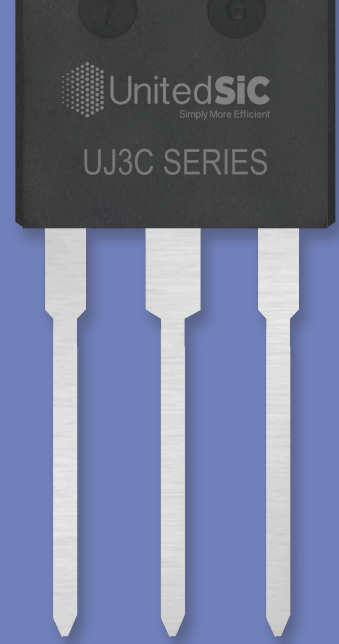




Product Selector Guide

SiC FETs, SiC JFETs, and SiC Schottky Diodes





UJ3C & UF3C Series, 650/1200V SiC FETs

Key Features

- Excellent body diode performance ($V_f < 2V$)
- Drive with any Si and/or SiC gate drive voltage
- High performance cascode configuration
- Superior thermal performance
- Integrated ESD and gate protection
- Kelvin package (UF3C Fast series)

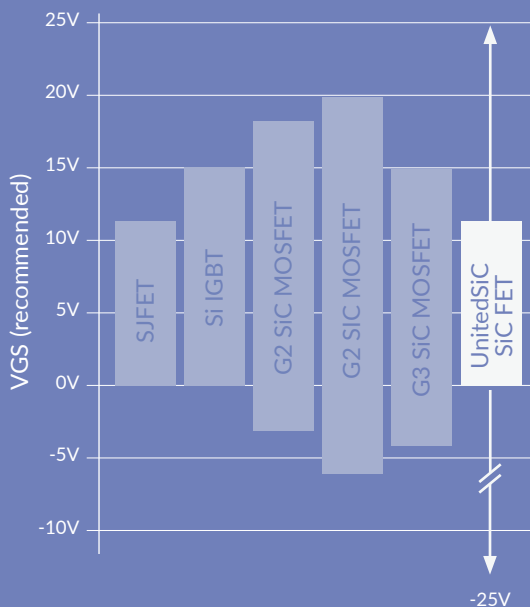
End Applications

- Electric Vehicles
- Battery Chargers
- Telecom & Server PSU
- Solar inverters
- Energy storage
- Motor drives

Drop-in Functionality Without Changing Gate Drive Voltage

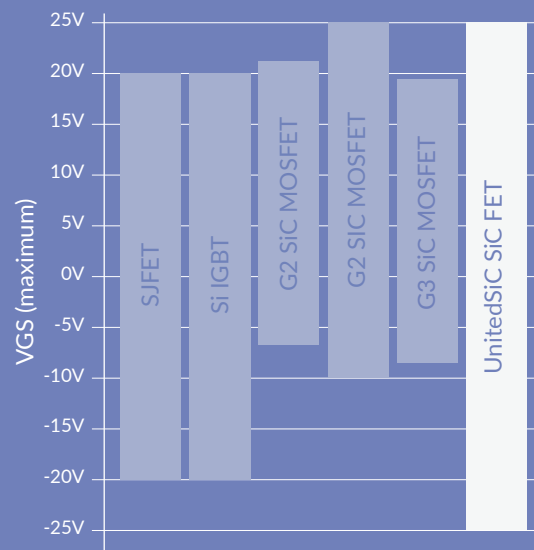
(Replaces Si IGBTs, Si FETs, SiC MOSFETs or Si Superjunction Devices)

12V/0V Operation Simplifies Upgrading



Innovative cascode configuration enables Si and SiC gate voltage compatibility

Superior Gate and ESD Protection



Integrated clamping diode protects gates from $|25V|$ and adds ESD protection

SiC FETs

UJ3C Series Selector Guide | General Purpose

Voltage	Part Number	Description	Id Max (A) at 25°C	Samples	Prod.	Package
1200V	UJ3C120150K3S	1200V 150mΩ SiC Cascode	18.4	Now	Now	TO-247-3L
	UJ3C120080K3S	1200V 80mΩ SiC Cascode	33.0	Now	Now	TO-247-3L
	UJ3C120040K3S	1200V 40mΩ SiC Cascode	65.0	Now	Now	TO-247-3L
650V	UJ3C065080K3S	650V 80mΩ SiC Cascode	31.0	Now	Now	TO-247-3L
	UJ3C065030K3S	650V 30mΩ SiC Cascode	85.0	Now	Now	TO-247-3L
	UJ3C065080T3S	650V 80mΩ SiC Cascode	31.0	Now	Now	TO-220-3L
	UJ3C065030T3S	650V 30mΩ SiC Cascode	85.0	Now	Now	TO-220-3L
	UJ3C065080B3	650V 80mΩ SiC Cascode	31.0	Now	Now	D2PAK-3L
	UJ3C065030B3	650V 30mΩ SiC Cascode	85.0	Now	Now	D2PAK-3L

UF3C Fast Series Selector Guide | Hard Switched

Voltage	Part Number	Description	Id Max (A) at 25°C	Samples	Prod.	Pkg.
1200V	UF3C120150K4S	1200V 150mΩ SiC Cascode Fast	18.4	Now	Q1 19	TO-247-4L
	UF3C120080K4S	1200V 80mΩ SiC Cascode Fast	33.0	Now	Now	TO-247-4L
	UF3C120040K4S	1200V 40mΩ SiC Cascode Fast	65.0	Now	Now	TO-247-4L
	UF3C120040K3S	1200V 35mΩ SiC Cascode Fast	65.0	Now	Now	TO-247-3L
	UF3C120150B7S	1200V 150mΩ SiC Cascode Fast	18.4	Now	Q1 19	D2PAK-7L
	UF3C120080B7S	1200V 80mΩ SiC Cascode Fast	33.0	Now	Q1 19	D2PAK-7L
	UF3SC120040B7S	1200V 40mΩ SiC Stack Cascode Fast	65.0	Now	Q1 19	D2PAK-7L
650V	UF3C065080K4S	650V 80mΩ SiC Cascode Fast	31.0	Now	Now	TO-247-4L
	UF3C065040K4S	650V 40mΩ SiC Cascode Fast	54.0	Now	Now	TO-247-4L
	UF3C065030K4S	650V 30mΩ SiC Cascode Fast	85.0	Now	Now	TO-247-4L
	UF3C065040K3S	650V 42mΩ SiC Cascode Fast	54.0	Now	Now	TO-247-3L
	UF3C065030K3S	650V 30mΩ SiC Cascode Fast	85.0	Now	Now	TO-247-3L
	UF3C065040T3S	650V 40mΩ SiC Cascode Fast	54.0	Now	Now	TO-220-3L
	UF3C065080B7S	650V 80mΩ SiC Cascode Fast	31.0	Now	Q1 19	D2PAK-7L
	UF3SC065040B7S	650V 40mΩ SiC Stack Cascode Fast	54.0	Q1 19	Q1 19	D2PAK-7L
	UF3SC065030B7S	650V 30mΩ SiC Stack Cascode Fast	85.0	Now	Q1 19	D2PAK-7L
	UF3C065080B3	650V 80mΩ SiC Cascode Fast	25.0	Q1 19	Q1 19	D2PAK-3L
	UF3C065040B3	650V 40mΩ SiC Cascode Fast	41.0	Now	Q1 19	D2PAK-3L
	UF3C065030B3	650V 30mΩ SiC Cascode Fast	66.0	Now	Q1 19	D2PAK-3L

SiC JFETs

UJ3N Series Selector Guide | 650V/1200V

Voltage	Part Number	Description	Package	Rdson (mΩ)	Idmax (A) at 25°C	Samples	Production
1200V	UJ3N120070K3S	70mΩ - 1200V SiC Normally-On JFET	TO-247-3L	70	33.5	Now	Now
	UJ3N120035K3S	35mΩ - 1200V SiC Normally-On JFET	TO-247-3L	35	63	Now	Now
650V	UJ3N065080K3S	80mΩ - 650V SiC Normally-On JFET	TO-247-3L	80	32	Now	Now
	UJ3N065025K3S	25mΩ - 650V SiC Normally-On JFET	TO-247-3L	25	85	Now	Now

SiC Schottky Diodes

UJ3D Series Selector Guide | 650V/1200V

Voltage	Part Number	Current Rating	Die	TO-220-2L	TO-247-3L	SOT-227
1200V JBS Diode	UJ3D1202	2A	✓	✓		
	UJ3D1205	5A	✓	✓		
	UJ3D1210 (KSD)	2 x 5A			✓	
	UJ3D1210	10A	✓	✓		
	UJ3D1220	2 x 10A			✓	
	UJ3D1250	50A	✓		✓	
	UJ3D12100	100A	✓			✓
650V JBS Diode	UJ3D06504	4A	✓	✓		
	UJ3D06506	6A	✓	✓		
	UJ3D06508	8A	✓	✓		
	UJ3D06510	10A	✓	✓		
	UJ3D06512	12A		✓		
	UJ3D06516	16A		✓		
	UJ3D06520	20A		✓	✓	
	UJ3D06530	30A	✓	✓		
	UJ3D06560	2 x 30A			✓	
	UJ3D065120	120A				✓
UJ3D065200	200A	✓				

SiC FETs

RDS(on) and Package Type



Voltage	RDS(on) mΩ typical	TO-247-3L	TO-247-4L	D2PAK-3L	TO-220-3L	D2PAK-7L
650V	20-29	UJ3C065030K3S UF3C065030K3S (1)	UF3C065030K4S	UJ3C065030B3 UF3C065030B3(1)	UJ3C065030T3S	UF3SC065030B7S
	30-39					
	40-49	UF3C065040K3S	UF3C065040K4S	UF3C065040B3	UF3C065040T3S	UF3SC065040B7S
	50-99	UJ3C065080K3S	UF3C065080K4S	UJ3C065080B3 UF3C065080B3(1)	UJ3C065080T3S	UF3C065080B7S
1200V	30-39	UJ3C120040K3S UF3C120040K3S (1)	UF3C120040K4S			UF3SC120040B7S
	40-49					
	50-99	UJ3C120080K3S	UF3C120080K4S			UF3C120080B7S
	150+	UJ3C120150K3S	UJ3C120150K3S			UF3C120150B7S

Notes:

1. Q(rr) for UF3C FAST device lower than equivalent UJ3C device

All data represents current information as of December 31, 2018.



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