VSP-MIKRON RoHS	**Soft Fast Recovery Diode**
Preliminary Specification, Rev 2, May 2012	V_{RRM} =1200V I_F =10A Die Size: 3.5 x 3.5mm **KD10120FU**

Ultra low losses
Passivation: Silicon Oxide

Maximum rated values:

Parameter	Symbol	min	max	Unit
Repetitive peak reverse voltage	V_{RRM}	-	1200	V
Continuous forward current	I_F	-	10	A
Repetitive peak forward current*	I_{FRM}	-	20	A
Nonrepetitive peak surge current (Halfwave, 1 Phase, 50 Hz)	I_{FSM}	-	200	A
Junction temperature	T_{vj}	-	150	˚C

* - Limited by T_{vj} max

Diode Characteristics values:

| Parameter	Symbol	Conditions	min	typ	max	Unit
Continuous forward voltage	V_F	I_F=10A, T_{vj}= 25˚C		2.2	**2.4**	V
Continuous reverse current	I_R	V_R=1200V T_{vj}= 25˚C			100	uA
		T_{vj}= 125˚C		1.5		mA
Peak reverse recovery current	I_{RRM}	I_F=10A, V_R=700V, dI_F/dt=200A/uS, T_{vj}= 25˚C		12		A
Recovered charge	Q_{rr}			0.9		µC
Reverse Recovery Time	t_{rr}			150		nS
Reverse Recovery Time	t_{rr}	I_F=1A, V_R=30V, dI_F/dt=200A/uS.		40		nS
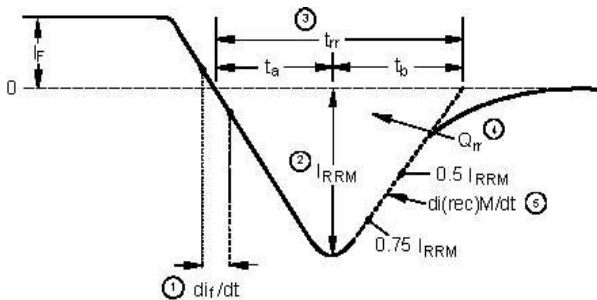
1. di_f/dt - Rate of change of current through zero crossing

2. I_{RRM} - Peak reverse recovery current

3. t_{rr} - Reverse recovery time measured from zero crossing point of negative going I_F to point where a line passing through 0.75 I_{RRM} and 0.50 I_{RRM} extrapolated to zero current

4. Q_{rr} - Area under curve defined by t_{rr} and I_{RRM}

$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$

5. d$i_{(rec)M}$/dt - Peak rate of change of current during t_b portion of t_{rr}

Mechanical properties:

Top metal: **Al** – for Wire Bonding
*Backside metal: **Ti-Ni-Ag*** – for Soldering

Top Metal
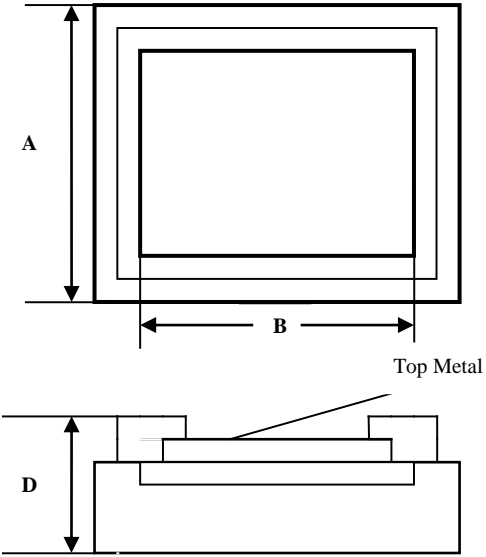
DIM	ITEM	µm
A_X A_y	Die Size	3500 3500
D	Thickness	350 max
Scribe Line Width		60