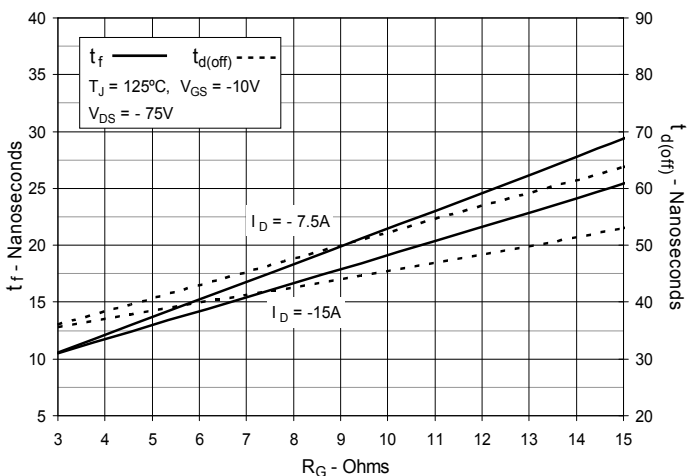


Fig. 19. Maximum Transient Thermal Impedance

