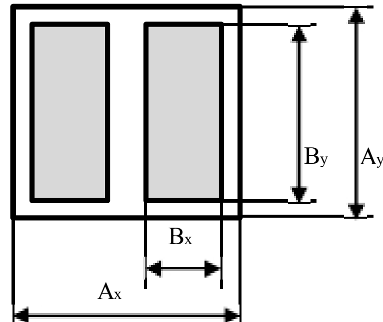
VSP-MIKRON

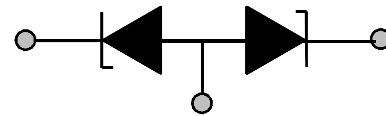
RoHS

Rev.4.March 2014.

SMB-05L12/ SMB-05L13/ SMB-05L14

Chip Bi-directional TVS diode in wafer form, 4 inch.





Schematic and pinning diagram.

Mechanical date: Ax=Ay=380um
Bx=110um, By=260um
Chip thickness: a) 138+/-12um for SMB05L12;
b) 230+/-20um for SMB05L13;
c) 230+/-20um for SMB05L14;
Scribe Line width - 60um.
Top Metal: Al metallization for wire bonding
Back side - Anode: a)Ti-Ni-Ag for soldering for SMB05L12
b) Ti-Ni-Ag for soldering for SMB05L13
c) without metallization for SMB05L14
Probing: **a) sampling testing:** no bad dice inking;
guaranteed good dice quantity≥95%.
b) 100% testing (if agreed with customer): wafer mapping data;
no bad dice inking.

Limiting values

Parameter	Symbol	Conditions	Value	Unit
Reverse Stand-off voltage	V_{RWM}	I_R=1mA	4,5	V
Peak Pulse Power	P_{pp}	t_p=8/20us	73*	W
Peak Pulse Current	I_{pp}	t_p=8/20us	6,7*	A
Electrostatic Discharge	V_{ESD}	IEC 61000-4-2, level 4.	>8 (Contact); >15 (Air).	kV
Max.junction temperature	T_j	-	+150	ºC

Characteristics (Tj=25ºC)

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_{BR}	Breakdown voltage	I_R=5mA	6,5	6,8	7,1	V
I_R	Reverse leakage current	V_R=5,0V	-	-	0,9	uA
V_{CL}	Clamping Voltage	I_{pp}=1.0A, t_p=8/20us I_{pp}=12A, t_p=8/20us	-	-	7,9* 11,9*	V
C_J	Diode capacitance	V_R=0 V, f=1MHz	-		55	pF

*For Device testing