



SEMICELL CAL-DIODE

SKCD 11 C 060 I3

$I_F = 20\text{ A}$

$V_{RRM} = 600\text{ V}$

Size: 3,3 mm X 3,3 mm

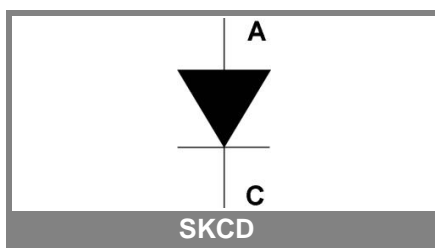
Package: wafer frame

Features

- 600V, 1200V and 1700V
- low forward voltage drop
- easy paralleling due to a small forward voltage spread
- low temperature dependence
- very soft recovery behavior
- small switching losses
- high ruggedness
- compatible to thick wire bonding
- compatible to all standard solder processes

Typical Applications

- freewheeling diode for IGBT
- optimal at frequencies > 8 kHz



Absolute Maximum Ratings

Symbol	Conditions	Values	Units
V_{RRM}	$T_{vj} = 25\text{ °C}, I_R = 0,1\text{ mA}$	600	V
$I_{F(AV)}$	$T_{vjmax} = 150\text{ °C}$	18	A
I_{FSM}	$T_{vj} = 25\text{ °C}, 10\text{ ms, half sine wave}$		A
	$T_{vjmax} = 150\text{ °C}, 10\text{ ms, half sine wave}$		A
T_{vjmax}		+ 150	°C

Electrical Characteristics

Symbol	Conditions	min.	typ.	max.	Units
I^2t	$T_{vjmax}, 10\text{ ms, half sine wave}$				A ² s
I_R	$T_{vj} = 25\text{ °C}, V_{RRM}$			0,1	mA
	$T_{vj} = 125\text{ °C}, V_{RRM}$				mA
V_F	$T_{vj} = 25\text{ °C}, I_F = 15\text{ A}$		1,35	1,7	V
	$T_{vj} = 125\text{ °C}, I_F = 15\text{ A}$		1,4		V
$V_{(TO)}$	$T_{vj} = 125\text{ °C}$		0,8	0,9	V
r_T	$T_{vj} = 125\text{ °C}$		26		mΩ

Dynamic Characteristics

Symbol	Conditions	min.	typ.	max.	Units
t_{rr}	$T_{vj} = \text{°C}, , V, A/\mu\text{s}$				ns
	$T_{vj} = \text{°C}, , V, A/\mu\text{s}$				ns
Q_{rr}	$T_{vj} = 25\text{ °C}, A, V, A/\mu\text{s}$	0	0	0	μC
	$T_{vj} = 125\text{ °C}, A, V, A/\mu\text{s}$	0	0	0	μC
I_{rrm}	$T_{vj} = \text{°C}, A, V, A/\mu\text{s}$				A
	$T_{vj} = \text{°C}, A, V, A/\mu\text{s}$				A

Thermal Characteristics

Symbol	Conditions	min.	typ.	max.	Units
T_{vj}		- 40		+ 150	°C
T_{stg}		- 40		+ 150	°C
T_{solder}	10 min			+ 250	°C
T_{solder}	5 min			+ 320	°C
$R_{th(j-c)}$			1,93		K / W

Mechanical Characteristics

Parameter	Units
raster size	3,3 x 3,3 mm
Area total	11 mm ²
Chips / wafer	932 pcs
Anode metallisation	bondable (Al)
Cathode metallisation	solderable (Ag / Ni)
wire bond	Al, diameter ≤ 500 μm

This technical information specifies semiconductor devices. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.