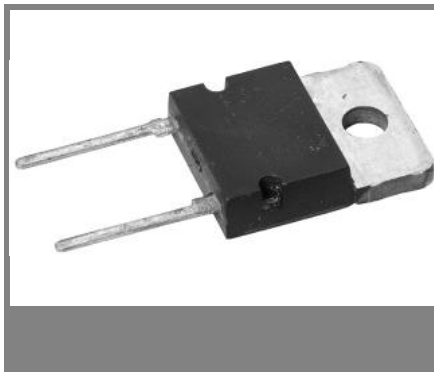


# SKR 31F



## Fast Recovery Rectifier Diode

### SKR 31F

#### Features

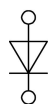
- CAL-Diode (controlled axial lifetime technology), patent no. DE 43104
- Very short recovery times
- Soft recovery under all conditions
- Up to 1200 V reverse voltage
- Epoxy meets UL 94V-0 flammability classification

#### Typical Applications

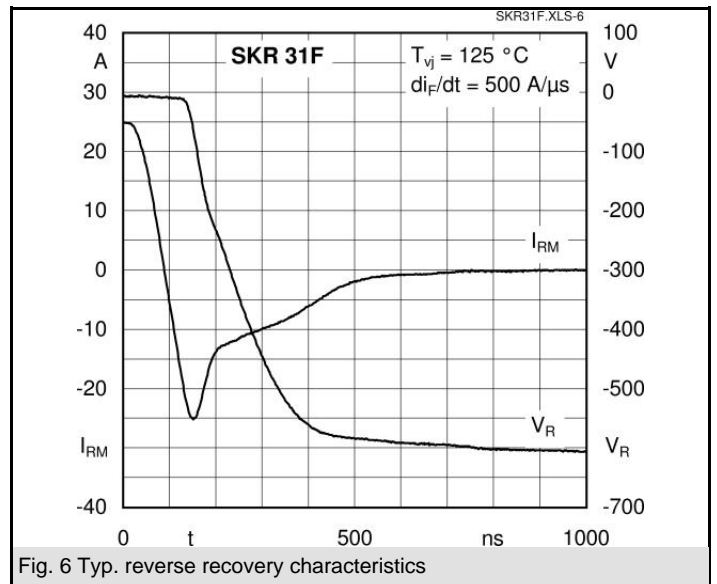
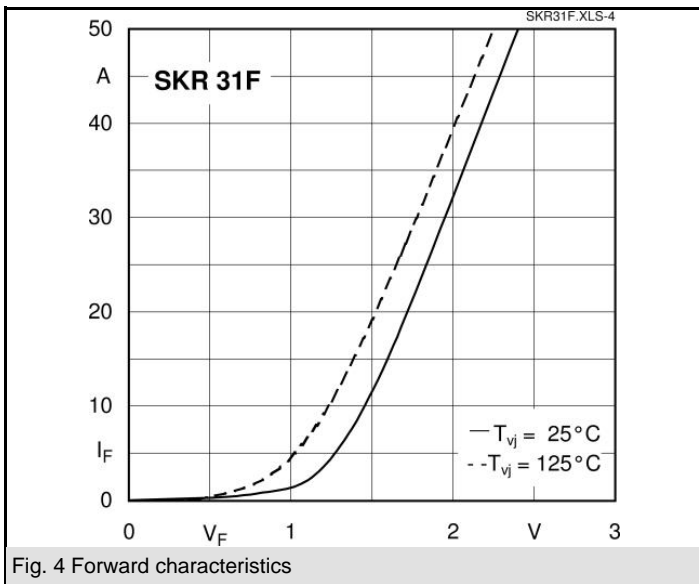
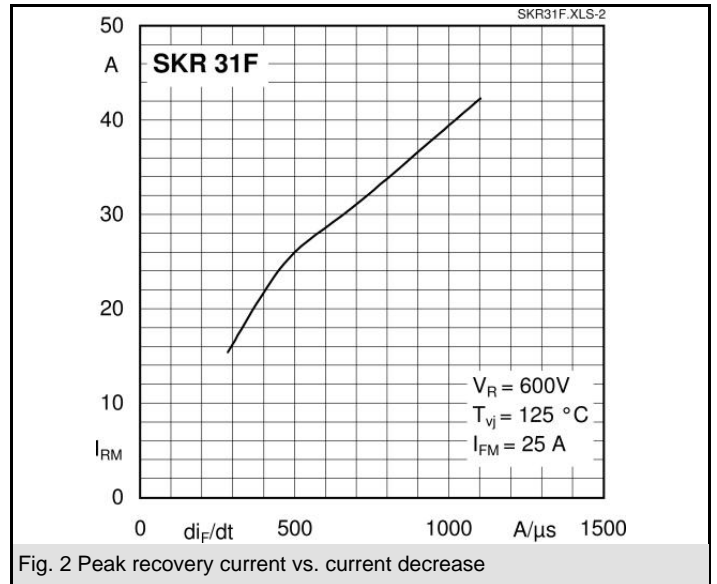
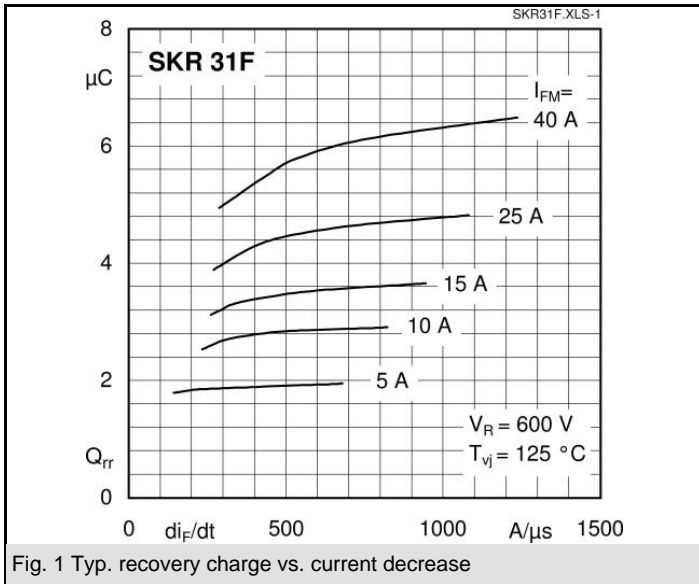
- Inverse diode for power transistors
- Inverter
- Power supply
- Snubber and clamping diode

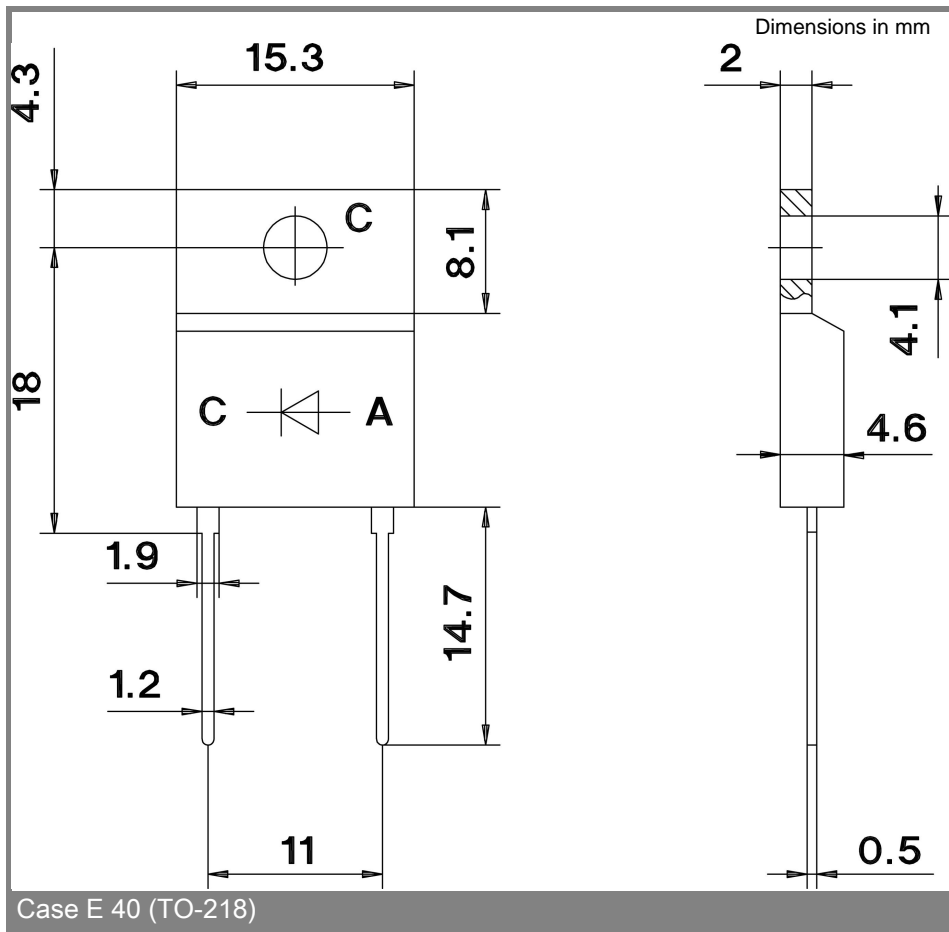
$V_{RSM}$ V	$V_{RRM}$ V	$I_{FRMS} = 47$ A (maximum value for continuous operation)	
1000	1000	$I_{FAV} = 31$ A (sin. 180; 50 Hz; $T_c = 85$ °C)	
1200	1200	SKR 31F10	
		SKR 31F12	

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 <sup>2</sup> s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	450	A <sup>2</sup> 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 <sup>2</sup>
$m$	approx.	5	g
Case		E 40	



SKR





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