Absolute Maximum Ratings Symbol	Conditions [1]	Values	Units
V_{RRM}		1200	V
I_{FSM}	(≥ 8 bondwires 300 µm ∅)		
	t_p = 10 ms; sin; T_j = 150 °C	720	A
I^2t	t_p = 10 ms; sin; T_j = 150 °C	2600	A^2s
Tsolder	max. 120 s (transfer)	375	°C
T_{vj}, T_{stg}	min	– 55	°C
T_{vj}, T_{stg}	max	+ 150	°C

Characteristics Symbol	Conditions [1]	min.	typ.	max.	Units
I_{RM}	T_j = 25 °C/125 °C; V_{RRM}			0,2 / 6	mA
V_F	I_F = 75 A; T_j = 25 °C		2,0	2,5	V
	T_j = 125 °C		1,8	2,3	V
V_F	I_F = 100 A; T_j = 25 °C		2,25		V
	T_j = 125 °C		2,05		V
$V_{T(TO)}$	T_j = 125 °C, see Fig. 1		1,0	1,2	V
r_T	T_j = 125 °C		11	15	mΩ
I_{RRM}	I_F = 75 A; [2]				
	T_j = 125 °C		45		A
Q_{rr}	I_F = 75 A; [2] T_j = 25 °C		3		µC
	T_j = 125 °C		11		µC
Tsolder	10 min		250		°C
Tsolder	5 min			320	°C

Mechanical Data			
A_{tot}	total area	61	mm^2
$A_{act.}$	active area	44	mm^2
w	weight	50	mg

Supplied on chip carriers (64 units) 102 x 102 x 8 mm
or supplied on frames, on request
Please contact factory

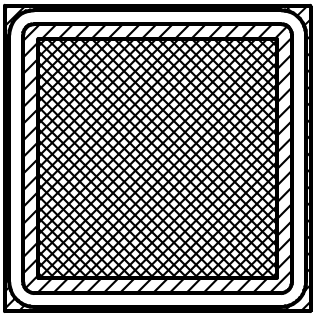
1) T_{case} = 25 °C, unless otherwise specified
2) V_R = 600 V; – di_F/dt = 800 A/µs;
3) CAL = Controlled Axial Lifetime Technology
4) Soldered on DCB ceramic (Al_2O_3) 0,4 mm thick on a 3 mm copper base plate R_{thjc} = 0,5 K/W T_{jm} = 150 °C; T_{case} = 80 °C.

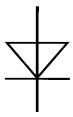
SEMICELL
CAL - Diode Chips[3]

SKCD 61C 120 I

7,8 x 7,8 mm; 65 A[4]; 1200 V

GBCD061





Features

- Low voltage drop
- low temperature dependence
- Very soft reverse recovery under **all** conditions
- CAL = Controlled Axial Lifetime Technology
- Top side = Al for bonding by aluminum wire
- Bottom = 4 layer metallisation for soldering

Typical Applications

- Inverse diode for IGBT (in inverter drives)
- Freewheeling diode in brake choppers or step-up choppers with IGBT or MOSFET
- UPS Uninteruptible Power Supplies
- Hybrid circuits for static power converters

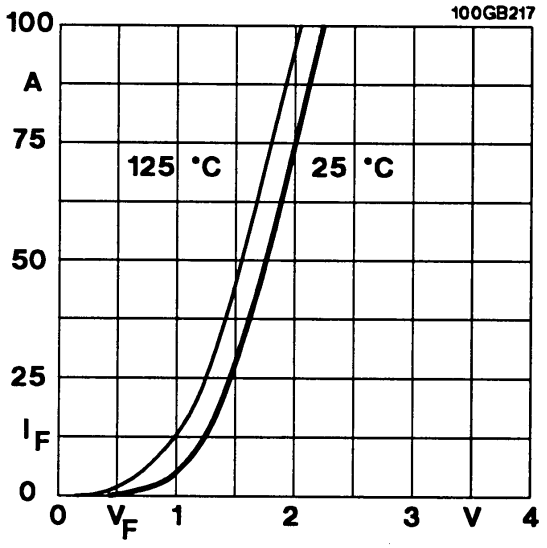


Fig. 1 Typ. CAL diode forward characteristic

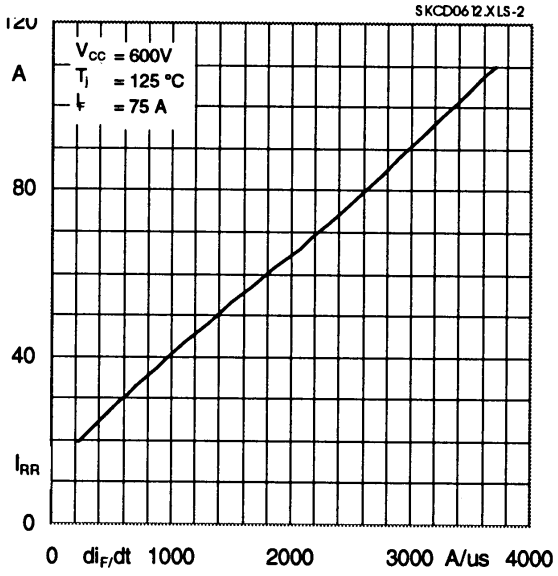


Fig. 2 Typ. peak reverse recovery curent $I_{RR} = f(di_F/dt)$

T_j = 125 °C
di_F/dt = - 800 A/µs

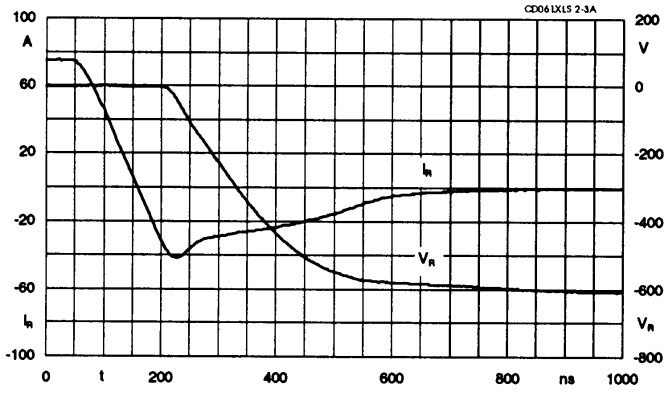


Fig. 3 Typ. diode reverse recovery behaviour i = f (t)

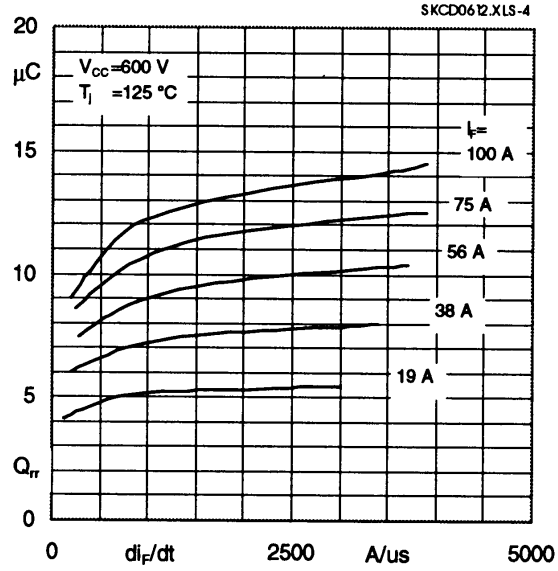


Fig. 4 Typ. reverse recovery charge $Q_{rr} = f(di_F/dt)$

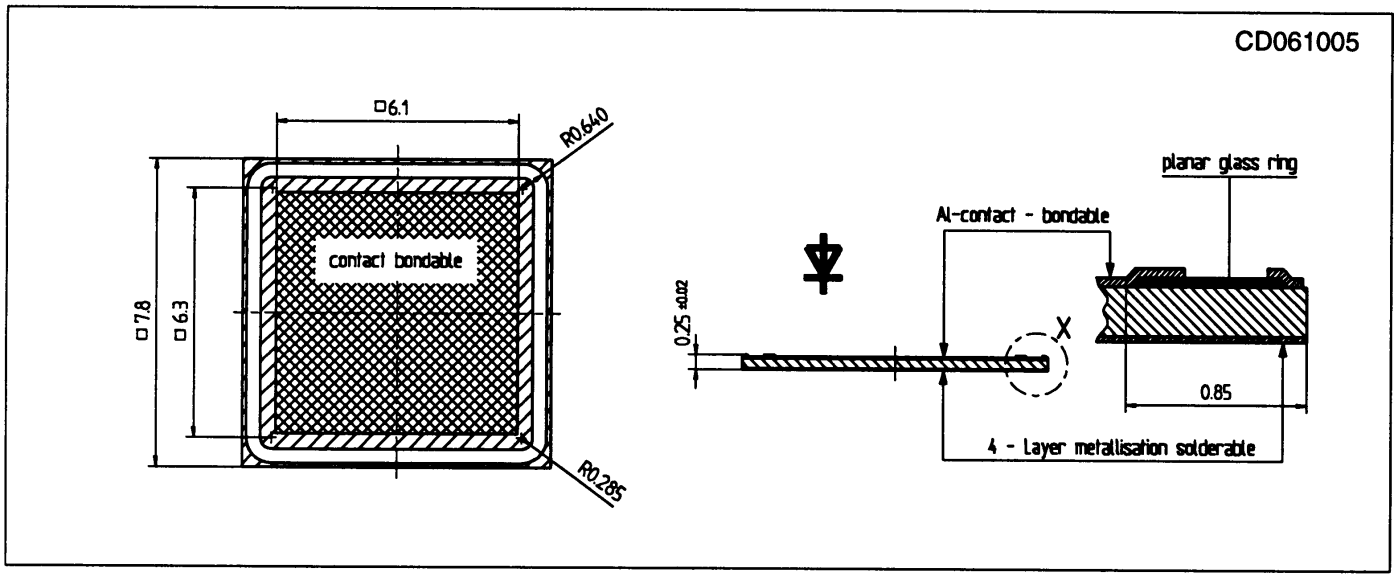


Fig. 5 Mechanical outline (dimensions in mm)

