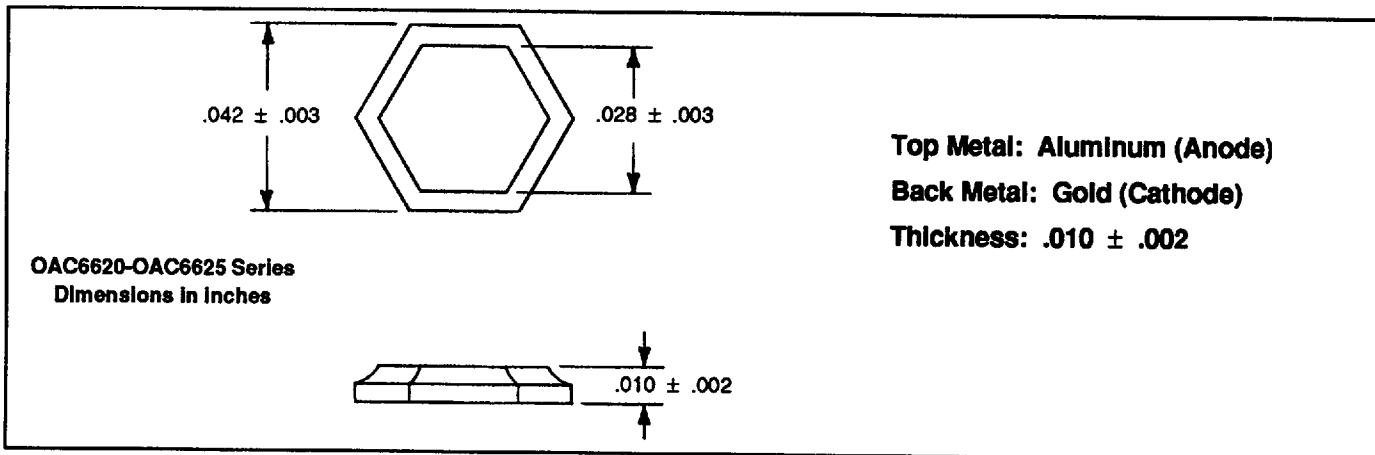


Product Bulletin OAC6620
March 1990

T-03-05

Extra Fast Recovery Rectifier Die

OAC6620 - OAC6625 Series



Features

- Contact metallization for wire bond and surface mount package construction:
Top Metal: Alloy Aluminum (Anode)
Back Metal: Alloy Gold (Cathode)
- Junction Sealing: Three layer passivation is silicon dioxide, silicon nitride and high temperature glass for maximum reliability.
- Mesa Construction for high surge capability
- Optek's extra fast recovery switching rectifier die exhibit the fastest t_{rr} available. This speed is coupled with low leakages and low V_F .
- Gold alloy back metal is suitable for eutectic or epoxy die attach process.
- Aluminum top metallization is ideal for a variety of wire bonding techniques.

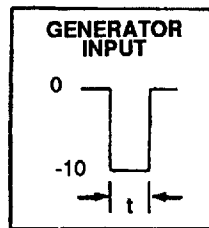
Electrical Characteristics ($T_A = 25^\circ\text{C}$)

Type	Rated PIV Vdc	Rated I_F Adc	Maximum $V_F @ I_F$ Vdc	Maximum $I_R @ PIV$ μA	I Surge ¹ A	Typical ¹ $C_j @ 25^\circ\text{C}$ $V_R = 10\text{V}$	t_{rr} Maximum ¹ .5A to 1.0A to .25A Nsec
OAC6620	200	1.2	1.4 @ 1.2A	0.5	20	8pf	30
OAC6621	400	1.2	1.4 @ 1.2A	0.5	20	8pf	30
OAC6622	600	1.2	1.4 @ 1.2A	0.5	20	8pf	30
OAC6623	800	1.0	1.5 @ 1.0A	0.5	20	8pf	50
OAC6624	900	1.0	1.8 @ 1.5A	0.5	20	8pf	50
OAC6625	1000	1.0	1.95 @ 1.5A	1.0	15	8pf	50

¹ These parameters are verified by wafer lot acceptance testing.

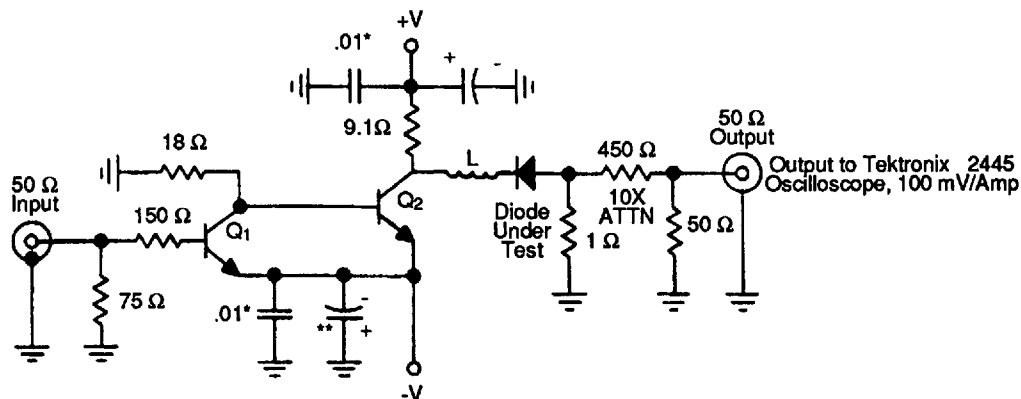
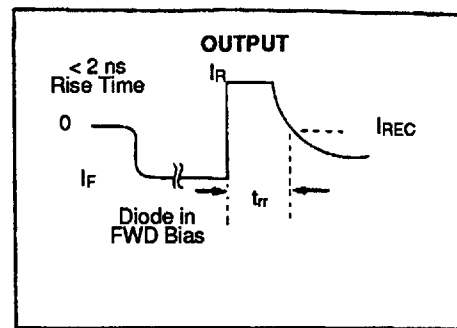
OAC6620 - OAC6625 Series

Reverse Recovery Time Test Circuit



Pulse Generator
Rise Time < 10 nsec

Transistors: 2N4430,
5 watt, 2GHz Types
(or equivalent)



$V_+ \equiv 10V$ (Adj. for specified reverse current)
 $V_- \equiv -3.5V$ (Adj. for specified forward current)

$t \gg t_{rr}$ to be measured

* Add .01 μf ceramic chip capacitors in parallel to minimize noise.

** Solid tantalum capacitors only. 100 μf 20 volts

L = Slight inductance to null out overshoot - must trim (about 1/2" .040 copper wire).

Note: Lead lengths of 1/8" or more will cause serious ringing effects. Layout is critical.

All resistors - non-inductive. Preferably chip resistors layed on microwave strip line board. Critical inductance values are paralleled to help reduce inductance.

Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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