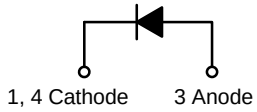
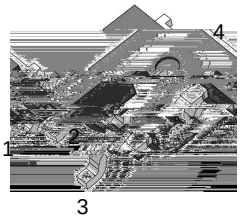
Silicon Carbide (SiC) Schottky Diode – EliteSiC, 10 A, 1200 V, D1, DPAK

FFSD10120A



Schottky Diode



DPAK
CASE 369AS

Description

Silicon Carbide (SiC) Schottky Diodes use a completely new technology that provides superior switching performance and higher reliability compared to Silicon. No reverse recovery current, temperature independent switching characteristics, and excellent thermal performance sets Silicon Carbide as the next generation of power semiconductor. System benefits include highest efficiency, faster operating frequency, increased power density, reduced EMI, and reduced system size and cost.

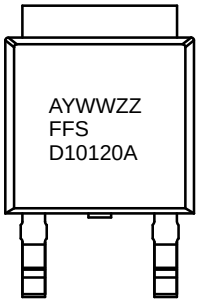
Features

- Max Junction Temperature 175°C
- Avalanche Rated 100 mJ
- High Surge Current Capacity
- Positive Temperature Coefficient
- Ease of Paralleling
- No Reverse Recovery/No Forward Recovery
- This Device is Pb−Free, Halogen Free/BFR Free and RoHS Compliant

Applications

- General Purpose
- SMPS, Solar Inverter, UPS
- Power Switching Circuits

MARKING DIAGRAM



A	= Assembly Plant Code
YWW	= Date Code (Year & Week)
ZZ	= Lot Code
FFSD10120A	= Specific Device Code

ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

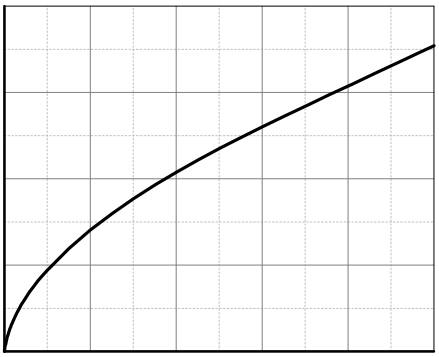
ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Symbol	Parameter		Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage		1200	V
E_{AS}	Single Pulse Avalanche Energy (Note 1)		100	mJ
I_F	Continuous Rectified Forward Current @ T_C < 164°C		10	A
	Continuous Rectified Forward Current @ T_C < 135°C		22	A
$I_{F,Max}$	Non-Repetitive Peak Forward Surge Current	T_C = 25°C, 10 μs	850	A
		T_C = 150°C, 10 μs	800	A
$I_{F,SM}$	Non-Repetitive Forward Surge Current	Half−Sine Pulse, t_p = 8.3 ms	90	A
$I_{F,RM}$	Repetitive Forward Surge Current	Half−Sine Pulse, t_p = 8.3 ms	35	A
P_{TOT}	Power Dissipation	T_C = 25°C	283	W
		T_C = 150°C	47	W
T_J, T_{STG}	Operating and Storage Temperature Range		−55 to +175	°C

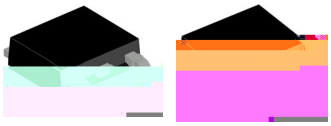
Stresses

TYPICAL CHARACTERISTICS

(T_J = 25°C UNLESS OTHERWISE NOTED)

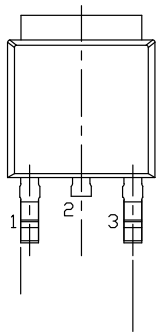


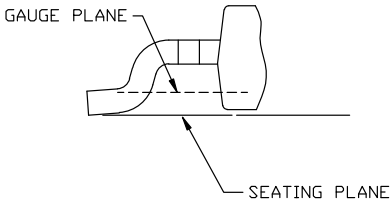
TYPICAL CHARACTERISTICS



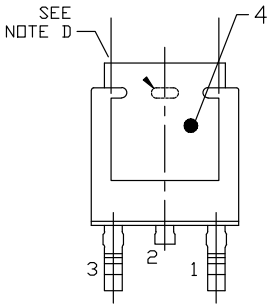
DPAK3 6.10x6.54x2.29, 4.57P
CASE 369AS
ISSUE B

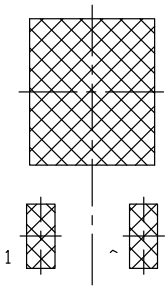
DATE 20 DEC 2023





DETAIL A
(ROTATED -90°)
SCALE: 12X





LAND PATTERN RECOMMENDATION

GENERIC
MARKING DIAGRAM*

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “▪”, may or may not be present. Some products may not follow the Generic Marking.

XXXX = Specific Device Code
A = Assembly Location
Y = Year
WW = Work Week
ZZ = Assembly Lot Code