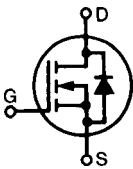


Standard
Power MOSFET

IRFP 260

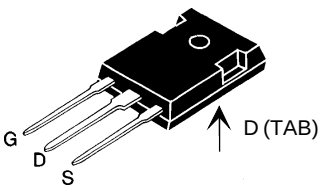
$V_{DSS} = 200\text{ V}$
 $I_{D(\text{cont})} = 46\text{ A}$
 $R_{DS(\text{on})} = 55\text{ m}\Omega$

N-Channel Enhancement Mode



Symbol	Test Conditions	Maximum Ratings	
V_{DSS}	$T_J = 25^{\circ}\text{C to } 150^{\circ}\text{C}$	200	V
V_{DGR}	$T_J = 25^{\circ}\text{C to } 150^{\circ}\text{C}; R_{GS} = 1\text{ M}\Omega$	200	V
V_{GS}	Continuous	± 20	V
V_{GSM}	Transient	± 30	V
I_{D25}	$T_C = 25^{\circ}\text{C}$	46	A
I_{DM}	$T_C = 25^{\circ}\text{C}$, pulse width limited by T_{JM}	184	A
I_{AR}		46	A
E_{AR}	$T_C = 25^{\circ}\text{C}$	28	mJ
dv/dt	$I_S \leq I_{DM}$, $di/dt \leq 100\text{ A}/\mu\text{s}$, $V_{DD} \leq V_{DSS}$, $T_J \leq 150^{\circ}\text{C}$, $R_G = 2\text{ }\Omega$	5	V/ns
P_D	$T_C = 25^{\circ}\text{C}$	280	W
T_J		-55 ... +150	$^{\circ}\text{C}$
T_{JM}		150	$^{\circ}\text{C}$
T_{stg}		-55 ... +150	$^{\circ}\text{C}$
M_d	Mounting torque	1.13/10	Nm/lb.in.
Weight		6	g
Maximum lead temperature for soldering 1.6 mm (0.062 in.) from case for 10 s		300	$^{\circ}\text{C}$

TO-247 AD



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

Features

- International standard package JEDEC TO-247 AD
- Low $R_{DS(\text{on})}$ HDMOS™ process
- Rugged polysilicon gate cell structure
- High commutating dv/dt rating
- Fast switching times

Applications

- Switch-mode and resonant-mode power supplies
- Motor controls
- Uninterruptible Power Supplies (UPS)
- DC choppers

Advantages

- Easy to mount with 1 screw (isolated mounting screw hole)
- Space savings
- High power density

Symbol	Test Conditions	Characteristic Values ($T_J = 25^{\circ}\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_{DSS}	$V_{GS} = 0\text{ V}$, $I_D = 250\text{ }\mu\text{A}$	200		V
$V_{GS(\text{th})}$	$V_{DS} = V_{GS}$, $I_D = 250\text{ }\mu\text{A}$	2		V
I_{GSS}	$V_{GS} = \pm 20\text{ V}_{DC}$, $V_{DS} = 0$			$\pm 100\text{ nA}$
I_{DSS}	$V_{DS} = 200\text{ V}$ $V_{DS} = 160\text{ V}$ $V_{GS} = 0\text{ V}$			$25\text{ }\mu\text{A}$ $250\text{ }\mu\text{A}$
$R_{DS(\text{on})}$	$V_{GS} = 10\text{ V}$, $I_D = 28\text{ A}$ Pulse test, $t \leq 300\text{ }\mu\text{s}$, duty cycle $d \leq 2\%$			$0.055\text{ }\Omega$

IXYS reserves the right to change limits, test conditions, and dimensions.

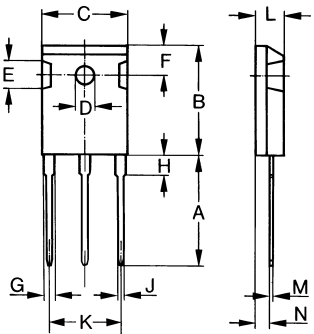
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Symbol	Test Conditions	Characteristic Values		
		(T _j = 25°C, unless otherwise specified)		
		min.	typ.	max.
g _{fs}	V _{DS} = 10 V; I _D = 28 A, pulse test	24	34	S
C _{iss}	V _{GS} = 0 V, V _{DS} = 25 V, f = 1 MHz		3900	pF
C _{oss}			760	pF
C _{rss}			320	pF
t _{d(on)}	V _{GS} = 10 V, V _{DS} = 100 V _{DSS} , I _D = 46A R _G = 4.3 Ω (External)		23	ns
t _r			30	ns
t _{d(off)}			90	ns
t _f			28	ns
Q _{g(on)}	V _{GS} = 10 V, V _{DS} = 0.5 • V _{DSS} , I _D = 0.5 I _{D25}		230	nC
Q _{gs}			42	nC
Q _{gd}			110	nC
R _{thJC}			0.45	K/W
R _{thCK}			0.24	K/W

Source-Drain Diode		Characteristic Values		
		(T _j = 25°C, unless otherwise specified)		
Symbol	Test Conditions	min.	typ.	max.
I _S	V _{GS} = 0 V			46 A
I _{SM}	Repetitive; pulse width limited by T _{JM}			180 A
V _{SD}	I _F = I _S , V _{GS} = 0 V, Pulse test, t ≤ 300 μs, duty cycle d ≤ 2 %			1.8 V
t _{rr}	I _F = 0.5 I _S , -di/dt = 100 A/μs, V _R = 100 V		260	590 ns
Q _{rr}			2.34	7.2 uC

TO-247 AD (IXTH) Outline



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102