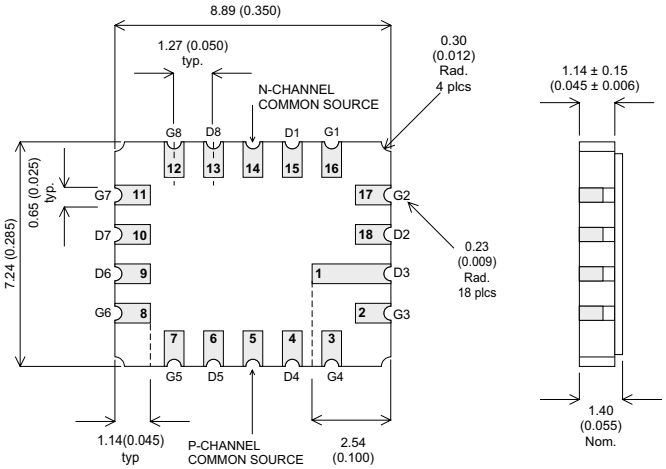
MCA002

MECHANICAL DATA
Dimensions in mm (inches)



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 (devices1,2,3,4)
Pin 5 = P-Channel Common Source (devices 5,6,7,8)

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
- $RDS_{(ON)MAX}$ = 5Ω
- Common Source Connection

P-CHANNEL DEVICES

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

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
⊖j-c	Thermal Resistance (junction to case)	30°C/W	
⊖j-a	Thermal Resistance (junction to ambient)	60°C/W	
T_j,T_{stg}	Storage, Junction Temperature	-55 to +150°C	

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ELECTRICAL CHARACTERISTICS

N-Channel (per device) (T_A = 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 f = 1MHz	V_{GS} = 10V		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) (T_A = 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		±1		nA
			T_J = 125°C		±5		
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = -48V	V_{GS} = 0V		-0.02		µA
			T_J = 125°C		-0.2		
$I_{D(on)}$	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		6	10	
			T_J = 125°C		12		
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		15		pF
C_{oss}	Output Capacitance	f = 1MHz			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			6		ns
t_r		V_{GEN} = -10V, R_G = -25Ω			10		
$t_{d(off)}$	Turn–Off Delay Time				7		
t_r					8		

1 Pulse test: PW = ≤ 300µS, Duty Cycle ≤ 2%
2 Pulse width limited by maximum junction temperature.