H04N60 Series

N-Channel Power Field Effect Transistor (600V, 4A)

Description

This advanced high voltage MOSFET is designed to withstand high energy in the avalanche mode and switch efficiently. This new high energy device also offers a drain-to-source diode with fast recovery time. Designed for high voltage, high speed switching applications such as power suplies, converters, power motor controls and bridge circuits.

Features

- Higher Current Rating
- Lower $R_{DS(on)}$<2.4Ω (@V_{GS}=10V, I_D=2A)
- Lower Capacitances
- Lower Total Gate Charge
- Tighter VSD Specifications
- Avalanche Energy Specified

Thermal Characteristics

Symbol	Parameter	Value		Units
$R_{\theta JC}$	Thermal Resistance Junction to Case (Maximum)	TO-263	1.7	°C/W
		TO-220AB	1.25	
		TO-220FP	3.79	
$R_{\theta JA}$	Thermal Resistance Junction to Ambient (Maximum)	TO-220AB	62.5	
		TO-220FP	120	°C/W

Absolute Maximum Ratings (T_C=25°C, unless otherwise specified)

Symbol	Parameter	Value	Units
V_{DS}	Drain to Source Voltage	600	A
V_{GS}	Gate to Source Voltage (Continue)	±30	V
I_D	Drain to Current (Continuous)	4	A
I_{DM}	Drain to Current (Pulsed)	16	A
P_D	Total Power Dissipation (T_C=25°C) H04N60U (TO-263) H04N60E (TO-220AB) H04N60F (TO-220FP)	110 100 33	W
	Derate above 25°C H04N60U (TO-263) H04N60E (TO-220AB) H04N60F (TO-220FP)	0.58 0.8 0.26	W/°C
T_j, T_{stg}	Operating and Storage Temperature Range	-55 to 150	°C
E_{AS}	Single Pulse Drain-to-Source Avalanche Enrgy-T_j=25°C (V_{DD}=100V, V_{GS}=10V, I_L=2A, L=10mH, R_G=25Ω)[*1]	276	mJ
T_L	Maximum Lead Temperature for Soldering Purposes, 1/8" from case for 10 seconds	260	°C

*1: L=30mH, I_{AS}=3.81A, V_{DD}=175V, R_G=25