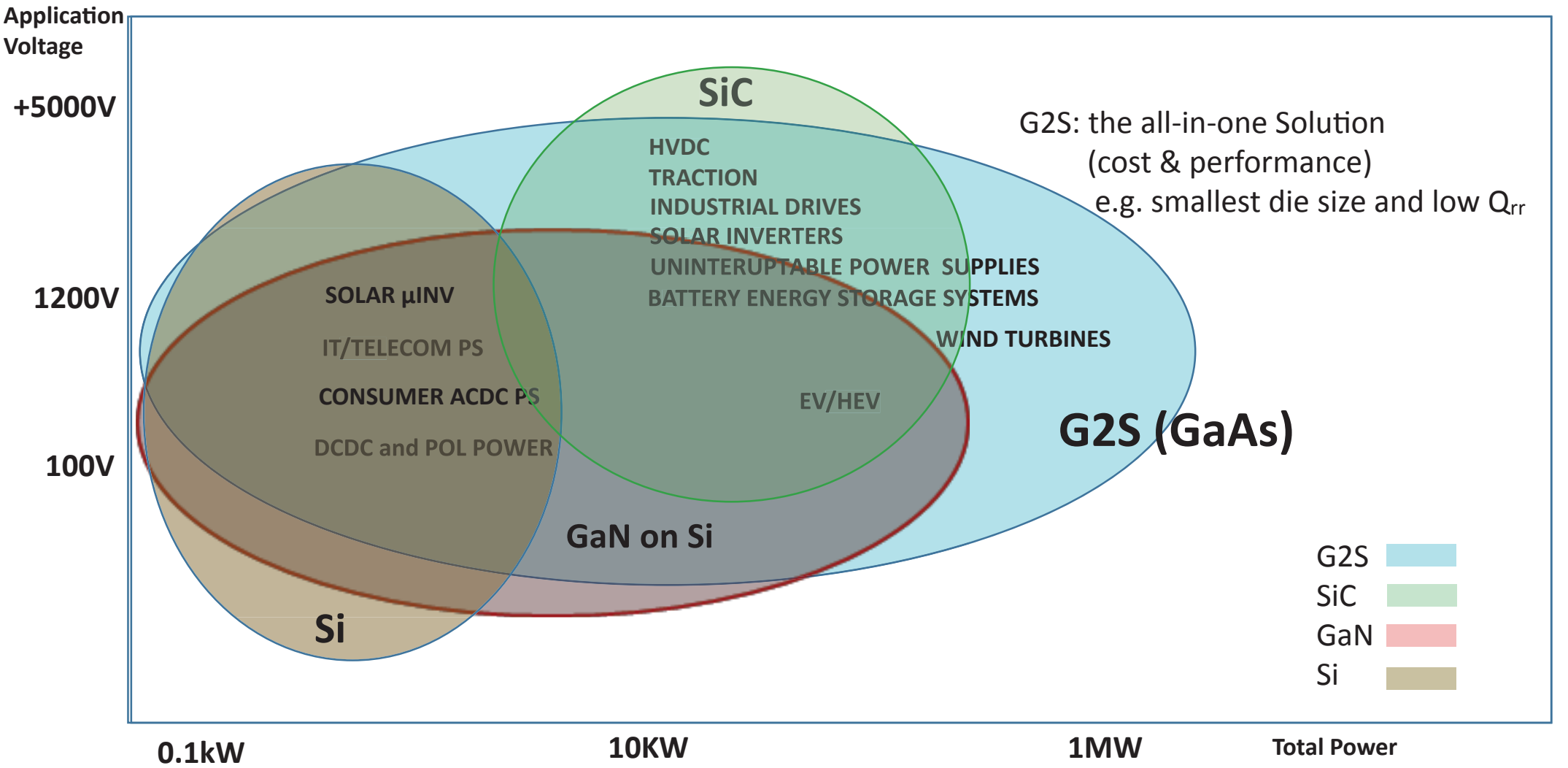
G2S™ (GaAs) the **NEW** fast switching and efficient Solution for Power & Renewables

PCIM 2026



G2S@powersem.com
www.3-5pe.com

10 Reasons why to use G2S™ (GaAs) for Power Applications & Renewables

Technical Characteristics	SiC to Si	Rating	GaAs (G2S) to Si	Rating
1. High breakdown Voltage (critical electrical field)	better than Si	●●	better than Si	●
2. Carrier mobility	0.7 times of Si	●	6 times better than Si	●●
3. High temperature robustness	>300°C, Si up to 200°C	●	300°C, Si up to 200°C	●
4. Switch off power loss	1/20 of Si	●●	1/7 of Si	●●
5. Switching frequency	7 times faster than Si	●	7 times faster than Si	●
6. EMI noise generation	higher than Si	●	Comparable to Si	●●
7. Production efforts	much higher than Si	●	comparable to Si	●

Economics	SiC to Si	GaAs (G2S) to Si
8. Die size of diodes with the same power rating	Die size smaller than Si	Die size much smaller than Si and factor 2 smaller than SiC
9. Manufacturing costs	Much higher than Si due to substrate costs and lower yield caused by high defect density	Is comparable to that of Si, the higher substrate cost are more than offset by die size
10. Scale of capital expenditures (CAPEX)	higher than Si due to higher processing temperature	the same as for Si

GaAs is the second most commonly used and highly mature semiconductor substrate, which has been in use for five decades