



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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TEL:805-498-2111 FAX:805-498-3804 WEB:<http://www.semtech.com>

AXIAL LEADED HERMETICALLY SEALED SUPERFAST RECTIFIER DIODE

QUICK REFERENCE DATA

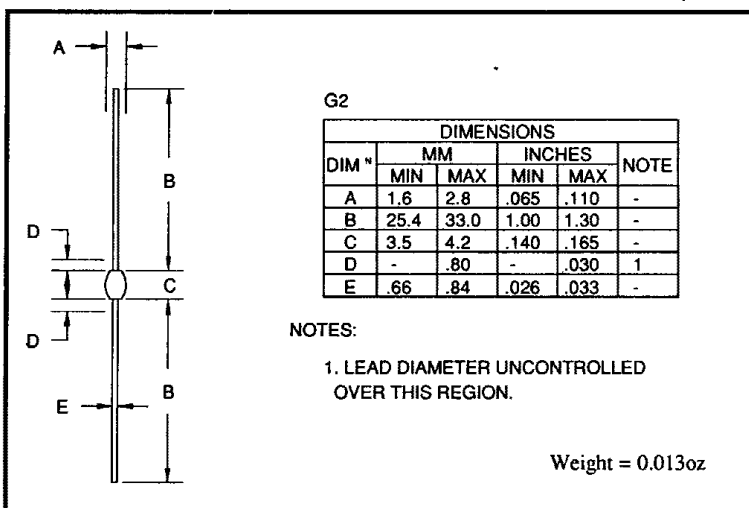
- Very low reverse recovery time
- Hermetically sealed with Metoxilite fused metal oxide
- Low thermal impedance
- Low switching losses
- Soft, non-snap off, recovery characteristics

- $V_R = 200 - 400V$
- $I_F = 2.1A$
- $t_{rr} = 50ns$
- $I_R = 10\mu A$

ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

	Symbol	USC1104	USC1105	USC1106	Unit
Working reverse voltage	VRWM	200	300	400	V
Repetitive reverse voltage	VRRM	200	300	400	V
Average forward current (@ 55°C, lead length = 0.375")	IF(AV)	←	2.1	→	A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	IFRM	←	9.0	→	A
Non-repetitive surge current (tp = 8.3mS, @ VR & Tjmax)	IFSM	←	20	→	A
Storage temperature range	TSTG	←	-55 to +150	→	°C
Operating temperature range	TOP	←	-55 to +150	→	°C

MECHANICAL



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ELECTRICAL CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	USC1104	USC1105	USC1106	Unit
Average forward current max. (pcb mounted; $T_A = 55^\circ\text{C}$) for sine wave	$I_{F(AV)}$	←	1.0	→	A
for square wave ($d = 0.5$)	$I_{F(AV)}$	←	1.1	→	A
Average forward current max. ($T_L = 55^\circ\text{C}$; $L = 3/8"$) for sine wave	$I_{F(AV)}$	←	2.0	→	A
for square wave	$I_{F(AV)}$	←	2.1	→	A
I^2t for fusing ($t = 8.3\text{mS}$) max.	I^2t	←	1.7	→	A ² S
Forward voltage drop max. @ $I_F = 1.0\text{A}$, $T_j = 25^\circ\text{C}$	V_F	←	1.25	→	V
Reverse current max. @ V_{RWM} , $T_j = 25^\circ\text{C}$	I_R	←	10	→	μA
@ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R	←	200	→	μA
Reverse recovery time max. 0.5A I_F to 1.0A I_R . Recovers to 0.25A I_{RR} .	t_{rr}	←	50	→	nS
Junction capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	←	25	→	pF

THERMAL CHARACTERISTICS

	Symbol	USC1104	USC1105	USC1106	Unit
Thermal resistance - junction to lead Lead length = 0.0"	$R_{\theta JL}$	←	7	→	°C/W
Lead length = 0.375"	$R_{\theta JL}$	←	38	→	°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1 oz. copper.	$R_{\theta JA}$	←	95	→	°C/W