



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Features

- Designed for High Volume Applications
- Crossover Quad Configuration
- Lead Free and RoHS* Compliant With 260°C Reflow Capability
- 100 % MATTE Tin Plating
- Available in SOT-143 (ODS –1068)
- Tape and Reel Deliverable

Description and Applications

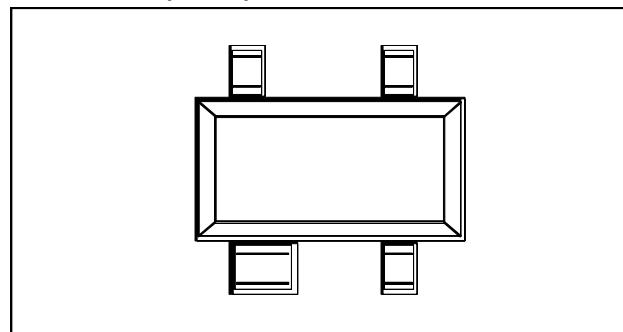
M/A-COM's MA4E2072 is a high performance silicon Schottky cross over quad. These parts are usable for a variety of mixer applications. The closely matched junctions minimize variation in capacitance, forward voltage and dynamic resistance within the four diodes in the quad. They are offered in low, medium and high barrier heights. These diodes are available in a small profile surface mount package SOT-143 (ODS-1068). They are available in tape and reel for automatic pick and place assembly.

Associated Application Note

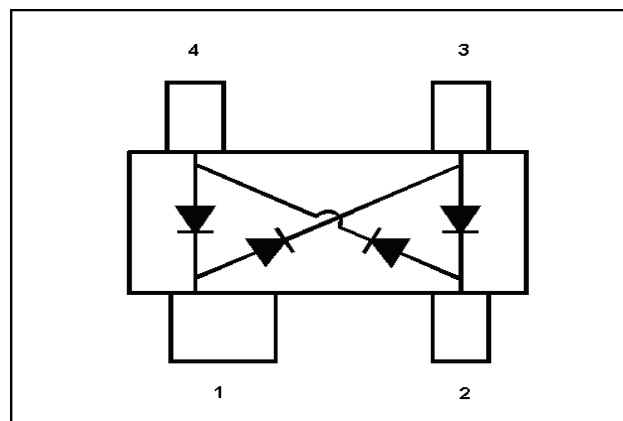
M538 – Surface Mounting Instructions

Package Outline (Topview)

SOT-143 (1068)



Configuration (Topview)



*Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

Maximum Ratings @ +25 °C ¹

Parameter	Unit	Values
Operating Temperature	°C	-65 to +125
Storage Temperature	°C	-65 to +125
Junction Temperature	°C	+150
RF Incident Power (CW)	mW	75
Soldering Temperature	°C	+260 max

1. Operation of this device above any one of these parameters may cause permanent damage.

Electrical Specifications @ +25 °C

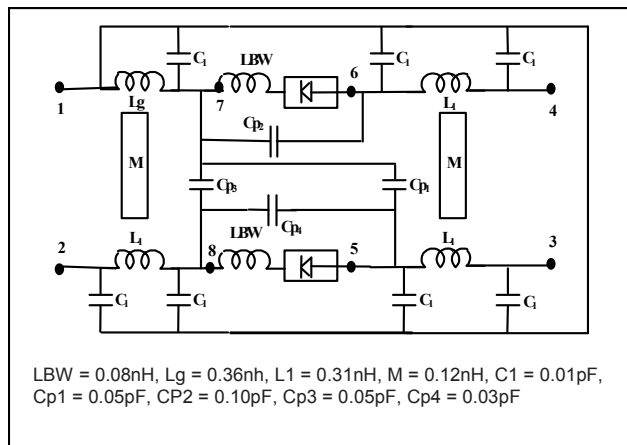
Part Number	Forward Voltage ²			Junction Capacitance ³	Dynamic Resistance
	Vf Typical (mV)	Vf Max. (mV)	Delta Vf Max. (mV)	Cj Typical (pF)	Rd Max. (ohms)
MA4E2072L -1068T	230	240	5	.5	7.0
MA4E2072M -1068T	363	400	5	.5	7.0

2. Forward voltage is measured at $I_f = 1$ mA

3. Cj is measured at $V_r = 0$ volts and $f = 1$ MHz.

Equivalent Circuit Parasitics

SOT-143

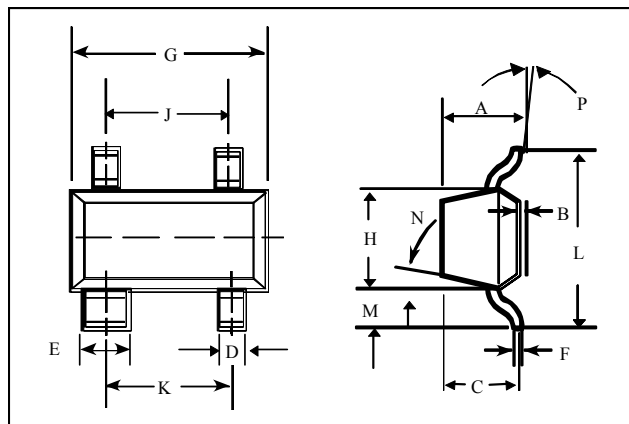


Spice Model Parameters

Parameter	L	M
IS	5.66n	3n
IKF	0.02	0.02
N	1.04	1.05
RS	1.4	1.7
CJO	0.32 pF	.35 pF
M	.23	.041
FC	0.1	0.1
VJ	0.16	0.07
EG	0.7	0.7
XTI	2	2
TT	0	0

Case Style

SOT-143



SOT-143 (Case Style 1068)

DIM.	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	-	0.044	-	1.10
B	-	0.044	-	1.10
C	-	0.040	-	1.00
D	0.030	0.035	0.75	0.90
E	0.013	0.020	0.35	0.50
F	0.003	0.006	0.08	0.15
G	0.110	0.119	2.80	3.00
H	0.047	0.056	1.20	1.40
J	0.075 typical		1.90 typical	
K	0.075 typical		1.90 typical	
L	-	0.103	-	2.6
M	-	0.024	-	0.6
DIM.	GRADIENT			
N	10° max. ⁴			
P	2° ... 30°			

4. Applicable on all sides

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