

FRD Chip

Die In Wafer Form

1700V
IF=200A
VF typ=2V@IF(200A)@25°C
300mm Wafer

Applications

- Industrial Motor Drive
- Highpower converters
- Medium voltage converters
- Wind power converter

Features

- Reduced Power Loss In Diode And Switching Transistor
- High Frequency Operation
- Optimized for switching softness, Reduced EMI

Chip Type	IF	VR	Die size	Wafer size
SYF200P170CBK	200A	1700V	12.0*8.4 mm ²	12 inch

Mechanical Parameters

Die size	12.0*8.4 mm ²
Anode pad size	10.9*7.3 mm ²
Silicon thickness	170um
Wafer size	300mm
Maximum possible chips per wafer	~550pcs
Passivation frontside	Polyimide
Pad metal	5000nm AlCu
Backside metal	Al - Ti - Ni/V - Ag, (2kA - 2kA - 3kA - 4kA) suitable for epoxy and soft solder die bonding
Die bond	electrically conductive glue or solder
Wire bond	Al, ≤500um
Reject ink dot size	Ø 0.65mm; max. 1.2mm
Storage environment (<6 months) for original and sealed MBB bags	Ambient atmosphere air, temperature 17°C – 25°C
Storage environment (<6 months) for open MBB bags	Store in original container, in dry nitrogen, <6 months at an ambient temperature of 23°C

Maximum Ratings

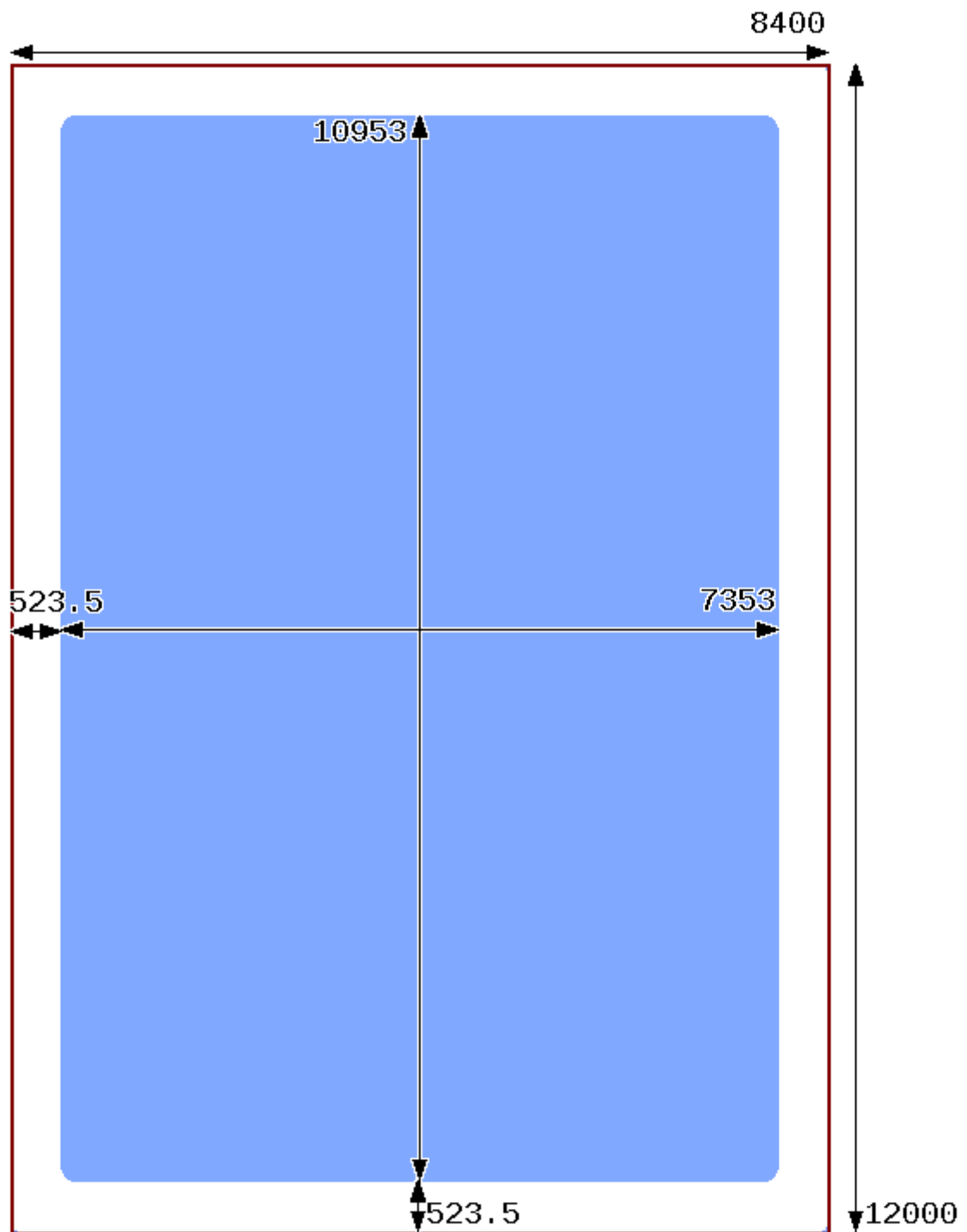
Parameter	Symbol	Value	Unit
Minimum reverse breakdown voltage, $T_j=25^{\circ}\text{C}$	V_{RRM}	1700	V
Maximum continue forward current, $T_j=150^{\circ}\text{C}$	I_{FM}	200	A
Maximum reverse leakage current, $T_j=25^{\circ}\text{C}$	I_{RM}	20	μA
Maximum forward voltage, $I_F=200\text{A}$, $T_j=25^{\circ}\text{C}$	V_{FM}	2.2	V
Operating junction temperature range	T_j	-55~+150	$^{\circ}\text{C}$

Electrical Characteristics (tested on chip)

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Breakdown voltage	V_{BR}	$I_R=200\mu\text{A}$	1700			
Forward voltage	V_F	$T_j=25^{\circ}\text{C}$, $I_F=200\text{A}$	-	2	-	V
Reverse leakage current	I_R	$V_R=1700\text{V}$, $T_j=25^{\circ}\text{C}$			20	μA

1. Depending on thermal properties of assembly.
2. Not subject or production test - verified by design/characterization.

此规格书中的芯片有效颗数以实际数量为准。



Not to Scale(unit:um)

Notes:

1. Controlling dimension: millimeters
2. Die width and length tolerance:<0.05