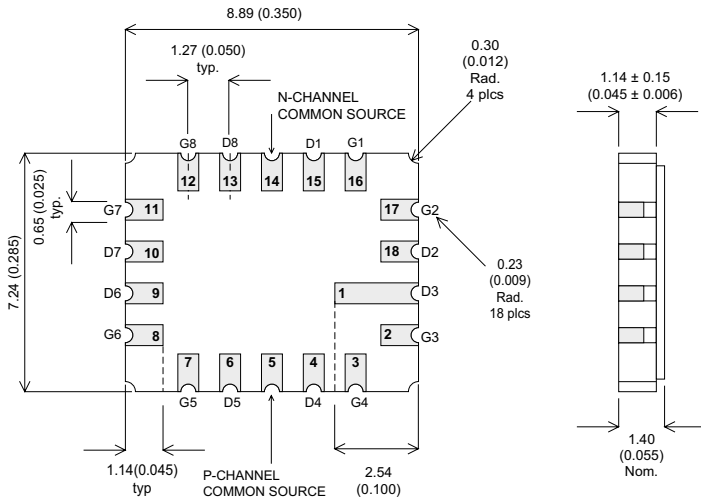


MECHANICAL DATA

Dimensions in mm (inches)



**MULTI-CHIP ARRAY
4 COMMON SOURCE
P-CHANNEL MOSFETS
AND 4 COMMON SOURCE
N-CHANNEL MOSFETS**

DESCRIPTION

The MCA002 is a ceramic surface mount Mosfet array designed for high reliability applications.

It contains 4 common source P Channel Mosfets and 4 common source N Channel Mosfets.

FEATURES

- Ceramic Surface Mount Package.
- Screening Options Available

N-CHANNEL DEVICES

- $V_{(BR)DSS} = 60V$
- $I_D = 200mA$
- $RDS_{(ON)MAX} = 5\Omega$
- Common Source Connection

P-CHANNEL DEVICES

- $V_{(BR)DSS} = -60V$
- $I_D = 200mA$
- $RDS_{(ON)MAX} = 10\Omega$
- Common Source Connection

N-CHANNEL DEVICES : 1-4

P-CHANNEL DEVICES : 5-8

- | | | | |
|--------|--------|---------|---------|
| 1 = D3 | 6 = D5 | 10 = D7 | 15 = D1 |
| 2 = G3 | 7 = G5 | 11 = G7 | 16 = G1 |
| 3 = G4 | 8 = G6 | 12 = G8 | 17 = G2 |
| 4 = D4 | 9 = D6 | 13 = D8 | 18 = D2 |

Pin14= N-Channel Common Source (devices 1,2,3,4)

Pin 5 = P-Channel Common Source (devices 5,6,7,8)

ABSOLUTE MAXIMUM RATINGS

	N Channel	P Channel
V_{DS} Drain-Source Voltage	+60V	-60V
V_{GS} Drain- Source Voltage	±30V	±30V
I_D Continuous Drain Current (per device) (25°C)	200mA	200mA
P_D Power Dissipation (per device)	0.5W	0.5W
θ_{j-c} Thermal Resistance (junction to case)	30°C/W	
θ_{j-a} Thermal Resistance (junction to ambient)	60°C/W	
T_j, T_{stg} Storage, Junction Temperature	-55 to +150°C	

ELECTRICAL CHARACTERISTICS
N-Channel (per device) (TA = 25°C Unless otherwise noted).

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
STATIC ELECTRICAL RATINGS					
V _{(BR)DSS} Drain – Source Breakdown Voltage	V _{GS} = 0 I _D = 100µA	60	70		V
V _{GS(th)} Gate Threshold Voltage	V _{DS} = V _{GS} I _D = 1mA	0.8	2.3	2.5	V
I _{GSS} Gate – Body Leakage	V _{DS} = 0V V _{GS} = ±30V		±1		nA
I _{DSS} Zero Gate Voltage Drain Current	V _{DS} = 50V		0.02		µA
	V _{GS} = 0V T _J = 125°C		1		
I _{D(on)} On–State Drain Current ²	V _{DS} = 10V V _{GS} = 10V	750	1000		mA
r _{DS(ON)} Drain – Source On–Resistance ¹	V _{GS} = 4.5V I _D = 75mA		5	7.5	Ω
	V _{GS} = 10V I _D = 0.2A		2.5	5	
	T _J = 125°C		4.4		
g _{fs} Forward Transconductance ¹	V _{DS} = 10V I _D = 0.5A		230		mS
g _{os} Common Source Output Conductance ¹	V _{DS} = 5V I _D = 50mA		500		µS
DYNAMIC CHARACTERISTICS					
C _{iss} Input Capacitance	V _{DS} = 25V V _{GS} = 10V f = 1MHz		16		pF
C _{oss} Output Capacitance			11		
C _{rss} Reverse Transfer Capacitance			2		
SWITCHING CHARACTERISTICS					
t _{d(on)} Turn–On	V _{DD} = 15V, R _L = 23Ω, I _D = 0.6A		7		ns
t _{d(off)} Turn–Off	V _{GEN} = 10V, R _G = 25Ω		7		

1 Pulse test: PW = ≤ 300µS, Duty Cycle ≤ 2%

2 Pulse width limited by maximum junction temperature.

ELECTRICAL CHARACTERISTICS
P-Channel (per device) (TA = 25°C Unless otherwise noted).

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
STATIC ELECTRICAL RATINGS					
V _{(BR)DSS} Drain – Source Breakdown Voltage	V _{GS} = 0 I _D = -10μA	-60	-70		V
V _{GS(th)} Gate Threshold Voltage	V _{DS} = V _{GS} I _D = -1mA	-1	-1.7	-2.4	V
I _{GSS} Gate – Body Leakage	V _{DS} = 0V V _{GS} = ±20V T _J = 125°C		±1 ±5		nA
I _{DSS} Zero Gate Voltage Drain Current	V _{DS} = -48V V _{GS} = 0V T _J = 125°C		-0.02 -0.2		μA
I _{D(on)} On–State Drain Current ¹	V _{DS} = -10V V _{GS} = -4.5V	-50	-80		mA
r _{DS(ON)} Drain – Source On–Resistance ¹	V _{GS} = -4.5V I _D = -25mA		11	25	Ω
	V _{GS} = -10V I _D = -0.2A T _J = 125°C		6 12	10	
g _{fs} Forward Transconductance ¹	V _{DS} = -10V I _D = -0.1A		90		mS
g _{os} Common Source Output Conductance ¹			400		μS
DYNAMIC CHARACTERISTICS					
C _{iss} Input Capacitance	V _{DS} = -25V V _{GS} = 0V f = 1MHz		15		pF
C _{oss} Output Capacitance			10		
C _{rss} Reverse Transfer Capacitance			3		
SWITCHING CHARACTERISTICS					
t _{d(on)} Turn–On Delay Time	V _{DD} = -25V, R _L = 133Ω, I _D = -0.18A V _{GEN} = -10V, R _G = -25Ω		6		ns
t _r			10		
t _{d(off)} Turn–Off Delay Time			7		
t _f			8		

1 Pulse test: PW = ≤ 300μS, Duty Cycle ≤ 2%

2 Pulse width limited by maximum junction temperature.