

POLYFET RF DEVICES

LDMOS

Lateral Double Diffuse MOS
Transistor

The Next Generation



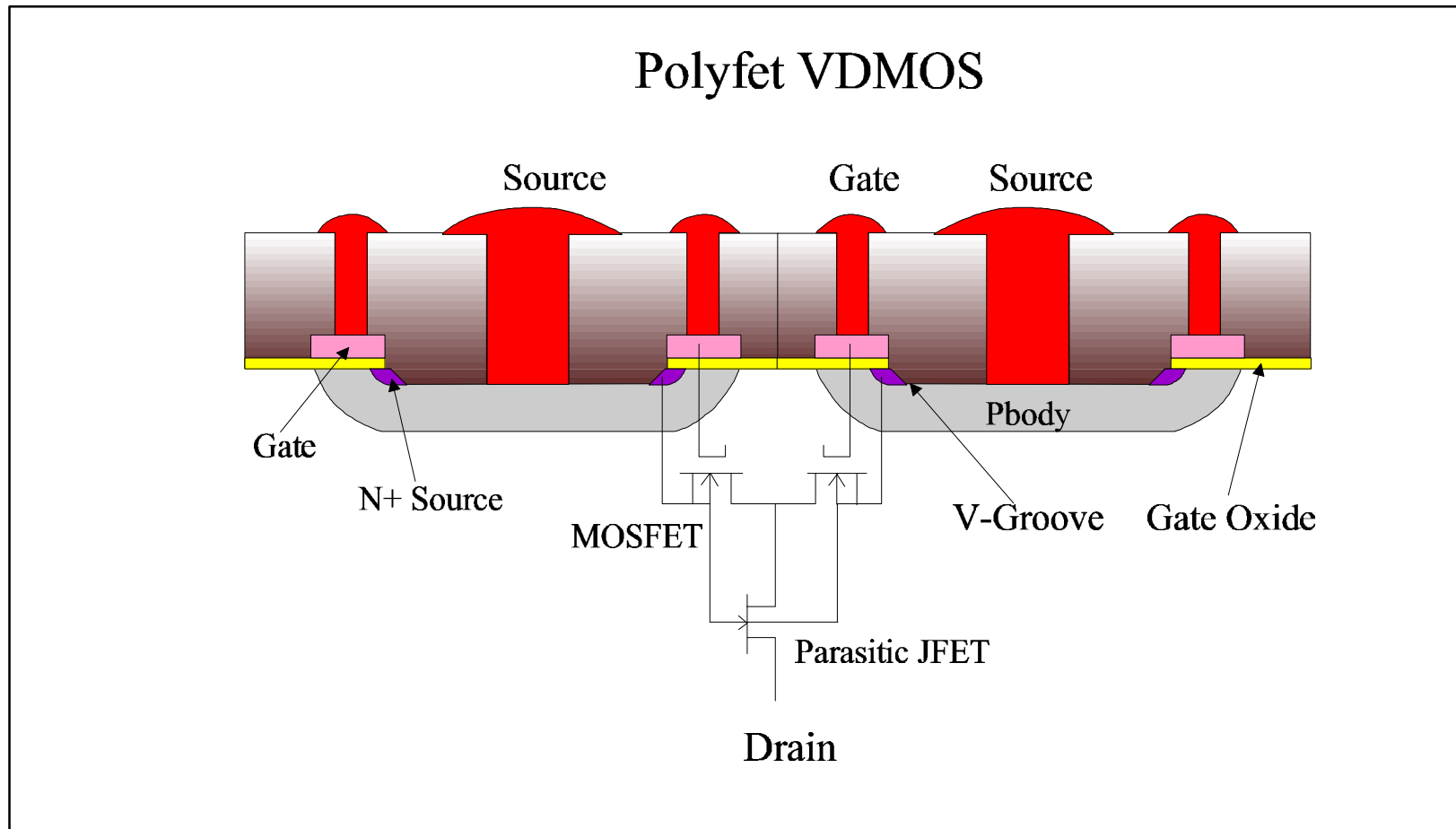
DMOS Technology

- Vertical DMOS
- Bottom Side Drain
- Source bond wire reducing gain
- Higher Crss
- BEO isolation
- High Package Cost

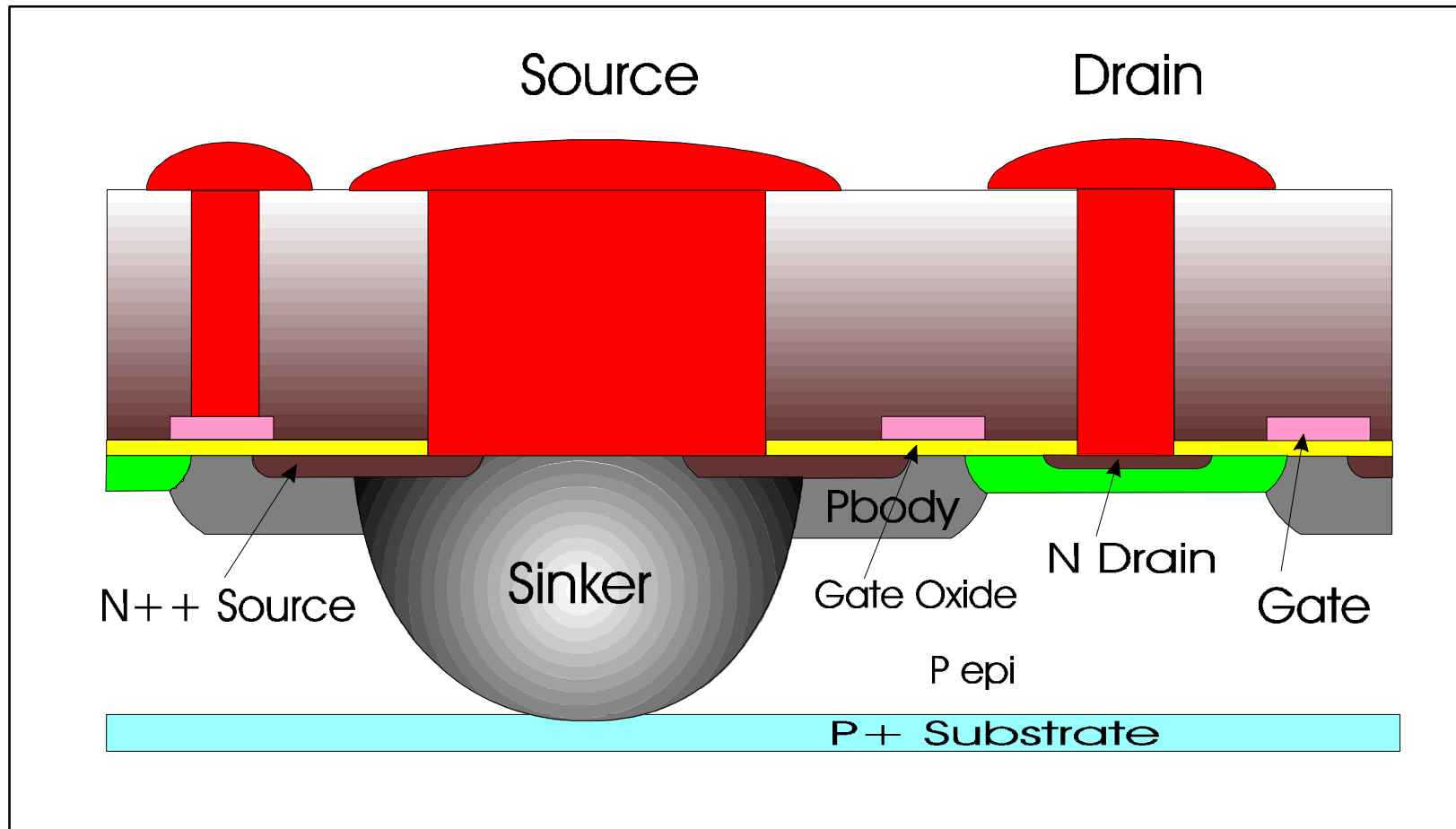
- Lateral DMOS
- Bottom Side Source
- No source bondwire
- 3 dB higher gain
- Lower Crss
- Higher Power
- Higher Efficiency
- Lower Package Cost
- No BEO required
- Improve θ_{jc}



Cross Section VDMOS

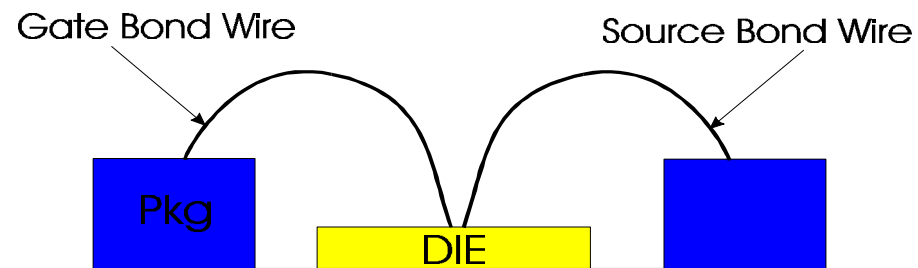


Cross Section LDMOS

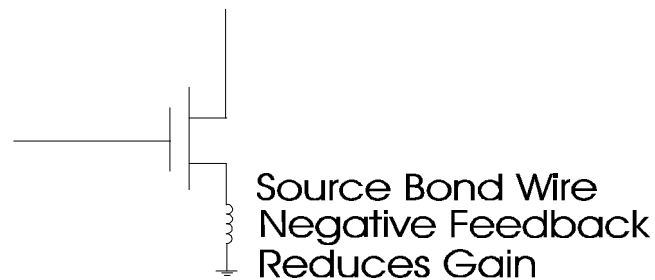


Source Bond Wires

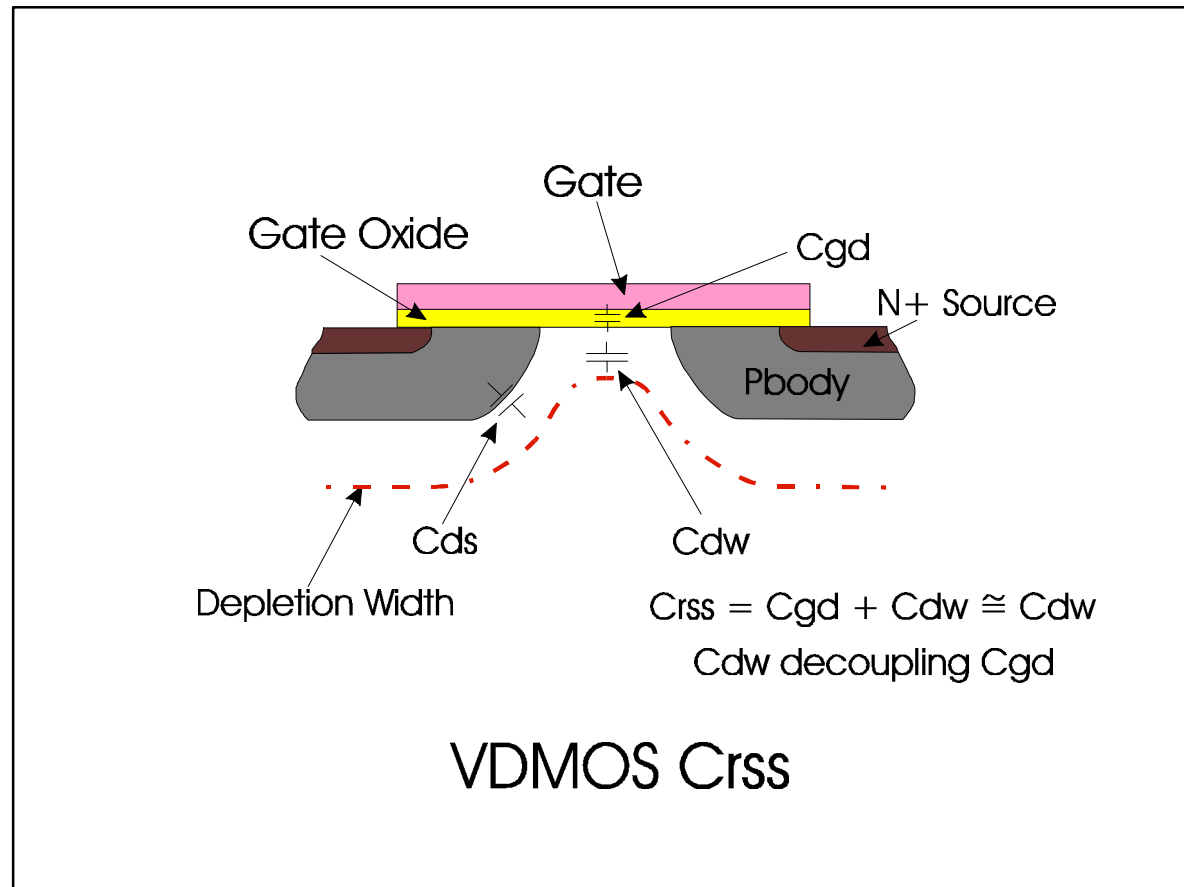
VDMOS WIRE BONDS



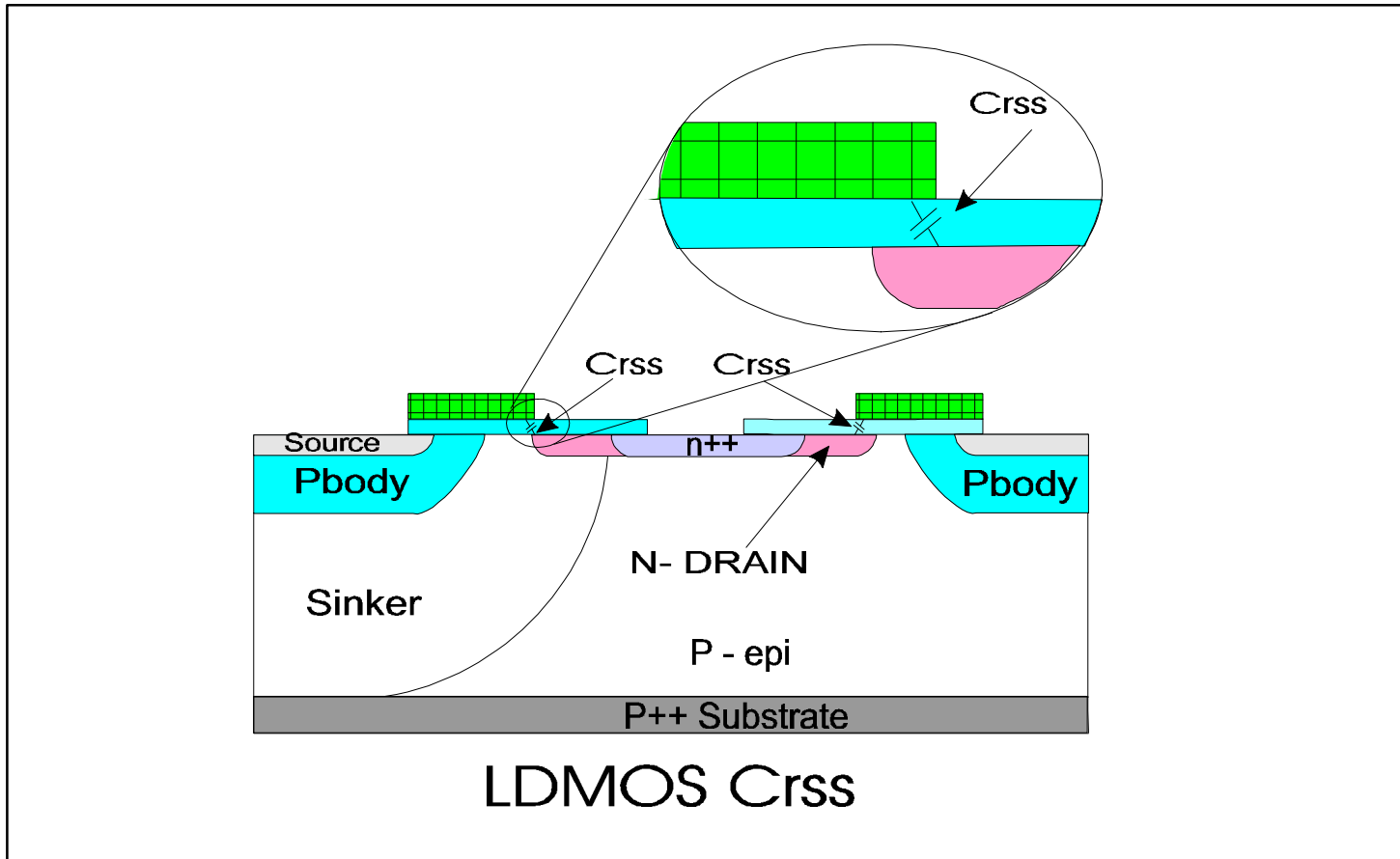
Bottom of Die is Drain - Vdd
Metal is connected to Ground



VDMOS Crss

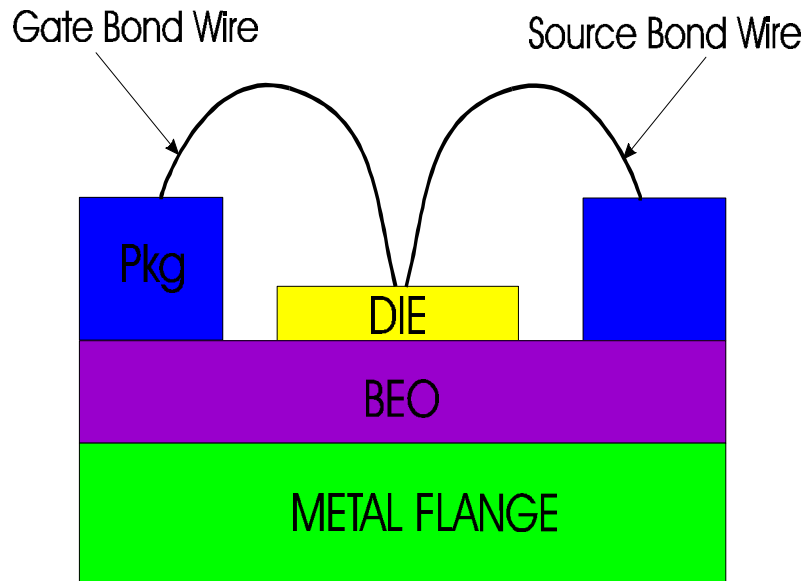


LDMOS Crss



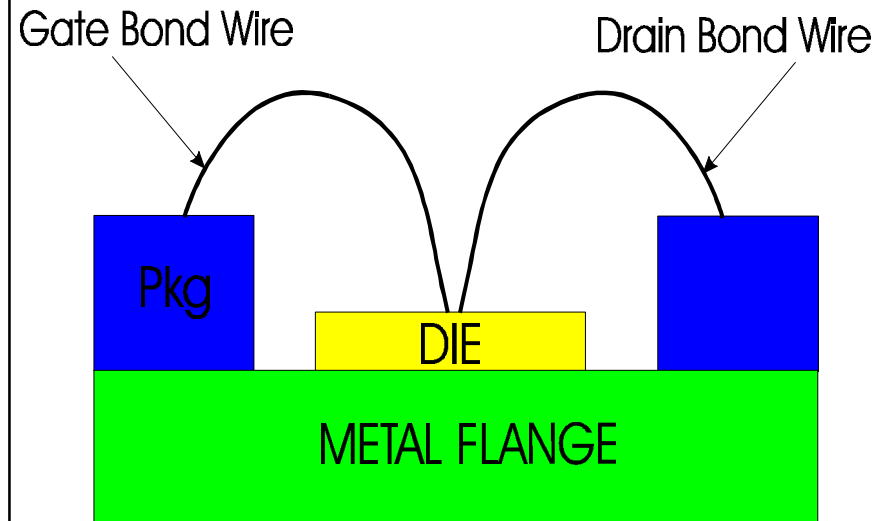
Packaging

VDMOS Requires BEO



Bottom of Die is Drain - Vdd
Metal is connected to Ground

LDMOS No BEO



Bottom of Die is Source - Gnd
Metal is connected to Ground



Polyfet DMOS Line

➤ 28V Devices

➤ L125	8W	13 dB	1000Mhz	50%	S08	Single Ended
➤ L88008	60W	14 dB	500Mhz	60%	AK	Push Pull
➤ L88007	30W	14 dB	500Mhz	55%	AK	Push Pull
➤ L88016	30W	14 dB	500Mhz	55%	AQ	Push Pull
➤ L88012	15W	12 dB	1000Mhz	60%	AP	Single Ended
➤ L88014	30W	12 dB	1000Mhz	55%	AP	Single Ended
➤ L88013	30W	12dB	1000Mhz	55%	AQ	Push Pull
➤ L88026	45W	12 dB	1000Mhz	50%	AK	Push Pull



Polyfet DMOS Line

🐾	L88081	15W	12 dB	1000Mhz	60%	LX2	Single Ended
🐾	L88082	30W	12 dB	1000Mhz	55%	LX2	Single Ended
🐾	L88083	45W	12 dB	1000Mhz	55%	LX2	Single Ended

🐾 12.5V Device

🐾	L225	6W	13 dB	850Mhz	55%	S08	Single Ended
🐾	L88201	10W	12 dB	500Mhz	55%	AP	Single Ended
🐾	L88208	40W	12 dB	400Mhz	55%	AK	Single Ended
🐾	L88216	20W	12dB	500Mhz	55%	AQ	Push Pull

