

A04496 MOSFET Datasheet

Product: A04496

Type: N-Channel MOSFET

Manufacturer: Alpha & Omega Semiconductor

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	10	A
Pulsed Drain Current	I_{DM}	50	A
Power Dissipation	P_D	2.5 (at 25°C)	W
Operating Junction Temp	T_J	-55 to +150	°C

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	62.5	°C/W

Electrical Characteristics ($T_{J} = 25^{\circ}\text{C}$ unless specified)

Parameter	Symbol	Condition	Value	Unit
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 250\mu\text{A}$	1.0 - 3.0	V
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}$, $I_D = 10\text{A}$	≤ 19.5	m Ω
		$V_{GS} = 4.5\text{V}$, $I_D = 10\text{A}$	≤ 26	m Ω
Total Gate Charge	Q_G	$V_{DS} = 15\text{V}$, $V_{GS} = 10\text{V}$	22	nC

Package Information

Parameter	Value
Package Type	SO-8
Pin Configuration	8-pin layout: Gate, Source, and Drain