

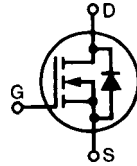
# HiPerFET™ Power MOSFETs

**IXFH 26N60/IXFT 26N60  
IXFK 28N60**

$V_{DSS}$	$I_{D25}$	$R_{DS(on)}$
<b>600 V</b>	<b>26 A</b>	<b>0.25 <math>\Omega</math></b>
<b>600 V</b>	<b>28 A</b>	<b>0.25 <math>\Omega</math></b>

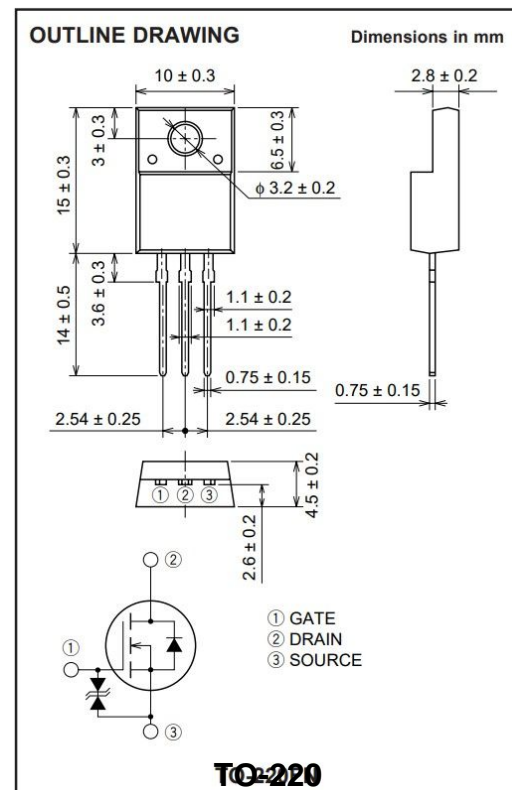
$t_{rr} \leq 250 \text{ ns}$

N-Channel Enhancement Mode  
Avalanche Rated, High dv/dt, Low  $t_{rr}$



Preliminary data

Symbol	Test Conditions	Maximum Ratings		
		IXFH/ IXFT	IXFK	
$V_{DSS}$	$T_J = 25^\circ\text{C}$ to $150^\circ\text{C}$	600	600	V
$V_{DGR}$	$T_J = 25^\circ\text{C}$ to $150^\circ\text{C}$ ; $R_{GS} = 1 \text{ M}\Omega$	600	600	V
$V_{GS}$	Continuous	$\pm 20$	$\pm 20$	V
$V_{GSM}$	Transient	$\pm 30$	$\pm 30$	V
$I_{D25}$	$T_C = 25^\circ\text{C}$ , Chip capability	26	28	A
$I_{DM}$	$T_C = 25^\circ\text{C}$ , pulse width limited by $T_{JM}$	104	112	A
$I_{AR}$	$T_C = 25^\circ\text{C}$	26	28	A
$E_{AR}$	$T_C = 25^\circ\text{C}$	50	50	mJ
$E_{AS}$	$T_C = 25^\circ\text{C}$	1.5	1.5	J
dv/dt	$I_S \leq I_{DM}$ , $di/dt \leq 100 \text{ A}/\mu\text{s}$ , $V_{DD} \leq V_{DSS}$ , $T_J \leq 150^\circ\text{C}$ , $R_G = 2 \Omega$	5	5	V/ns
$P_D$	$T_C = 25^\circ\text{C}$	360	416	W
$T_J$		-55 ... +150		$^\circ\text{C}$
$T_{JM}$			150	$^\circ\text{C}$
$T_{stg}$		-55 ... +150		$^\circ\text{C}$
$T_L$	1.6 mm (0.063 in) from case for 10 s	300	300	$^\circ\text{C}$
$M_d$	Mounting torque	1.13/10	0.9/6	Nm/lb.in.
Weight		6	10	g



Symbol	Test Conditions	Characteristic Values ( $T_J = 25^\circ\text{C}$ , unless otherwise specified)		
		min.	typ.	max.
$V_{DSS}$	$V_{GS} = 0 \text{ V}$ , $I_D = 250 \mu\text{A}$	600		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$ , $I_D = 4 \text{ mA}$	2		4.5 V
$I_{GSS}$	$V_{GS} = \pm 20 \text{ V}_{DC}$ , $V_{DS} = 0$			$\pm 200 \text{ nA}$
$I_{DSS}$	$V_{DS} = 0.8 \cdot V_{DSS}$ , $T_J = 25^\circ\text{C}$ $V_{GS} = 0 \text{ V}$ , $T_J = 125^\circ\text{C}$			25 $\mu\text{A}$ 1 mA
$R_{DS(on)}$	$V_{GS} = 10 \text{ V}$ , $I_D = 0.5 \cdot I_{D25}$ Pulse test, $t \leq 300 \mu\text{s}$ , duty cycle $d \leq 2 \%$			0.25 $\Omega$

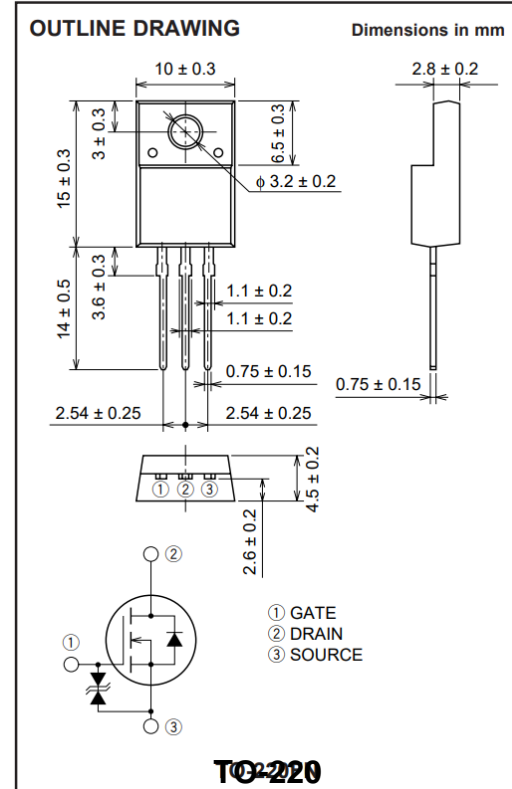
## Features

- International standard packages
- Epoxy meet UL94V-0, flammability classification
- Low  $R_{DS(on)}$  HDMOS™ process
- Rugged polysilicon gate cell structure
- Avalanche energy and current rated
- Fast intrinsic Rectifier

## Advantages

- Easy to mount
- Space savings
- High power density

Symbol	Test Conditions	Characteristic Values ( $T_J = 25^\circ\text{C}$ , unless otherwise specified)		
		min.	typ.	max.
$g_{fs}$	$V_{DS} = 10\text{ V}; I_D = 0.5 \cdot I_{D25}$ , pulse test	11	18	S
$C_{iss}$	$V_{GS} = 0\text{ V}, V_{DS} = 25\text{ V}, f = 1\text{ MHz}$		5000	pF
$C_{oss}$			600	pF
$C_{rss}$			250	pF
$t_{d(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 \cdot I_{D25}$ $R_G = 1.5\ \Omega$ (External),		30	ns
$t_r$			43	ns
$t_{d(off)}$			110	ns
$t_f$			30	ns
$Q_{g(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 \cdot I_{D25}$		250	300 nC
$Q_{gs}$			33	45 nC
$Q_{gd}$			115	150 nC
$R_{thJC}$		26N60 28N60		0.35 0.30 K/W
$R_{thCK}$	TO-247 TO-264		0.25 0.15	K/W K/W



Symbol	Test Conditions	Characteristic Values ( $T_J = 25^\circ\text{C}$ , unless otherwise specified)		
		min.	typ.	max.
$I_S$	$V_{GS} = 0\text{ V}$	26N60 28N60		26 28 A
$I_{SM}$	Repetitive; pulse width limited by $T_{JM}$	26N60 28N60		104 112 A
$V_{SD}$	$I_F = I_S, V_{GS} = 0\text{ V}$ , Pulse test, $t \leq 300\ \mu\text{s}$ , duty cycle $d \leq 2\%$			1.5 V
$t_{rr}$	$I_F = I_S - di/dt = 100\text{ A}/\mu\text{s}, V_R = 100\text{ V}$			250 ns
$Q_{RM}$			1	$\mu\text{C}$
$I_{RM}$			10	A