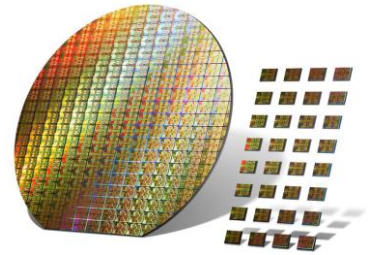




Fast switching diode chip

Chip Type	V _R	I _F	Die size
An75FRD17	1700 V	75 A	7.5 x 7.5 mm ²



FEATURES

- 1700 V technology 300 um chip
- Soft, fast switching
- Low reverse recovery charge

This chip is used for:

- Medium power Modules

GENERAL INFORMATION

Die size (including scribe line)	7.5 x 7.5 mm ²
Area total / active	56.25 / 38.44 mm ²
Anode pad size	See chip drawing
Scribe line width	160 um
Wafer size	150 mm (6 inch)
Wafer thickness	300 um
Type and thickness of anode metal layer	Al Si 1% 4.0 um
Type and thickness of cathode metal layer (wafer back side)	Ti – Ni – Ag 1.0 um
Passivation frontside	Polyimide
Die bond	Electrically conductive glue or solder
Wire bond	Al, ≤ 500 um
Recommended Storage Environment	Store in original container, in dry nitrogen, < 6 month at an ambient temperature 23°C

**MAXIMUM RATINGS:**

Parameter	Legend	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	1700	V
Continuous forward current limited by T_{jmax}	I_F	75	A
Single pulse forward current	I_{FSM}	1)	A
Maximum repetitive forward current limited by T_{jmax}	I_{FRM}	150	A
Operating junction and storage temperature	T_j, T_{stg}	-55 ... +150	°C

STATIC CHARACTERISTICS (tested on wafer), $T_j=25\text{ }^\circ\text{C}$:

Parameter	Legend	Condition	Value			Unit
			min.	typ.	max	
Reverse leakage current	I_R	$V_R=1700\text{ V}$	-	10	250	uA
Cathode-Anode breakdown Voltage	V_{BR}	$I_R=1\text{ mA}$	1700	-	-	V
Forward voltage drop	V_F	$I_F=20\text{ A}$	-	1.3	1.4	V
		$I_F=75\text{ A}^{2)}$	-	2.1 ²⁾	2.5 ²⁾	

DYNAMIC ELECTRICAL CHARACTERISTICS (tested at component):

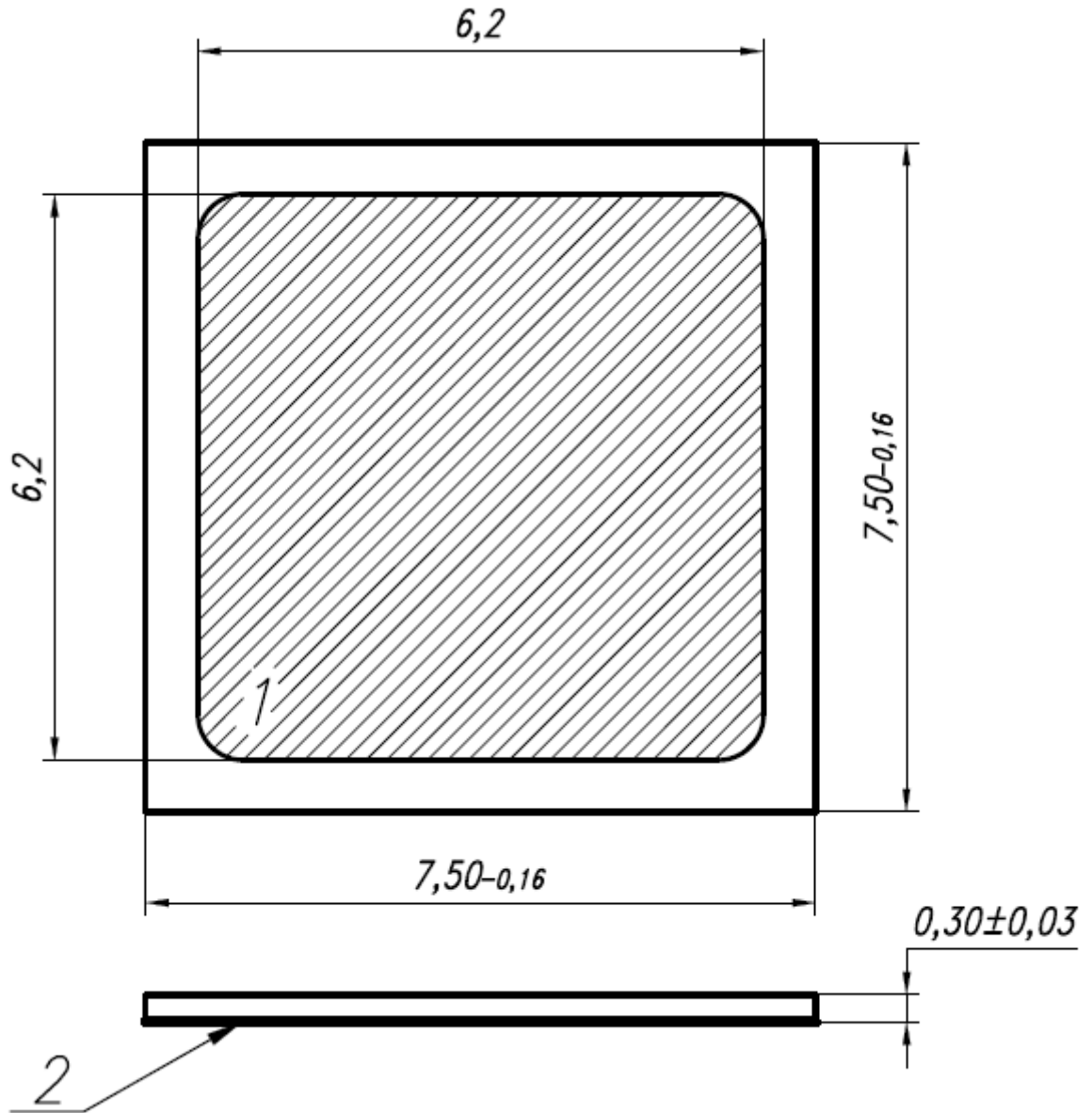
Parameter	Legend	Condition	Value			Unit
			min.	typ.	max	
Reverse recovery time	t_{rr}	$T_j=25\text{ }^\circ\text{C}$ $I_F=50\text{ A}$ $di/dt=400\text{ A/us}$ Inductive Load	-	200	-	ns
Peak recovery current	I_{RRM}		-	34	-	A
Reverse recovery charge	Q_{rr}		-	3.0	-	uC

1) Depending on wire bond configuration

2) tested at component



CHIP DRAWING:



NOTE:

ASSIGNMENTS

1 Dimensions are shown in mikrometers.

PAD

1 = ANODE

2 = CATHODE (BACK SIDE)