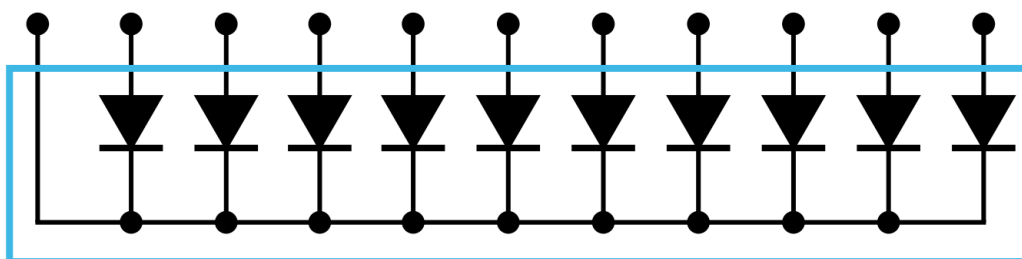
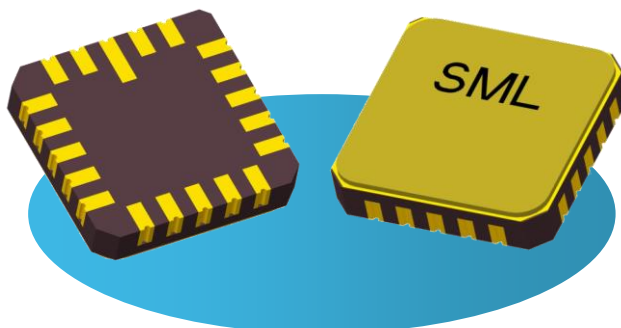


MULTI CHIP ARRAY 10 x COMMON CATHODE 1N4148 DIODES

MCADRAC4148C7

- Low Leakage
- Fast Switching
- Low Forward Voltage
- Hermetic Ceramic Surface Mount Package
- Suitable For General Purpose, Switching Applications
- Screening Options Available



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise stated)

		Per Diode ⁽¹⁾	Total Device ⁽²⁾
V _{BR}	Breakdown Voltage	100V	
V _{RWM}	Working Peak Reverse Voltage	75V	
I _O	Average Rectified Output Current, T _A = 75°C	200mA	
I _{FSM}	Surge Current, Half Sine Wave, t _p = 8.3ms	2A	
P _D	Total Power Dissipation at T _{sp} = 75°C	1.042W	5W
	Derate Above 75°C	8.33mW/°C	40mW/°C
T _J	Junction Temperature Range	-65°C to +200°C	
T _{stg}	Storage Temperature Range	-65°C to +200°C	

THERMAL PROPERTIES

Symbols	Parameters	Per Diode ⁽¹⁾	Total Device ⁽²⁾
R _{θJSP} ⁽³⁾	Thermal Resistance, Junction To Solder Pads	120°C/W	25°C/W

Notes

- (1) One diode conducting only.
- (2) With all diodes conducting, maximum power dissipation per diode = 500mW, limited by maximum junction temperature while maintaining the solder point at 75°C.
- (3) Stated R_{θJSP} properties assume infinite heatsink.

Semelab Limited reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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MULTI CHIP ARRAY

10 x COMMON CATHODE

1N4148 DIODES

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ELECTRICAL CHARACTERISTICS (Per Diode, $T_A = 25^\circ\text{C}$ unless otherwise stated)

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
V_{BR}	Breakdown Voltage	$I_R = 100\mu\text{A}$	100			
$V_F^{(4)}$	Forward Voltage	$I_F = 10\text{mA}$			0.8	V
		$T_A = 150^\circ\text{C}$			0.8	
		$I_F = 100\text{mA}$			1.2	
		$T_A = -55^\circ\text{C}$			1.3	
I_R	Reverse Current	$V_R = 20\text{V}$			25	nA
		$T_A = 150^\circ\text{C}$			35	μA
		$V_R = 75\text{V}$			500	nA
		$T_A = 150^\circ\text{C}$			75	μA

DYNAMIC CHARACTERISTICS (Per Diode, $T_A = 25^\circ\text{C}$ unless otherwise stated)

$C^{(5)}$	Capacitance	$V_R = 0\text{V}$	$f = 1.0\text{MHz}$			4	pF
		$V_R = 1.5\text{V}$				2.8	
$t_{rr}^{(5)}$	Reverse Recovery Time	$I_F = I_R = 10\text{mA}$ $I_{REC} = 1.0\text{mA}$	$R_L = 100\Omega$			5	ns
$t_{fr}^{(5)}$	Forward Recovery Time	$I_F = 50\text{mA}$				20	
$V_{fr}^{(5)}$	Forward Recovery Voltage					5.0	V (pk)

Notes

(4) Pulse Width $\leq 380\mu\text{s}$, $\delta \leq 2\%$

(5) By Design. Not a production test

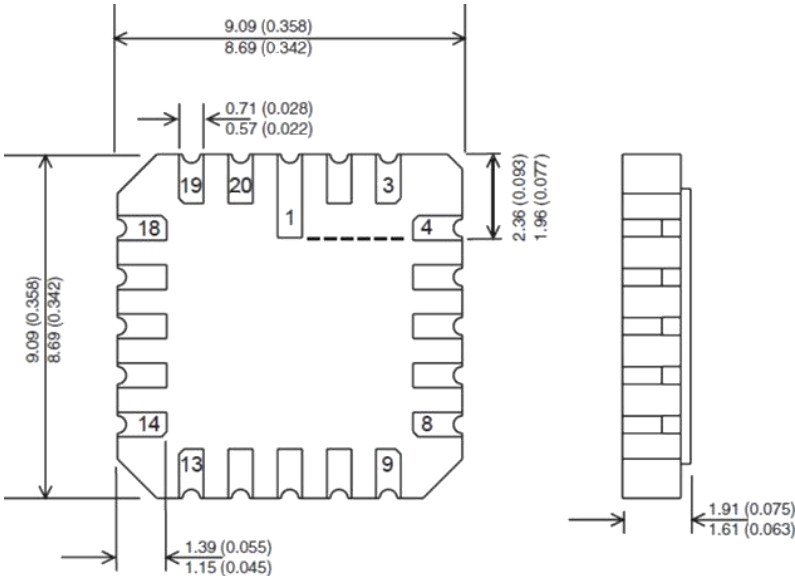
MULTI CHIP ARRAY
10 x COMMON CATHODE
1N4148 DIODES



MCADRAC4148C7

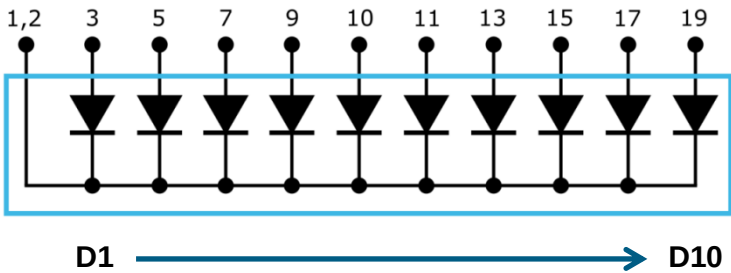
MECHANICAL DATA

Dimensions in mm (inches)



C7 (MS-004CB)
(Underside View)

PACKAGE PIN CONNECTIONS



Pin	Device	Connection	Pin	Device	Connection
1	Common	Cathode (All)	11	D6	Anode
2	Common	Cathode (All)	12	N/C	N/C
3	D1	Anode	13	D7	Anode
4	N/C	N/C	14	N/C	N/C
5	D2	Anode	15	D8	Anode
6	N/C	N/C	16	N/C	N/C
7	D3	Anode	17	D9	Anode
8	N/C	N/C	18	N/C	N/C
9	D4	Anode	19	D10	Anode
10	D5	Anode	20	N/C	N/C

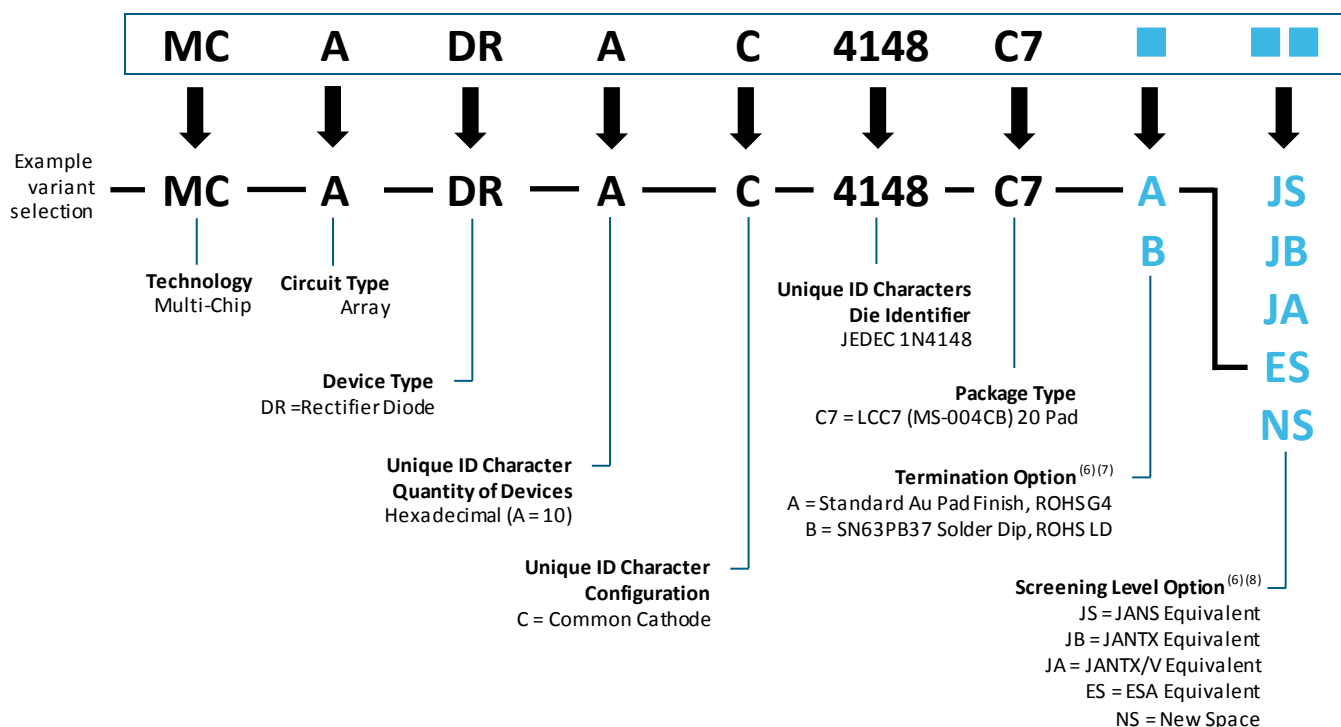
MULTI CHIP ARRAY

10 x COMMON CATHODE

1N4148 DIODES

MCADRAC4148C7

PART VARIANT OPTIONS ⁽⁶⁾



Notes

- (6) Part variant options (termination, screening level) to be specified at point of order.
 (7) LD = e0, G4 = e4, as defined in J-STD-609 2nd Level Interconnect Category.
 (8) Please enquire with customer services regarding other requirements (pin connections, termination & screening level).