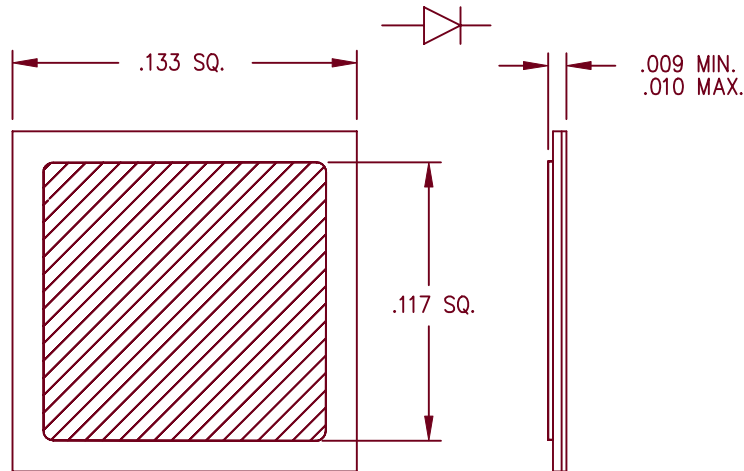


Class HC and Class KC Equivalents 1N5812-16 Ultrafast Rectifier Die



- Ultrafast Recovery Rectifier
- Glass passivated
- 20A Average, up to 150V
- Solderable silver both sides
- Available with Al top and/or gold back – contact factory
- Cells with moly discs available – contact factory

Part Number	V _{RRM}
1N5812HCE	50V
1N5812KCE	50V
1N5814HCE	100V
1N5814KCE	100V
1N5816HCE	150V
1N5816KCE	150V

Electrical Characteristics (Properly Packaged)

Average forward current	I _{F(AV)} 20 Amps	T _C = 100°C, Square wave, R _{θJC} = 1.5°C/W
Maximum surge current	I _{FSM} 400 Amps	8.3 ms, half sine, T _C = 100°C
Max peak forward voltage	V _{FM} .86 Volts	I _{FM} = 10A: T _J = 25°C*
Max peak forward voltage	V _{FM} .95 Volts	I _{FM} = 20A: T _J = 25°C*
Max peak forward voltage	V _{FM} .78 Volts	I _{FM} = 10A: T _J = 100°C*
Max peak reverse current	I _{RM} 1 mA	V _{RRM} , T _J = 100°C*
Max peak reverse current	I _{RM} 10 μA	V _{RRM} , T _J = 25°C*
Max reverse recovery time	t _{RR} 35 ns	I _F = I _R = 1A, (REC) = 0.1A, di/dt = 85A/μs
Maximum junction capacitance	C _J 300 pF	V _R = 10V, f = 1Mhz, T _J = 25°C

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Group A Die Element Evaluation Electrical Tests

Subgroup	Method	Symbol	Min. Limit	Max. Limit	Unit
<u>Subgroup 2</u>	Thermal Impedance	3101	Z _{JX}	1.35	°C/W
	Forward voltage @ 10Apk	4011	V _{F1}	0.86	V(pk)
	Forward voltage @ 20Apk	4011	V _{F2}	0.95	Vdc(pk)
	Reverse voltage @ rated V _R	4016	I _{R1}	10	μA dc
	Breakdown voltage @ 100μA dc	4021	V(BR)1		μA dc
			60	Vdc	
			110	Vdc	
			160	Vdc	
<u>Subgroup 3</u>	Reverse current @ rated V _R , 100°C	4016	I _{R2}	1.00	mA dc
	Forward voltage @ 10Apk, 100°C	4011	V _{F3}	0.78	V(pk)
	Forward voltage @ 10Apk, -65°C	4011	V _{F3}	1.05	V(pk)
	Breakdown volt. @ 100μA, -65°C	4021	V(BR)		V(pk)
				50	
			100		
			150		
<u>Subgroup 4</u>	Reverse recovery time	4031	t _{rr}	35	ns
	Capacitance @ V _R = 10V	4001	C _J	300	pF
	Forward recovery voltage	4026	V _{FR}	2.2	V(pk)
	Forward recovery time	4026	t _{rr}	15	ns

7-30-01 Rev. IR



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.