



VSP-MIKRON



FRED

$V_{RRM} = 600V$

$I_F = 50A$

KD5060 UF

Preliminary Specification, Rev 3, May 2013

Die Size:

5.4 x 5.2 mm

Ultra low losses

Passivation: Silicon Oxide

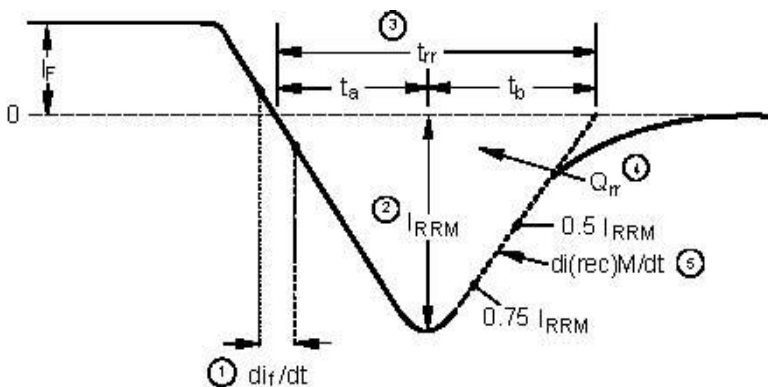
Maximum rated values:

Parameter	Symbol	min	max	Unit
Repetitive peak reverse voltage	V_{RRM}	-	600	V
Continuous forward current	I_F	-	50	A
Repetitive peak forward current*	I_{FRM}	-	100	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	$I_F=50A, T_{vj}= 25^\circ C$		1.2	1.35	V
Continuous reverse current	I_R	$V_R=600V \begin{matrix} T_{vj}= 25^\circ C \\ T_{vj}= 125^\circ C \end{matrix}$		0.9	20	uA mA
Reverse Recovery Time	t_{rr}	$I_F=1A, V_R=30V, \text{di}_F/\text{dt}=100A/\mu S.$		60	70	nS



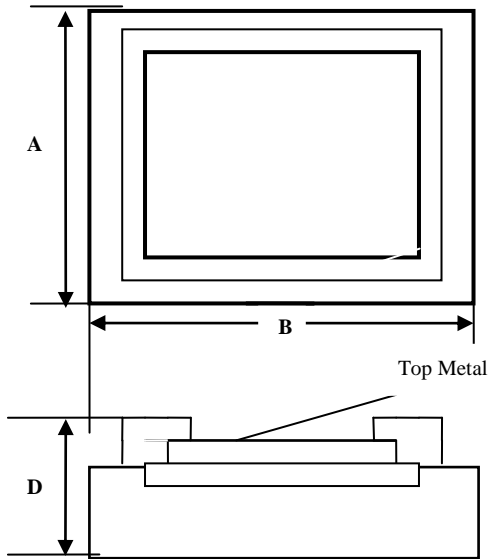
- 1. di_F/dt - Rate of change of current through zero crossing
- 2. I_{RRM} - Peak reverse recovery current
- 3. t_{rr} - Reverse recovery time measured from zero crossing point of negative going I_F to point where a line passing through $0.75 I_{RRM}$ and $0.50 I_{RRM}$ extrapolated to zero current
- 4. Q_{rr} - Area under curve defined by t_{rr} and I_{RRM}

$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$
- 5. $di_{(rec)M}/dt$ - Peak rate of change of current during t_b portion of t_{rr}

Mechanical properties:

*Top metal: **Al-Ti-Ag***

*Backside metal: **Ti-Ni-Ag** – for Soldering*



DIM	ITEM	µm
A B	Die Size	5200 5400
D	Thickness	350max.
Scribe line Width		60

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*Backside metal: **Ti-Ni-Ag** – for Soldering.*