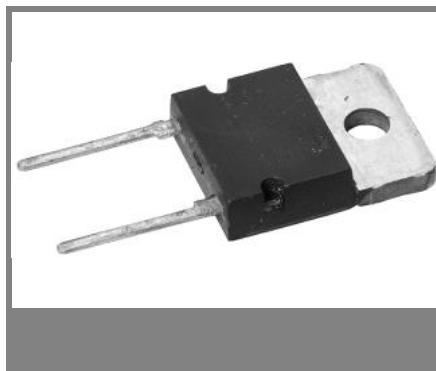


SKR 31F



Fast Recovery Rectifier Diode

SKR 31F

Features

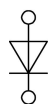
- CAL-Diode (controlled axial lifetime technology), patent no. DE 43104
- Very short recovery times
- Soft recovery under all conditions
- Up to 1200 V reverse voltage
- Epoxy meets UL 94V-0 flammability classification

Typical Applications

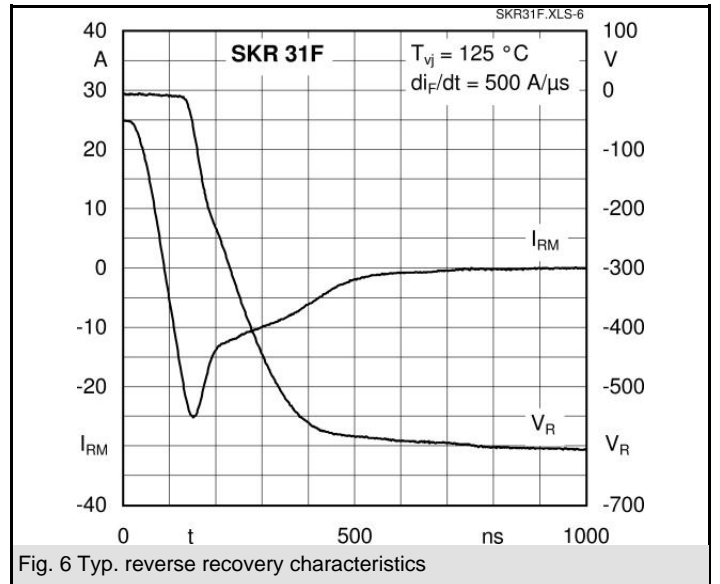
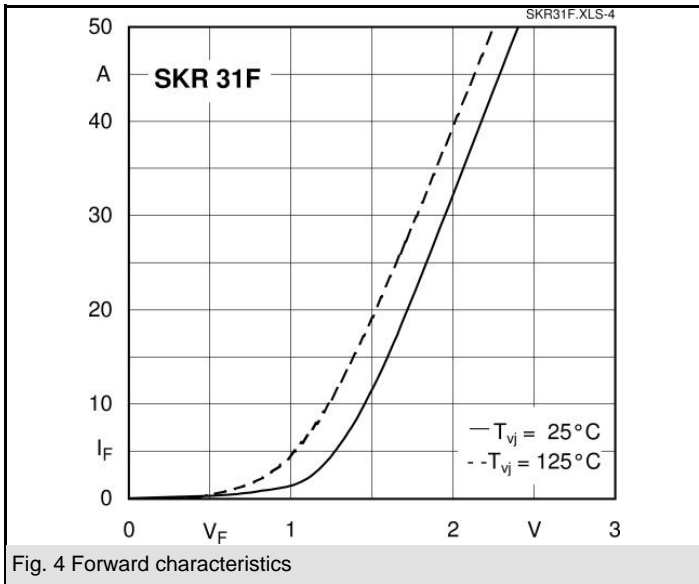
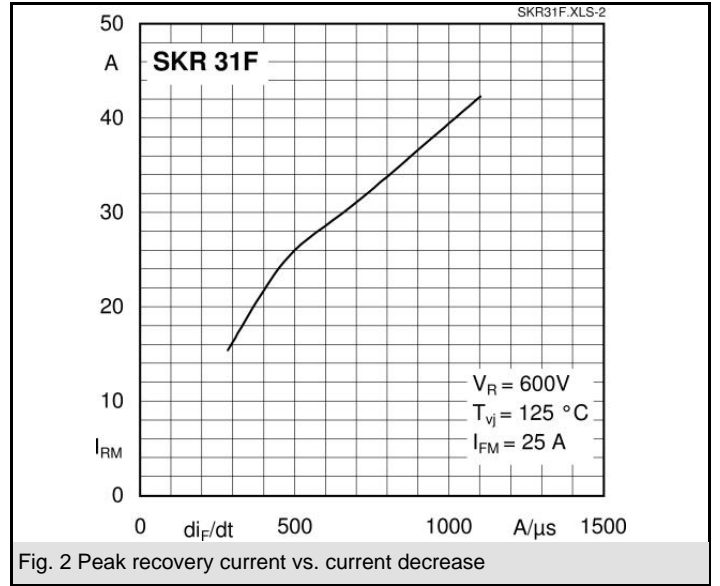
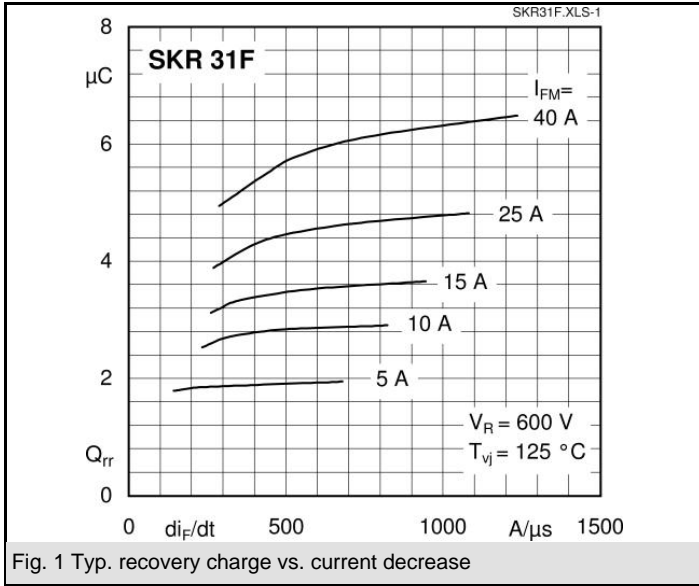
- Inverse diode for power transistors
- Inverter
- Power supply
- Snubber and clamping diode

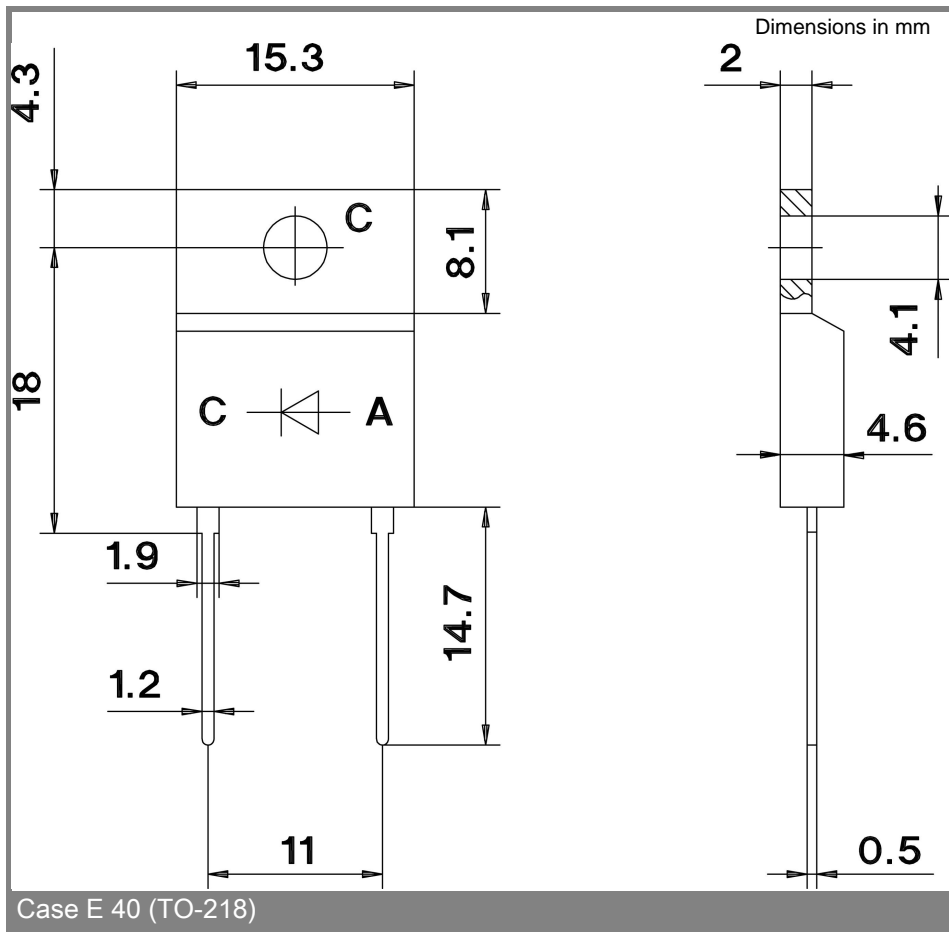
V_{RSM} V	V_{RRM} V	$I_{FRMS} = 47$ A (maximum value for continuous operation) $I_{FAV} = 31$ A (sin. 180; 50 Hz; $T_c = 85$ °C)	
1000	1000	SKR 31F10	
1200	1200	SKR 31F12	

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 85$ (100) °C	31 (27)	A
I_{FSM}	$T_{vj} = 25$ °C; 10 ms	320	A
	$T_{vj} = 150$ °C; 10 ms	300	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	510	A ² s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	450	A ² s
V_F	$T_{vj} = 25$ °C; $I_F = 25$ A	max. 2,35	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 1,2	V
r_T	$T_{vj} = 150$ °C	max. 44	mΩ
I_{RD}	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	max. 0,1	mA
I_{RD}	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}$	max. 4	mA
Q_{rr}	$T_{vj} = 125$ °C, $I_F = 25$ A,	4,5	μC
I_{RM}	$-di/dt = 500$ A/μs, $V_R = 600$ V	25	A
t_{rr}		400	ns
E_{rr}		-	mJ
$R_{th(j-c)}$		0,45	K/W
$R_{th(c-s)}$		0,3	K/W
T_{vj}		- 40 ... 150	°C
T_{stg}		- 40 ... 150	°C
V_{isol}		-	V~
M_s	to heatsink	0,7 ... 1	Nm
a			m/s ²
m	approx.	5	g
Case		E 40	



SKR





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