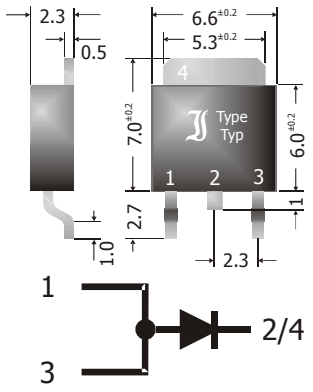
Diotec Semiconductor

SK1020D1 ... SK10100D1

Surface Mount Schottky Rectifiers – Single Diode
Schottky-Gleichrichter für die Oberflächenmontage – Einzeldiode

Version 2012-04-10



Dimensions - Maße [mm]

Nominal Current Nennstrom	10 A
Repetitive peak reverse voltage Periodische Spitzensperrspannung	20...100 V
Plastic case Kunststoffgehäuse	TO-252AA D-PAK
Weight approx. Gewicht ca.	0.32g
Plastic material has UL classification 94V-0 Gehäusematerial UL94V-0 klassifiziert	
Standard packaging taped and reeled Standard Lieferform gegurtet auf Rolle	

Maximum ratings and Characteristics — **Grenz- und Kennwerte**

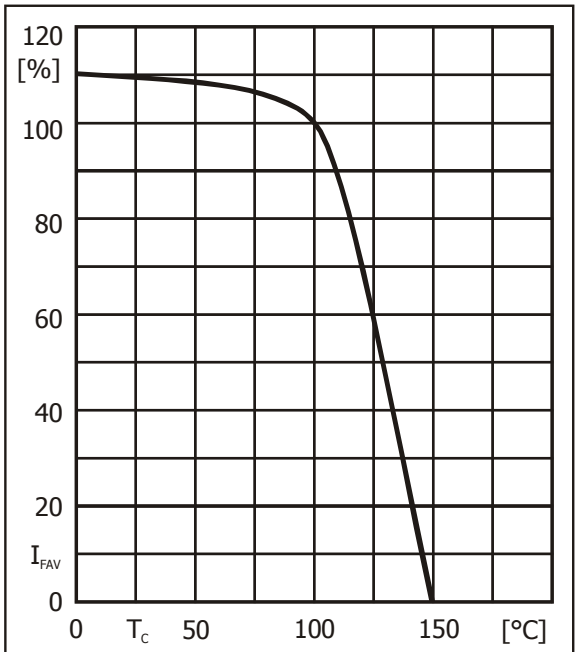
Type Typ	Repetitive peak reverse voltage Periodische Spitzensperrspannung V_{RRM} [V]	Surge peak reverse voltage Stoßspitzensperrspannung V_{RSM} [V]	Forward Voltage Durchlass-Spannung V_F [V] [1]	
			I_F = 5 A	I_F = 10 A
SK1020D1	20	20	< 0.51	< 0.55
SK1030D1	30	30	< 0.51	< 0.55
SK1040D1	40	40	< 0.51	< 0.55
SK1045D1	45	45	< 0.51	< 0.55
SK1050D1	50	50	< 0.62	< 0.70
SK1060D1	60	60	< 0.62	< 0.70
SK1080D1	80	80	< 0.71	< 0.83
SK10100D1	100	100	< 0.71	< 0.83

Max. average forward rectified current, R-load Dauergrenzstrom in Einwegschaltung mit R-Last		T_C = 100°C	I_{FAV}	10 A
Repetitive peak forward current Periodischer Spitzenstrom		f > 15 Hz	I_{FRM}	30 A [2])
Peak forward surge current 50/60 Hz half sine-wave Stoßstrom für eine 50/60 Hz Sinus-Halbwelle	SK1020... SK1060D1	T_A = 25°C	I_{FSM}	135/150 A
	SK1080... SK10100D1	T_A = 25°C	I_{FSM}	115/125 A
Rating for fusing, t < 10 ms Grenzlastintegral, t < 10 ms		T_A = 25°C	i^2t	80 A^2s
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur			T_j T_S	-50...+150°C -50...+175°C

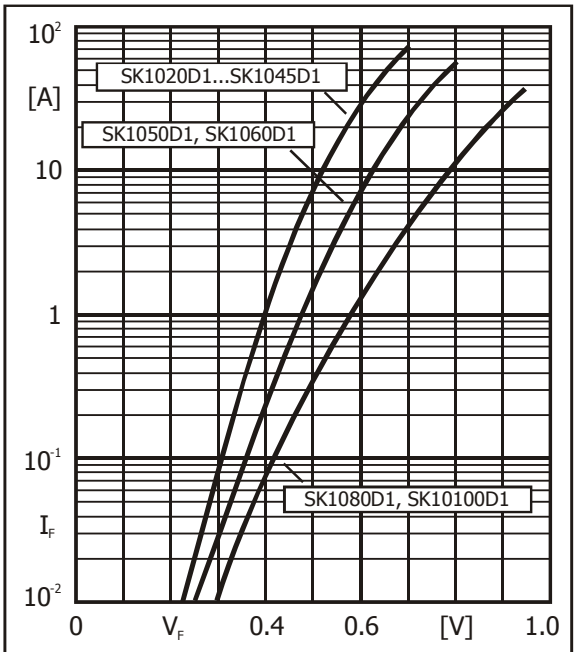
1 T_j = 25°C
2 Max. temperature of the case T_C = 100°C – Max. Temperatur des Gehäuses T_C = 100°C

Datasheet.Company

Characteristics					**Kennwerte**
Leakage current Sperrstrom	SK1020D1... SK1045D1	T_j = 25°C T_j = 100°C	$V_R = V_{RRM}$	I_R	< 300 µA < 45 mA
Leakage current Sperrstrom	SK1050D1... SK10100D1	T_j = 25°C T_j = 100°C	$V_R = V_{RRM}$	I_R	< 200 µA < 25 mA
Thermal resistance junction to case Wärmewiderstand Sperrschicht - Gehäuse				R_{thC}	< 2.5 K/W



Rated forward current vs. temp. of the case
Zul. Richtstrom in Abh. v. d. Gehäusetemperatur



Forward characteristics (typical values)
Durchlasskennlinien (typische Werte)

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