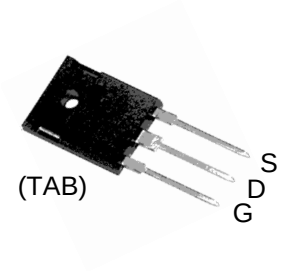
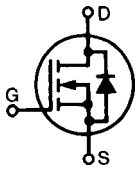
SMOS21N50, SMOS26N50

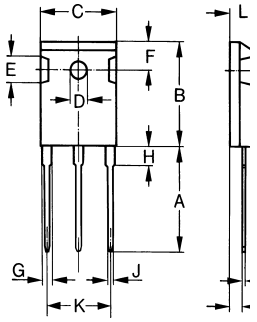
Power MOSFETs





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

Dimensions TO-247AD



Dim.	Millimeter Min.	Max.	Inches 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

Symbol	Test Conditions		Maximum Ratings	Unit
V_{DSS}	T_J=25°C to 150°C		500	V
V_{DGR}	T_J=25°C to 150°C; R_{GS}=1MΩ		500	
V_{GS}	Continuous		±20	V
V_{GSM}	Transient		±30	
I_{D25}	T_C=25°C	21N50	21	A
		26N50	26	
I_{DM}	T_C=25°C; pulse width limited by T_{JM}	21N50	84	A
		26N50	104	
I_{AR}	T_C=25°C	21N50	21	A
		26N50	26	
E_{AR}	T_C=25°C		30	mJ
dv/dt	$I_S \leq I_{DM}$; di/dt ≤100A/us; $V_{DD} \leq V_{DSS}$, $T_J \leq 150°C$; R_G=2Ω		5	V/ns
P_D	T_C=25°C		300	W
T_J			-55...+150	°C
T_{JM}			150	
T_{stg}			-55...+150	
T_L	1.6mm(0.062 in.) from case for 10s		300	°C
Md	Mounting torque		1.13/10	Nm/lb.in.
Weight			6	g

Sirectifier®

SMOS21N50, SMOS26N50

Power MOSFETs

(T_J=25°C, unless otherwise specified)

Symbol	Test Conditions	Characteristic Values			Unit
		min.	typ.	max.	
V_{DSS}	V_{GS}=0V; I_D=250uA	500			V
$V_{GS(th)}$	V_{DS}=V_{GS}; I_D=4mA	2		4	V
I_{GSS}	V_{GS}=±20V_{DC}; V_{DS}=0			±100	nA
I_{DSS}	V_{DS}=0.8V_{DSS}; T_J=25°C			200	uA
	V_{GS}=0V; T_J=125°C			1	mA

(T_J=25°C, unless otherwise specified)

Symbol	Test Conditions	Characteristic Values			Unit
		min.	typ.	max.	
$R_{DS(on)}$	V_{GS}=10V; I_D=0.5I_{D25} 21N50			0.25	
	26N50			0.23	Ω
	Pulse test, t≤300us, duty cycle≤2%			0.20	
g_{ts}	V_{DS}=10V; I_D=0.5I_{D25}; pulse test	11	21		S
C_{ies}			4200		
C_{oes}	V_{GS}=0V; V_{DS}=25V; f=1MHz		450		pF
C_{res}			135		
$Q_{g(on)}$			135	160	
Q_{gs}	V_{GS}=10V; V_{DS}=0.5V_{DSS}; I_D=0.5I_{D25}		28	40	nC
Q_{gd}			62	85	
$t_{d(on)}$			16	25	ns
t_r	V_{GS}=10V; V_{DS}=0.5V_{DSS}; I_D=0.5I_{D25}		33	45	ns
$t_{d(off)}$	R_G=2Ω (External)		65	80	ns
t_f			30	40	ns
R_{thJC}				0.42	K/W
R_{thCK}			0.25		K/W

Source-Drain Diode

(T_J=25°C, unless otherwise specified)

Symbol	Test Conditions		Characteristic Values			Unit
			min.	typ.	max.	
I_S	V_{GS}=0V	21N50			21	A
		26N50			26	
I_{SM}	Repetitive;	21N50			84	A
	pulse width limited by T_{JM}	26N50			104	
V_{SD}	I_F=I_S; V_{GS}=0V;				1.5	V
	Pulse test, t≤300us, duty cycle d≤2%					
t_{rr}		T_J=25°C			250	ns
	I_F=I_S;	T_J=125°C			400	ns
Q_{RM}	-di/dt=100A/us;	T_J=25°C		1		uC
	V_R=100V;	T_J=125°C		2		uC
I_{RM}		T_J=25°C		10		A
		T_J=125°C		15		A

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