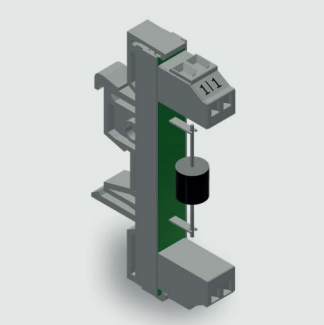
Technical data sheet

Diode Module



Identification

Type	DGE-2050 / FK DC 110V
Part No.	812050

Product version

Hardware revision	A
Datasheet version	01

Use/Application/Properties

Description	Diode module equipped with one diode.

Technical data

Rated voltage U_N	DC 110 V
Rated current (at U_N)	6 A
Number of diodes	1
Diode	DIOTEC P600M / Vishay P600M / LiteOn LT6A07
Diode blocking voltage	1000 V
Connection type	Spring terminal: single stranded 0.08 – 2.5 mm², fine stranded 0.08 – 2.5 mm² Stripping length: 6 – 7 mm Screwdriver: 3.5 × 0.5 mm
Operation temperature range	-40 °C … +70 °C (+85 °C 10 min)
Storage temperature range	-40 °C … +85 °C

General

Dimensions (w × h × d)	11.2 mm × 78.5 mm × 43.6 mm
Weight/unit	0.016 kg

Environmental service conditions

Altitude	2000 m
Operating temperature class	OT4: -40 °C … +70 °C

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Switch-on extended Operating temperature class	ST1: OTx + 15 °C
Temperature variation class	H1:no requirements
Shock/Vibration	Category 1, class B
Class of supply voltage interruption	not applicable
Supply change-over class	not applicable
Useful life class	L4: 20 years
Degree of pollution	PD2
Over voltage category	OV2
Socket and edge connector	K2: Sockets for ICs and/or edge connectors are not used
Protective coating class	PCX: single side painting
Degree of protection	IP20

Failure Rate Prediction (MTBF)

Standards	Electronic components – Reliability – Reference conditions for failure rates and stress models for conversion: EN/IEC 61709 Failure Rates of Components – Expected values: SN 29500
Failure rate at +45 °C	4 fit
Failure rate at +45 °C	222766768 h
	1 fit equals one failure per 10^9 component hours
	The indicated temperature is the mean component ambient temperature.
Comments	The results are valid under following conditions: Automotive environment or industrial areas without extreme dust levels and harmful substances Continuous operation 8760 h per year

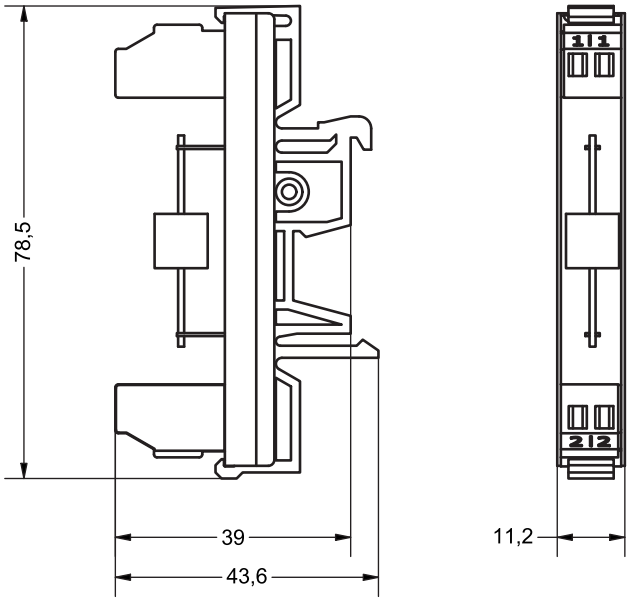
Standards/Certifications

Standards	**EN 50155:2007:** Railway applications – Rolling stock – Electronic equipment **EN 50155:2021:** Railway applications – Rolling stock – Electronic equipment – only testing according to chapter 13.3 **EN 50124-1:2017:** Railway applications – Insulation coordination – Part 1: Basic requirements – Clearances and creepage distances for all electrical and electronic equipment **EN 61373:1999:** Railway applications – Rolling stock equipment – Shock and vibration tests **EN 61373:2010:** Railway applications – Rolling stock equipment – Shock and vibration tests **EN 61373/AC:2017:** Railway applications – Rolling stock equipment – Shock and vibration tests **EN 45545-2:2020:** Railway applications – Fire protection on railway vehicles – Part 2: Requirements for fire behaviour of materials and components

Notes and Comments

Comments	The current and voltage values specified are the nominal data of the components used. Derating may be necessary in order to prevent thermal overloading.

Dimensions



Circuit diagram