

Silicon Foundry Processes

Mixed-Signal Technologies

MHS's Silicon Foundry offers an extensive choice of processes through a combination of options specifically tailored to optimize mixed-signal circuits and applications. Each process technology family includes a modular approach, which can be chosen in accordance with the real IC product needs. This process technology partitioning helps our customers to optimize the wafer

manufacturing cost. A professional Design Kit tool is offered for each of the technology families. The Design Kit tool is customer friendly, providing a quick and reliable resource. A recent development has been created to optimize the quality of the device modeling, in order to support analog design fine-tuning.

“ Mature technologies for mixed-signal circuits and applications ”

Mature Technologies

MHS's technologies are mature processes. Their performance and reliability are time-proven as millions of products have been produced for

different customers in the High Reliability applications. Moreover, our technologies are offered in a long-term perspective.

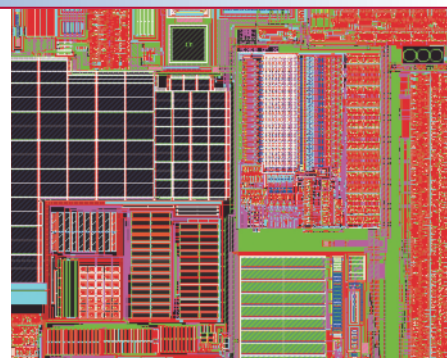
Offering

THE FOLLOWING TABLE GIVES A BRIEF DESCRIPTION OF MHS PROCESS TECHNOLOGY OFFERING.

	BiCMOS2SC	SCMOS3EE	SCMOS3E	SCMOS3RT
Minimum Feature Size (µm)	1.0	0.5	0.5	0.5
Substrate type	Bulk	Epi	Epi	Epi
Nb of Poly layers	1	1 or 2	1 or 2	1 or 2
Nb of Metal layers	2	2 or 3	2 or 3	3
Supply Voltage	5V CMOS 12V Bipolar	2V, 3V, 5V 20V, 30V, 50V	3V, 5V	3V, 5V
CMOS Transistors	NMOS and PMOS	NLV, PLV, HVMOS, LDMOS, Isolated LDMOS, Isolated LVNMOS	NLV, PLV, HVMOS	NLV, PLV
Bipolar Transistors	VPNP, LPNP, VNPN	VPNP, VNPN	VPNP	VPNP
Resistors	Poly	Nwell, Poly, HiRes Poly	Nwell, Poly, HiRes Poly	Nwell, Poly, HiRes Poly
Capacitors	CMOS	CMOS, Poly-BN+, PIP, Varactor	CMOS, Poly-BN+, PIP	CMOS, PIP
Diodes	Diffusion, Zener, Rectifier	Diffusion, Zener, Schottky, Isolated diode	Diffusion	Diffusion
Non-Volatile Memory cells		1P-EEPROM	2P-EPROM	
Trimming solutions	Antifuse diode	Poly Fuse OTP IP, Poly Fuse, Metal Fuse, Antifuse diode	Metal Fuse Antifuse diode	Antifuse diode
Additional capabilities	HV CMOS	Thick last metal option	Complete 200°C PDK option Thick last metal option	Total dose radiation tolerance: 60 krad or 300 krad @VCC=5,5V

Design Kits

MHS's Foundry customers benefit from professional Design Kit tools for each of the proposed process technologies. These tools aim at helping the customer to design a complex mixed-signal IC product quickly and safely.



SUPPORTED TOOLS

	SCMOS3EE, SCMOS3E, SCMOS3RT	BiCMOS2SC
Digital Synthesis	SYNOPSIS ® Design Compiler CADENCE ® AMBIT SPR CADENCE ® RTL Compiler	
Digital Netlist Simulations	CADENCE ® LVD / NCSIM VHDL Vital & Verilog	
Digital Place & Route	CADENCE ® Silicon Ensemble CADENCE ® VDI0 CADENCE ® Virtuoso Custom Placer CADENCE ® Chip Assembly Router TANNER EDA ® L-EDIT	
Digital / Analog Simulations	CADENCE ® Spectre-Verilog	
Digital / Analog Front End / Schematic Entry	CADENCE ® Composer TANNER EDA ® S-EDIT	CADENCE ® Composer
Analog Front End Simulations	CADENCE ® Spectre SYNOPSIS ® HSPICE MENTOR Graphics ® ELDO TANNER EDA ® T-SPICE	CADENCE ® Spectre SYNOPSIS ® HSPICE MENTOR Graphics ® ELDO
Full Custom Layout	CADENCE ® Virtuoso TANNER EDA ® L-EDIT	CADENCE ® Virtuoso
DRC	CADENCE ® Diva MENTOR Graphics ® Calibre TANNER EDA ® L-EDIT / HiPer Verify	CADENCE ® Diva
LVS / Extract	CADENCE ® Diva TANNER EDA ® L-EDIT / HiPer Verify MENTOR Graphics ® Calibre	CADENCE ® Diva

