



GaNrich

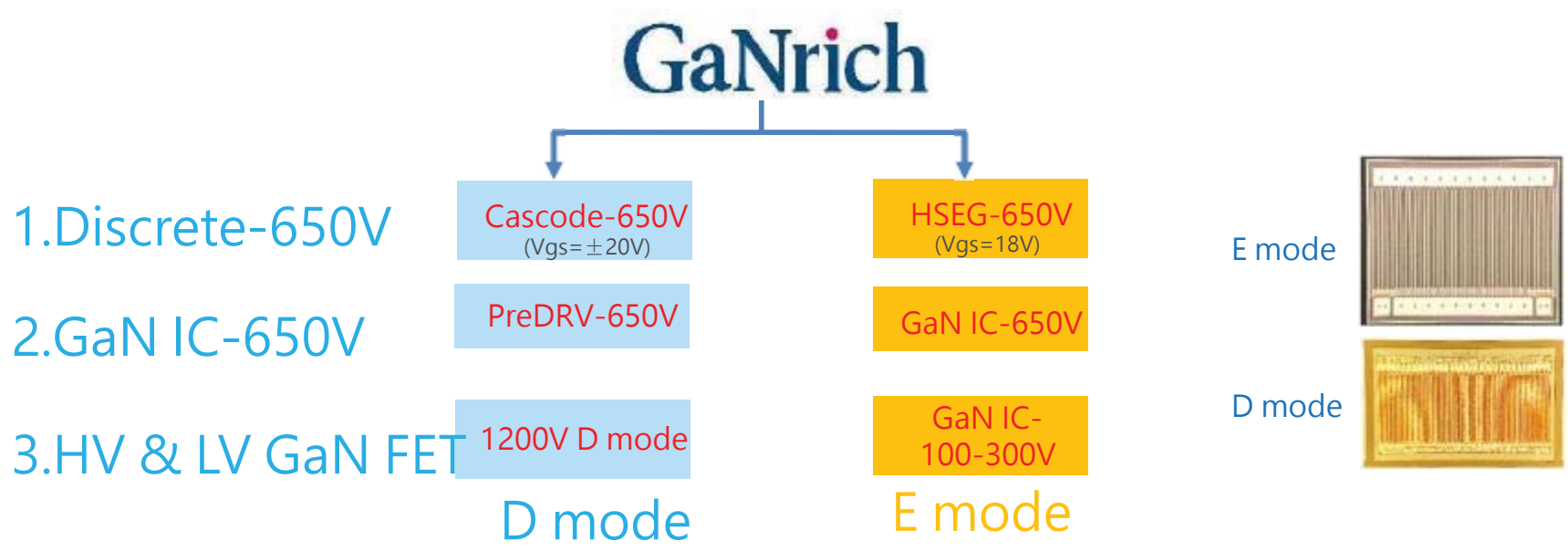
Let's GaN access to innovation

GaNrich semiconductor

Advanced GaN device provider



Product category of GaNrich

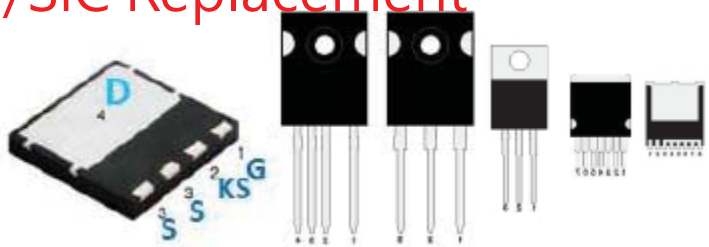


Discrete



*Drop-In replace existing E mode

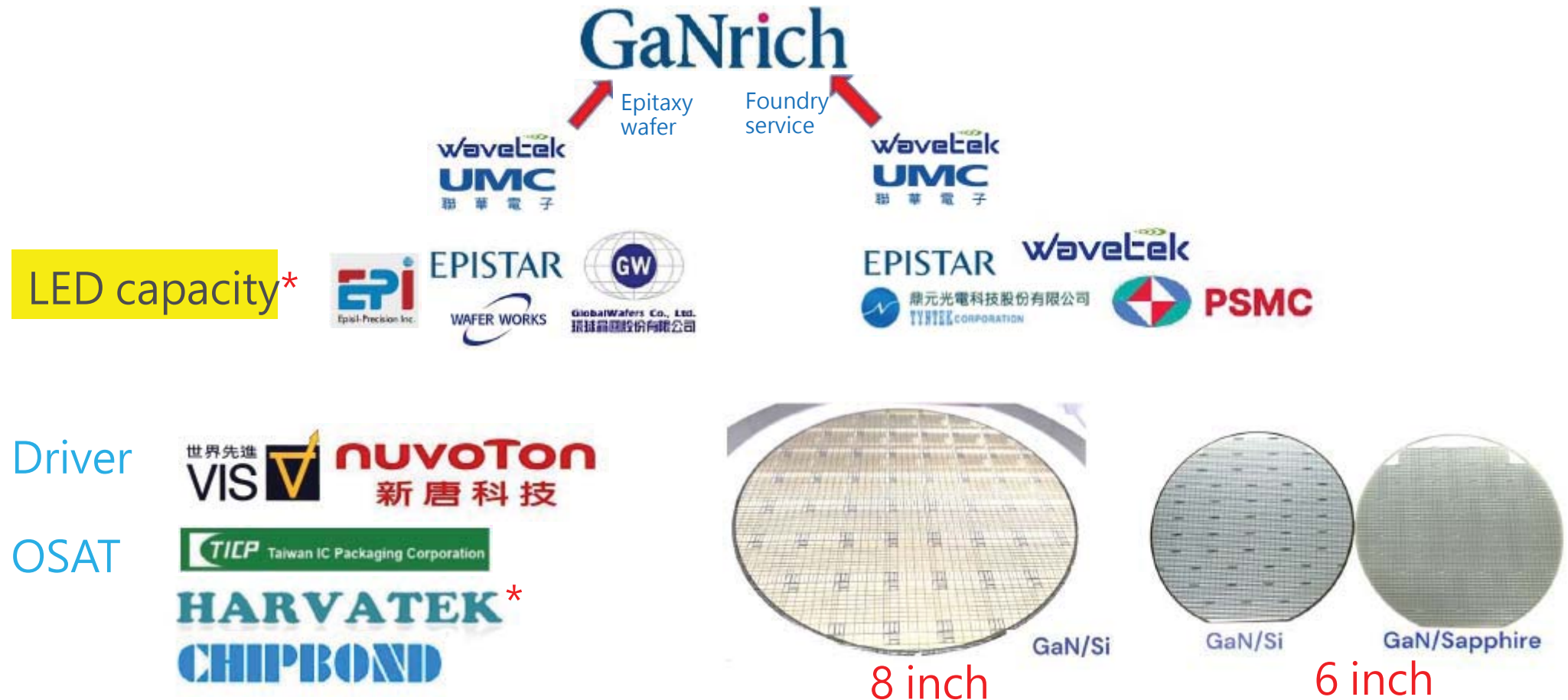
SJ/SiC Replacement



GaN IC



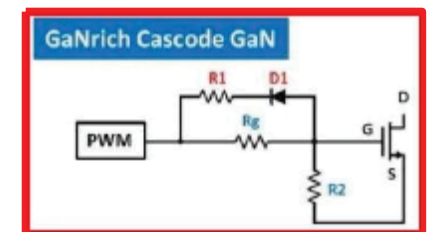
Consolidate value chain of Taiwan players



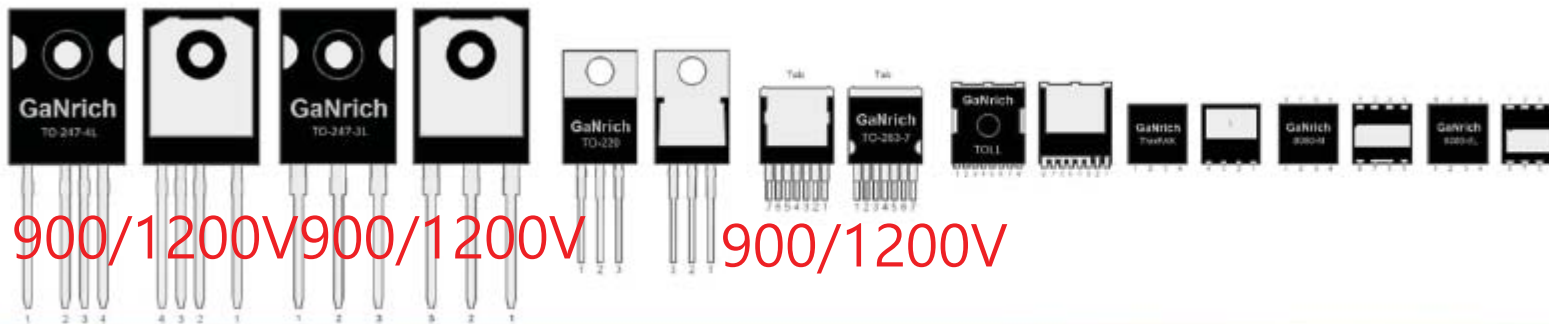
GaNrich

GaNrich product line-up

Package	BVDSS	R _{DS} ON (mR)						
		240	200	150	100	75	50	35
8080-M	650V	65P240AM	65P200AM	65P150AM	65P100AM	65P075AM	-	-
8080-CM	650V	-	65P200AK	65P150AK	65P100AK	65P075AK	65P050AK	-
TO-220-3	650V	-	-	65P150KT	65P100KT	65P075KT	-	-
TO-263-7	650V	-	-	-	65P100MT	65P075MT	65P050MT	-
TO-247-3	650V	-	-	-	65P100PT	65P075PT	65P050PT	-
TO-247-4	650V	-	-	-	65P100NT	65P075NT	65P050NT	-
TOLL-9	650V	-	-	-	65P100TT	65P075TT	65P050TT	65P035TT
TOLT	650V	-	-	-	65P100OT	65P075OT	65P050OT	65P035OT
TO-263-7	900V	-	-	-	90P100MT	90P075MT	90P050MT	-
TO-247-4	900V	-	-	-	90P100NT	90P075NT	90P050NT	-
TO-263-7	1200V	-	-	-	A2P100MT	A2P075MT	A2P050MT	-
TO-247-4	1200V	-	-	-	A2P100NT	A2P075NT	A2P050NT	-



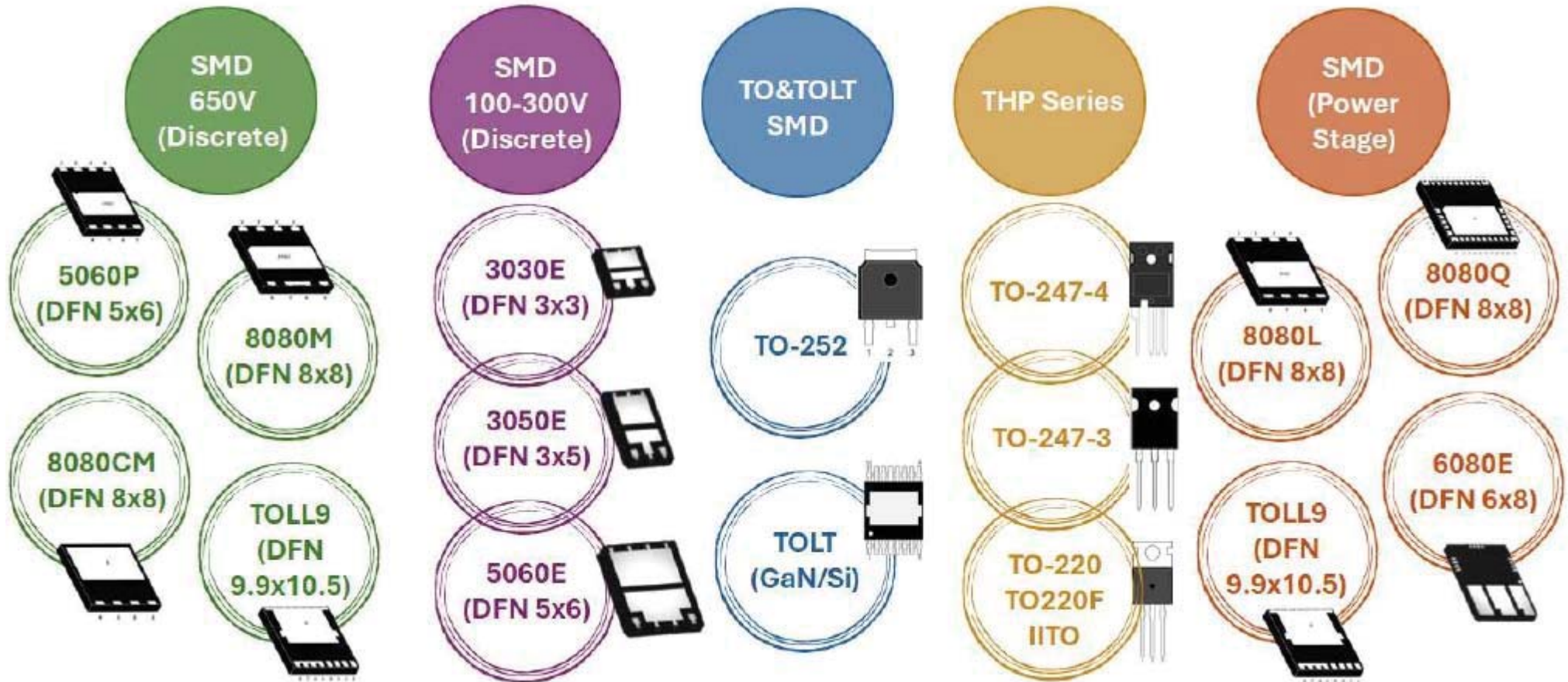
1. Pin to Pin with Standard Si/SiC MOSFET.
2. Identical gate driving as before.



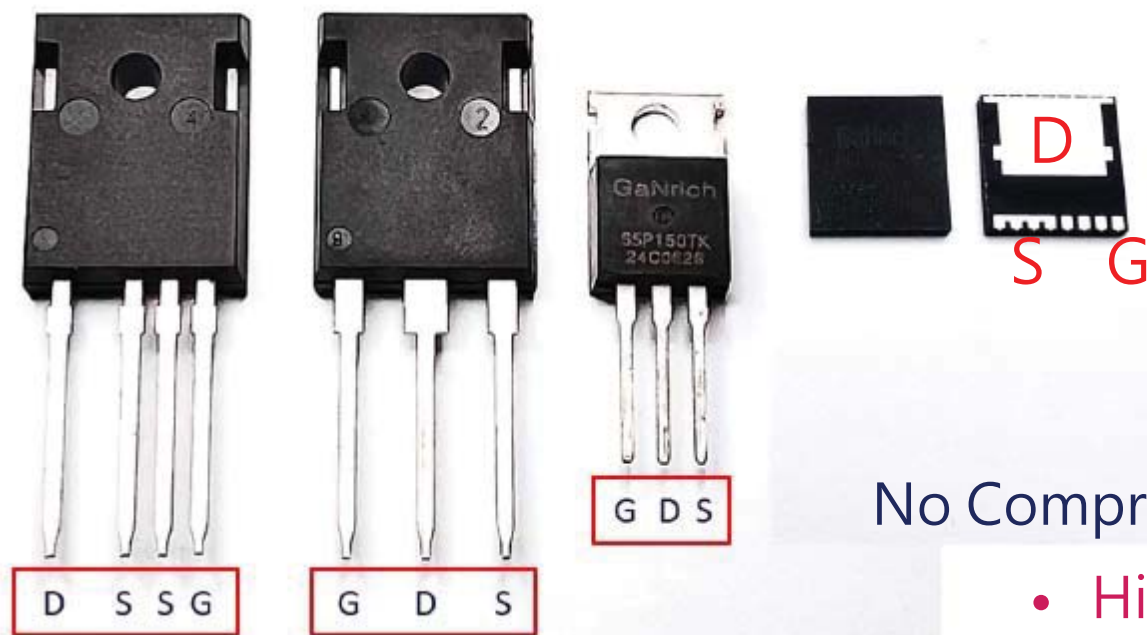
900/1200V 900/1200V 900/1200V

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GaNrich product line-up



100% Pin Compatible with SiC/Si and same Driving



No Compromise GaN FET

- High Speed with HEAT/Current Capab
- Driving as before, and Pin Compatible
- Seamless upgrade of performance.

100V/150V GaN FET vs. SGT



GaN

Silicon

Technologies, packages and voltages

OptiMOS™ 7	40 V
OptiMOS™ 6	60 V
OptiMOS™ 5	80 V
OptiMOS™ T, T2, Gen 12.7	100 V
	120 V

New OptiMOS™ 7 family with outstanding technical performance



3x5 DSC 100V 2.4mΩ



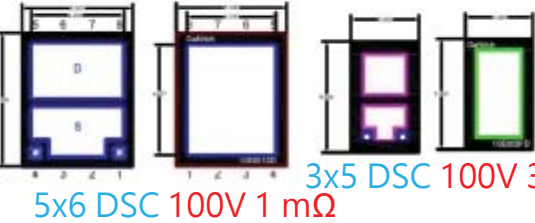
135-200V



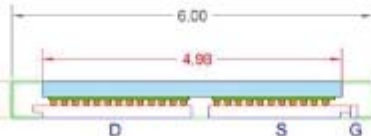
10x10 100V 1.5 mΩ



5x6 DSC 100V 3 mΩ



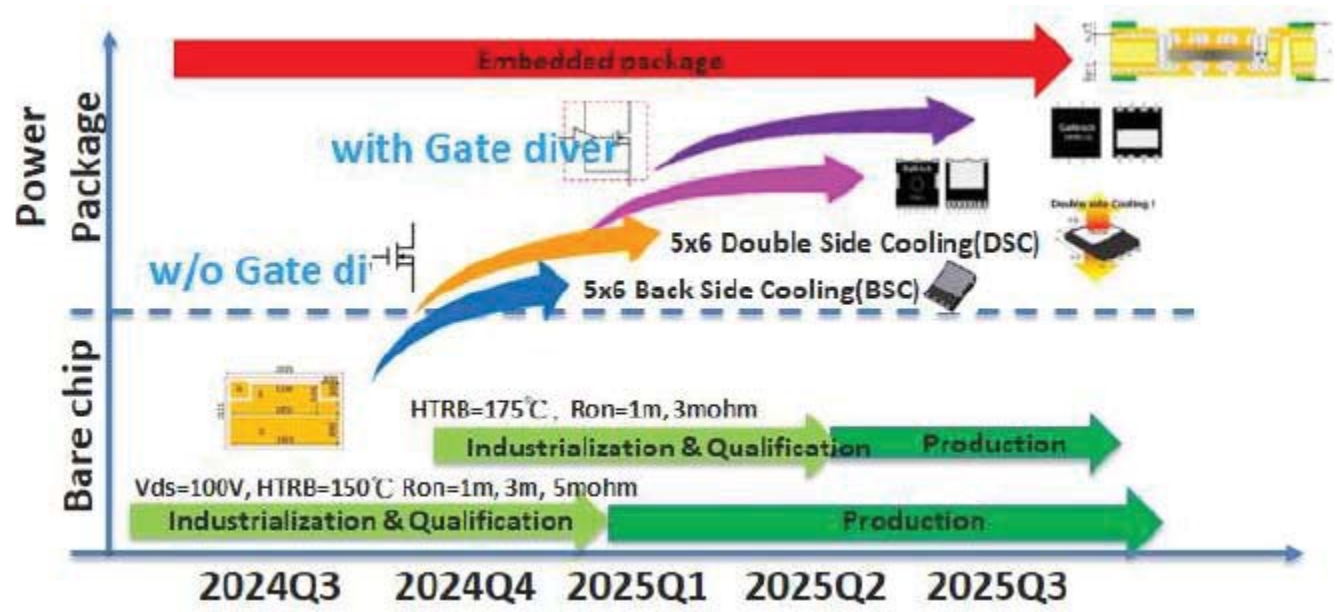
5x6 DSC 100V 1 mΩ



3x5 DSC 100V 3 mΩ



GaNrich MV GaN FET device Roadmap



Vds (V)	Ron	1m ohm	3m ohm	5m ohm	7m ohm	10m ohm	20m ohm	30m ohm	60m ohm
100	package	5x6	3x5	3x3	3x3				
150	package		5x6	3x5	3x3				
200	package			5x6	3x5	3x3	3x3		
250	package				5x6	3x5	3x3		
300	package				5x6	3x5	3x5	3x3	3x3

GaNrich

Let's GaN access to innovation!



Pros of GaNrich GaN FET

- 1 High Speed Operation with Heat / Current Capability.
- 2 Pin Compatible with any Si or GaN Device
- 3 Seamless Upgrade of Performance.



The Only One

The only provider in the market capable of fully supplying GaN FET and GaN IC for both D-mode and E-mode.



Seamless Pin to Pin

No changes to the package form or system design, allowing seamless system effortless upgrade.



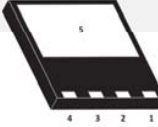
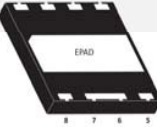
Ideal Partner

We provide diverse specifications range from low power to high power, along with optimal solutions.

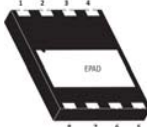
Confidential Security C

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SMD 650V (Discrete)

Package	8080CM (DFN 8x8)		8080M (DFN 8x8)	
Pinout				
Type	Cascode GaN		Cascode GaN	
	Vth 1.7V	Vth 3.0V	Vth 1.7V	Vth 3.0V
Part-number (650V)	GR-65P075AK GR-65P100AK GR-65P150AK	GR-65J075AK GR-65J100AK GR-65J150AK	GR-65P075AM GR-65P100AM GR-65P150AM GR-65P240AM	GR-65J075AM GR-65J100AM GR-65J150AM GR-65J240AM

※ Compatible with GaN Device

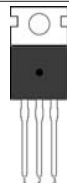
Package	5060E (DFN 5x6)	TOLL9 (DFN 9.9x10.5)
Pinout		
Type	700V E-mode GaN	650V Cascode GaN
		Vth 3V
Part-number	GR-70E150DD GR-70E240DD GR-70E350DD	GR-65J050ED GR-65J075ED GR-65J100ED GR-65J150ED

※ Compatible with Si/SiC Device

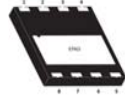
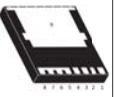
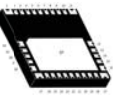
SMD 100-200V (Discrete)

Package	5060E (DFN 5x6)	5060E P2P (DFN 5x6)	3050E (DFN 3x5)	5030E (DFN 5x3)
Pinout				
Type	Low Ron E-mode GaN			
Part-number (100V)	GR-10E001DD GR-10E003DD	GR-10E001DD GR-10E003DD GR-10E005DD	GR-10E003FD	GR-10E003UD GR-10E005UD
Part-number (150V)	GR-15E005DD GR-15E007DD	GR-15E003DD GR-15E005DD GR-15E007DD	GR-15E005FD	GR-15E003UD GR-15E005UD GR-15E007UD
Part-number (200V)	GR-20E007DD	GR-20E007DD	GR-20E007FD	GR-20E007UD

Package	TO-252	TOLT
Pinout		
Type	Cascode GaN	Cascode GaN
	Vth 3.0V	Vth 3.0V
Part-number (650V)	GR-65J150JA GR-65J240JA	GR-65J035SL GR-65J050SL GR-65J075SL GR-65J100SL

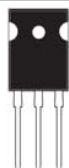
TO-220C				
Pinout	Part-number			
	Type	650V Cascode GaN	900V Cascode GaN	1200V Cascode GaN
	Vth 3.0V	GR-65J075JB GR-65J100JB GR-65J150JB GR-65J240JB	GR-90J050JB GR-90J075JB GR-90J100JB	GR-A2J075JB GR-A2J100JB

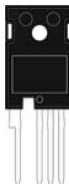
SMD (Power Stage)

Package	8080L (DFN 8x8)		TOLL9 (DFN 9.9x10.5)	6080E (DFN 6x8)	8080Q (QFN 8x8)
Pinout					
Type	650V Integrated Cascode GaN	650V Integrated E-mode GaN	650V 3Pin Integrated Cascode GaN ★	100-300V Integrated HB + GaN	650V Integrated QR + GaN
Part-number	GR-65R170AD GR-65C170AD	GR-65N150AD GR-65T150AD	GR-65K075ED GR-65K100ED GR-65K120ED GR-65K170ED	GR-10G101CD GR-10G102CD	GR-65D170AQ GR-65D240AQ

TO-220F				
Pinout	Part-number			
	Type	650V Cascode GaN	900V Cascode GaN	1200V Cascode GaN
	Vth 3.0V	GR-65J075JF GR-65J100JF GR-65J150JF GR-65J240JF	GR-90J050JF GR-90J075JF GR-90J100JF	GR-A2J075JF GR-A2J100JF

IITO-220				
Pinout	Part-number			
	Type	650V Cascode GaN	900V Cascode GaN	1200V Cascode GaN
	Vth 3.0V	GR-65J075JZ GR-65J100JZ GR-65J150JZ GR-65J240JZ	GR-90J050JZ GR-90J075JZ GR-90J100JZ	GR-A2J075JZ GR-A2J100JZ

TO-247-3				
Pinout	Part-number			
	Type	650V Cascode GaN	900V Cascode GaN	1200V Cascode GaN
	Vth 3.0V	GR-65J035JT GR-65J050JT GR-65J075JT GR-65J100JT	GR-90J035JT GR-90J050JT GR-90J075JT GR-90J100JT	GR-A2J035JT GR-A2J050JT GR-A2J075JT GR-A2J100JT

TO-247-4				
Pinout	Part-number			
	Type	650V Cascode GaN	900V Cascode GaN	1200V Cascode GaN
	Vth 3.0V	GR-65J035KT GR-65J050KT GR-65J075KT GR-65J100KT	GR-90J035KT GR-90J050KT GR-90J075KT GR-90J100KT	GR-A2J035KT GR-A2J050KT GR-A2J075KT GR-A2J100KT
	Type	650V 3Pin Integrated Cascode GaN ★	900V 3Pin Integrated Cascode GaN ★	1200V 3Pin Integrated Cascode GaN ★
	Vth 4.5V	GR-65K075KT GR-65K100KT GR-65K125KT	GR-90K075KT GR-90K100KT GR-90K125KT	GR-A2K075KT GR-A2K100KT GR-A2K125KT



Thank You