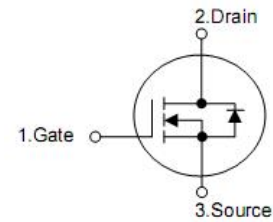


75A, 60V N-Channel Fast Switching MOSFET

Feature

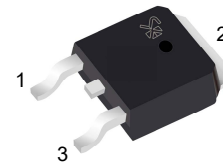
- Green Device Available
- Super Low Gate Charge
- Advanced high cell density Trench technology
- TO-252 for Surface Mount Package.



Applications

The 75N06 is the high cell density trenched N-ch MOSFETs, which provide R_{DS(on)} and gate charge for most of the synchronous buck converter applications.

The 75N06 meet the RoHS and Green Product requirement, guaranteed with full function reliability approved.



TO-252

Absolute Maximum Ratings $T_A=25^{\circ}\text{C}$ Unless Otherwise noted

Parameter	Symbol	Limit	Units
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current-Continuous	I_D	7.5	A

Electrical Characteristics $T_A=25^{\circ}\text{C}$ Unless Otherwise noted

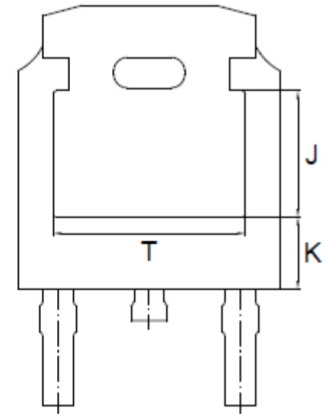
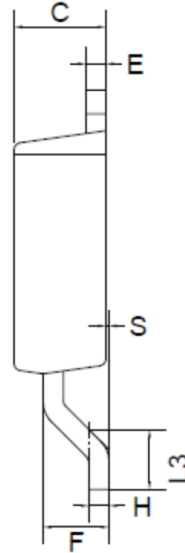
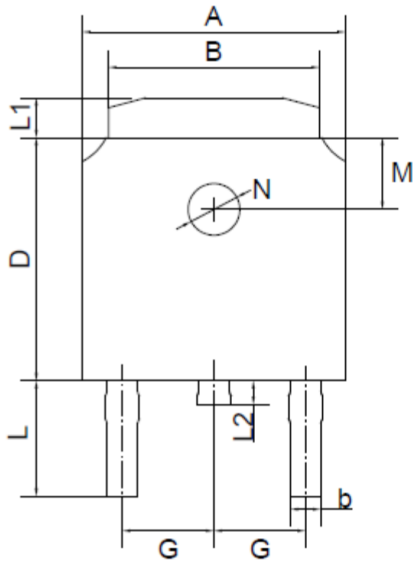
Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
Off Characteristics						
Drain to Source Breakdown Voltage	BVDSS	$V_{GS}=0V, I_D=250\mu A$	60	-	-	V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=48V, V_{GS}=0V$	-	-	100	μA
Gate Body Leakage Current, Forward	I_{GSSF}	$V_{GS}=20V, V_{DS}=0V$	-	-	100	nA
Gate Body Leakage Current, Reverse	I_{GSSR}	$V_{GS}=-20V, V_{DS}=0V$	-	-	-100	nA
On Characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	1.0	-	2.5	V
Static Drain-source On-Resistance	RDS(ON)	$V_{GS}=10V, I_D=30A$	-	-	8.5	m Ω
		$V_{GS}=4.5V, I_D=4A$	-	-	12	m Ω
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Voltage	VSD	$V_{GS}=0V, I_S=10 A$			1.2	V

Dynamic

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
Total Gate Charge	Q_g	$V_{DS}=30V, V_{GS}=10V, I_D=18A$			57	nC
Gate-Source Charge	Q_{gs}				8.7	
Gate-Drain Charge	Q_{gd}				14	

PACKAGE OUTLINE

TO-252(D-PAK)



TO-252(D-PAK) mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T
mm	max	6.7	5.5	0.8	2.5	6.3	0.6	1.8	2.29	0.55	3.1	1.2	1.0	1.75	0.1	1.8	1.3	3.16	1.80	4.83
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3	TYPICAL	0.45	2.7	0.8	0.6	1.40	0.0	TYPICAL	TYPICAL	ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90	22	122	47	39	69	4	71	51	124	71	190
	min	248	201	12	83	232	16	51	TYPICAL	18	106	31	24	55	0	TYPICAL	TYPICAL	ref.	ref.	ref.