

New High Frequency Welding Diodes

ABB Semiconductors'
first-class welding diodes
assure successful performance



ABB presents new high frequency welding diodes with following features:

- high operating frequency up to 10 kHz
- high operating temperature up to 190 °C
- high current capability combined with excellent reverse recovery characteristics
- available in standard or housingless versions
- excellent surge current ratings
- very low thermal resistance
- presspack devices

Applications:

- high current applications up to 10 kHz
- high frequency welding equipment

Product range for high frequency standard and housingless welding diodes (up to 10 kHz) new

Part number	V_{RRM} [V]	I_{FAVm} $T_c=85^\circ\text{C}$ [A]	I_{FSM} 8.3 ms T_{vjn} [kA]	10 ms T_{vjn} [kA]	Q_{rr} -30 A/μs T_{vjn} [μC]	T_{vjn} [°C]	R_{thjc} [K/kW]	R_{thch} [K/kW]	F_m [kN]	Housing
5SDF 63X0400	400	6266	47	44	180	190	10	5	22	X
5SDF 63B0400	400	6266	47	44	180	190	10	5	22	B
5SDF 0102C0400	400	10159	75	70	300	190	6	3	36	C
5SDF 90Z0400	400	9041	51	48	200	190	5.6	3.6	22	Z1
5SDF 0103Z0400	400	10266	58	54	230	190	5.0	2.5	30	Z2
5SDF 0131Z0400	400	13058	75	70	300	190	3.9	2.6	35	Z3

Table 1 - Product range

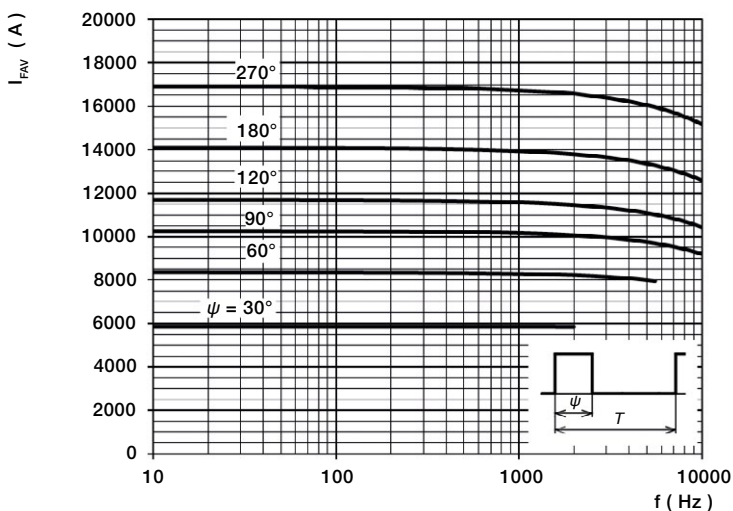


Table 2 - Example for 5SDD 0131Z0400, average forward current vs. frequency, trapezoid waveform, $T_c = 85^\circ\text{C}$, $di_f/dt = -2\,000\text{ A}/\mu\text{s}$, $V_R = 50\text{ V}$

Document Title	Document Number
Recommendations regarding mechanical clamping of high power press pack semiconductors	5SYA2036
Field measurements on high power press pack semiconductors	5SYA2048
Voltage ratings of high power semiconductors	5SYA2051
Specification of environmental class for pressure contact diodes, PCTs and GTO, STORAGE	5SZK9104
Specification of environmental class for pressure contact diodes, PCTs and GTO, TRANSPORTATION	5SZK9105
Specification of environmental class for presspack Diodes, PCTs and GTOs - Operation (Industry) -	5SZK 9115-00

Table 2 - Principal applications documents

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