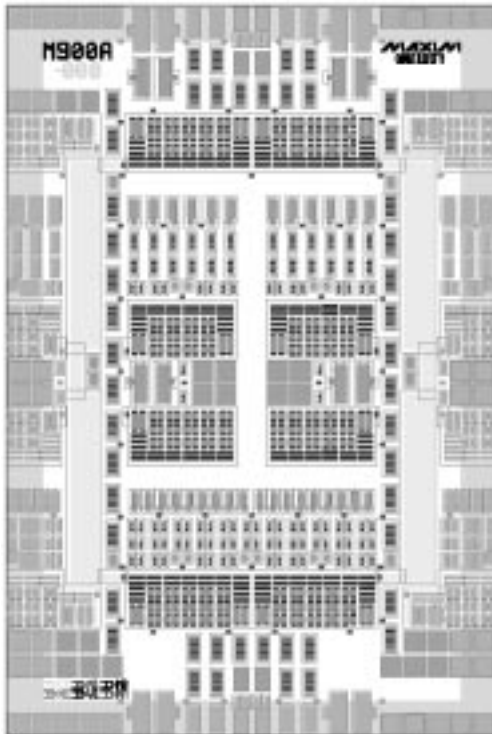


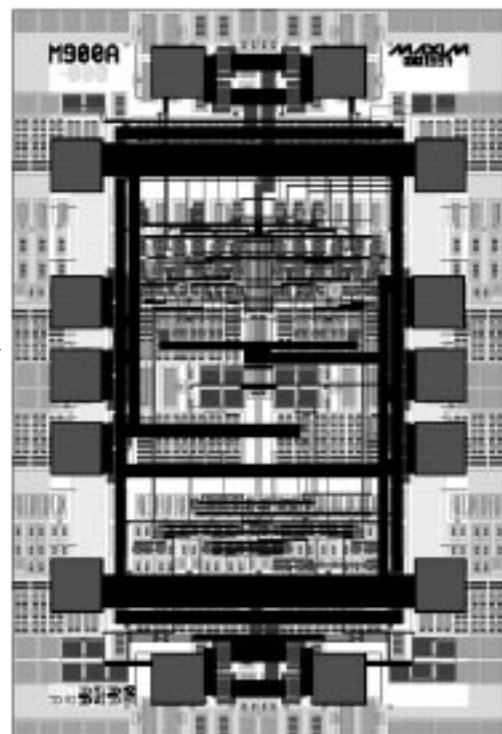
QuickChip 10 Family

The QuickChip 10 Family consists of 7 array size options that are assembled from a common 40 by 60 mil (1.02mm x 1.52mm) tile of devices. Unlike the QuickChip 9, bond pad size and placement are user defined and first layer metal can be routed over unused devices without making connection to the device. The additional layout design flexibility gives this array family a custom feel without adding to prototype fabrication leadtime.

QuickChip 10 is fabricated on Maxim's CB-2 Complementary Bipolar Process which features well matched NPN and PNP transistors with f_T 's of 8.7GHz and 6.4GHz respectively. The CB-2 PNP, with one of the highest $\beta \cdot VA$ products available (typically 2,400V), is ideal for design requiring high linearity, high gain, high power supply rejection, or a low-voltage supply. The QuickChip 10 uses a 2-layer gold metal interconnect for high reliability and low interconnect resistance. Laser-trimmable resistors are also available for circuits requiring high precision and a low temperature coefficient.

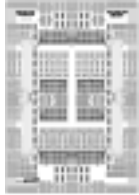


QuickChip 10-10 without metal interconnect or bond pads (devices only).



QuickChip 10-10 after metal interconnect and bond pad placement.

QuickChip 10 Family



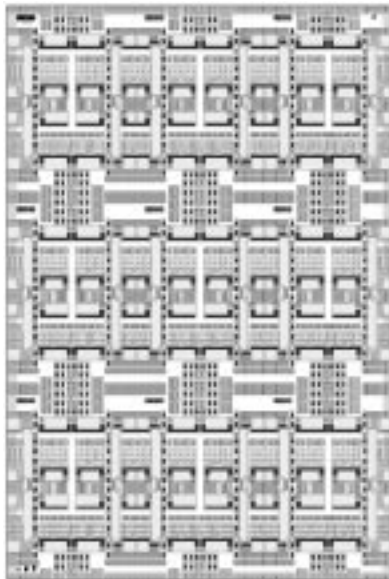
QuickChip 10-10



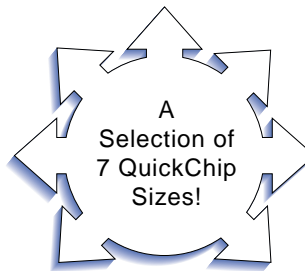
QuickChip 10-20



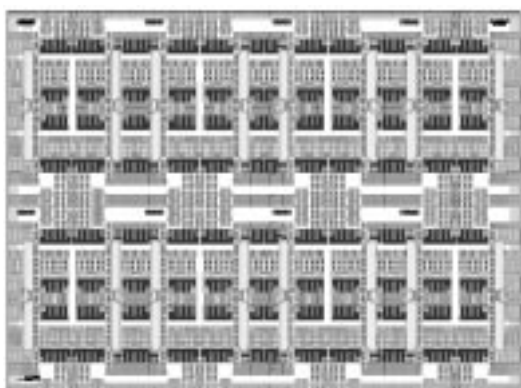
QuickChip 10-30



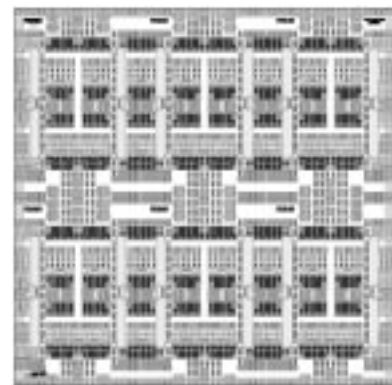
QuickChip 10-90



QuickChip 10-40



QuickChip 10-80



QuickChip 10-60

QuickChip 10 Device Inventory per Die Size

QuickChip Name	10-10		10-20		10-30		10-40		10-60		10-80		10-90	
Die Size in Tile Units	1 x 1		2 x 1		3 x 1		2 x 2		3 x 2		4 x 2		3 x 3	
Die Size in mils (X,Y)	40 x 60		80 x 60		120 x 60		80 x 120		120 x 120		160 x 120		120 x 180	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
N11A030H 1x NPN	80		200		320		416		664		912		1,008	
N12E070H 4.2x NPN	24		60		96		120		192		264		288	
N14E150H 17.3x NPN(a)	24	48	48	96	72	144	160	208	240	312	320	416	408	480
P11A030 1x PNP	18		44		70		88		140		192		210	
P12E070 4.2x PNP	12		30		48		60		96		132		144	
P14F150 17.3x PNP(a)	4	8	8	16	12	24	40	48	60	72	80	96	108	120
JPR064 P-Channel JFET(a)	0	4	0	8	0	12	16	24	24	36	32	48	48	60
DU071041H Unguarded Schottky	10		24		38		48		76		104		114	
DG071081H Guarded Schottky(a)	4	8	12	16	20	24	24	32	40	48	56	64	60	72
400Ω Implanted Resistors ±16.7%	146		368		590		736		1,180		1,624		1,770	
4kΩ Implanted Resistors ±12.3%	228		576		924		1,152		1,848		2,544		2,772	
10kΩ Implanted Resistors ±12.1%	28		80		132		160		264		368		396	
Nichrome Resistors	Custom Designed(c)													
0.5pF Capacitor(a)	8	22	24	64	40	106	94	160	172	264	250	368	304	422
3.5mil Bond Pads(b)	24		40		56		64		80		94		102	
4.0mil Bond Pads(b)	22		34		46		54		70		84		94	

(a) Placement of bond pads can reduce the quantity of these devices.

(b) The actual number of bond pads for any die size is greatly influenced by the package type, bond wire diameter, and package vendor selected.

(c) Custom nichrome resistors are available with untrimmed tolerances down to ±12% and laser wafer trimmed tolerances down to ±0.1%. Typical numbers for trimmed resistors are 1% tolerance and 0.1% matching. Over a limited range, and with very large sizes, 0.1% tolerance and 0.2% matching can be achieved.

Common Tile Used by All QuickChip 10 Arrays

