



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!



Contact us

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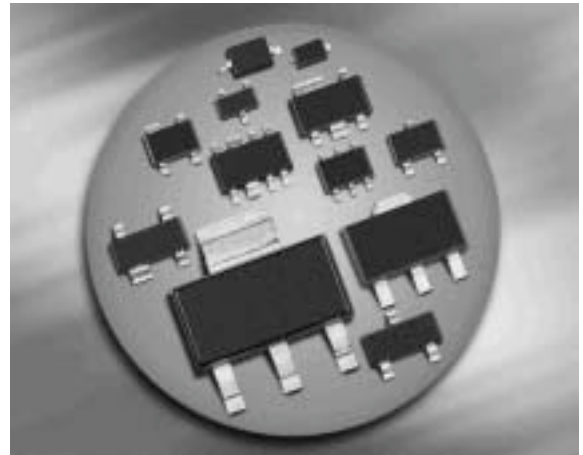
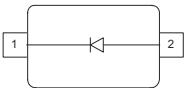
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Silicon Variable Capacitance Diode

- For Hyperband TV / VTR tuners, Bd I
- Large capacitance ratio, low series resistance
- Pb-free (RoHS compliant) package ¹⁾
- Qualified according AEC Q101


SD199


Type	Package	Configuration	L_S (nH)	Marking
SD199E6327	SOD323	single	1.8	red S

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	30	V
Peak reverse voltage-	V_{RM}	35	
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ... 150	°C
Storage temperature	T_{stg}	-55 ... 150	

¹Pb-containing package may be available upon special request

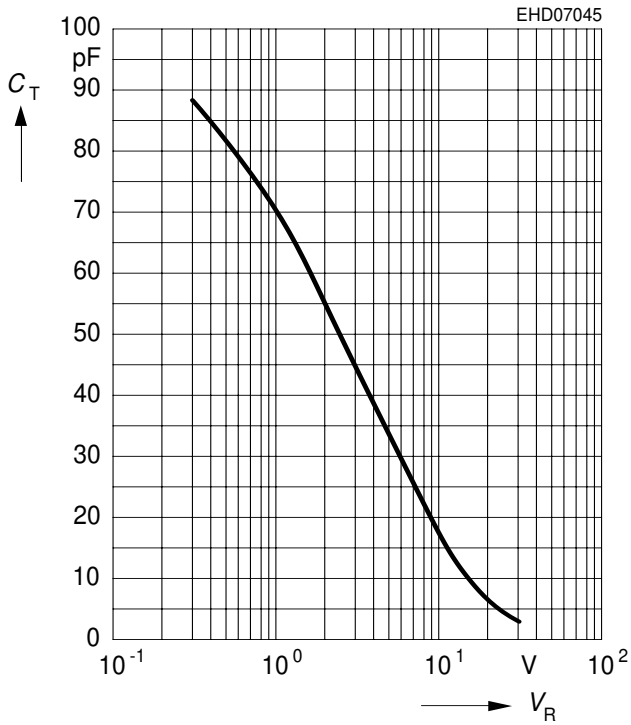
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current $V_R = 30\text{ V}$ $V_R = 30\text{ V}, T_A = 85$	I_R	- -	- -	10 200	nA
AC Characteristics					
Diode capacitance $V_R = 1\text{ V}, f = 1\text{ MHz}$ $V_R = 2\text{ V}, f = 1\text{ MHz}$ $V_R = 25\text{ V}, f = 1\text{ MHz}$ $V_R = 28\text{ V}, f = 1\text{ MHz}$	C_T	62 47 2.85 2.8	69 54 3.18 3.05	76 62 3.6 3.3	pF
Capacitance ratio $V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$	C_{T1}/C_{T28}	19.5	22.6	25	-
Capacitance ratio $V_R = 2\text{ V}, V_R = 25\text{ V}, f = 1\text{ MHz}$	C_{T2}/C_{T25}	15	17	19	
Capacitance matching ¹⁾ $V_R = 1 \dots 28\text{ V}, f = 1\text{ MHz}, 8\text{ diodes sequence}$	$\Delta C_T/C_T$	-	-	2.5	%
Series resistance $V_R = 5\text{ V}, f = 470\text{ MHz}$	r_S	-	1.15	-	Ω

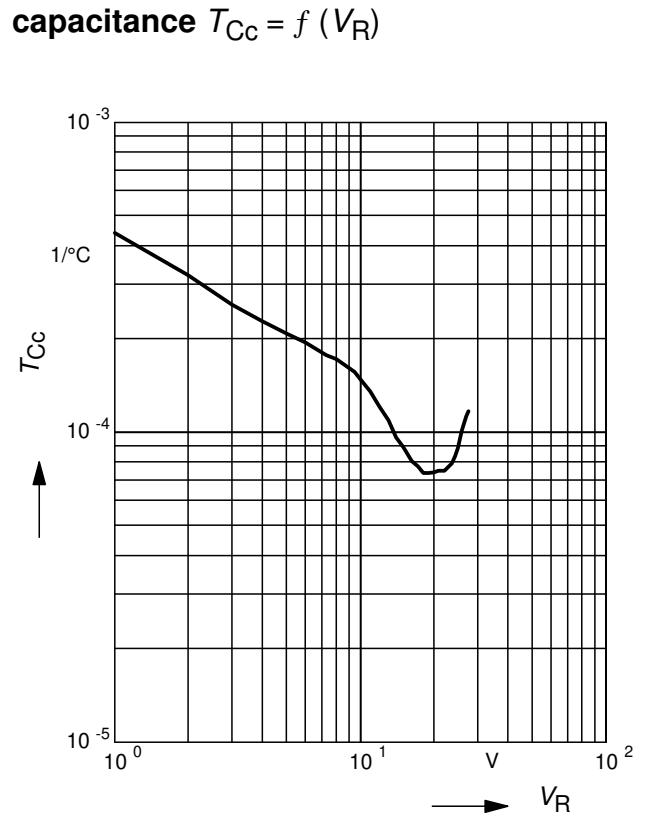
¹For details please refer to Application Note 047.

Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

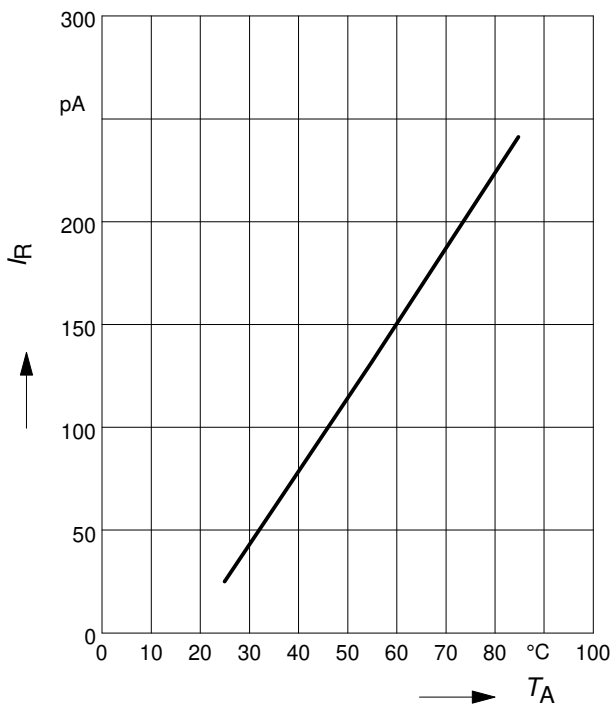


Temperature coefficient of the diode capacitance $T_{Cc} = f(V_R)$



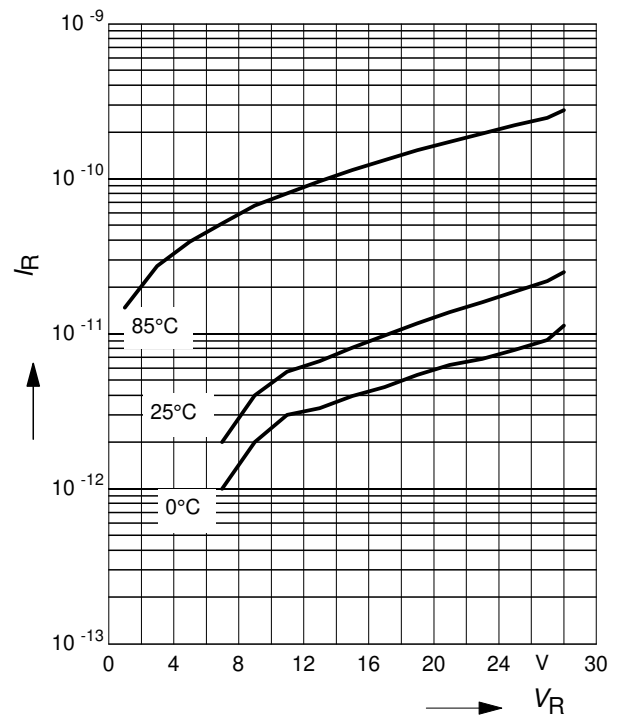
Reverse current $I_R = f(T_A)$

$V_R = 28\text{ V}$

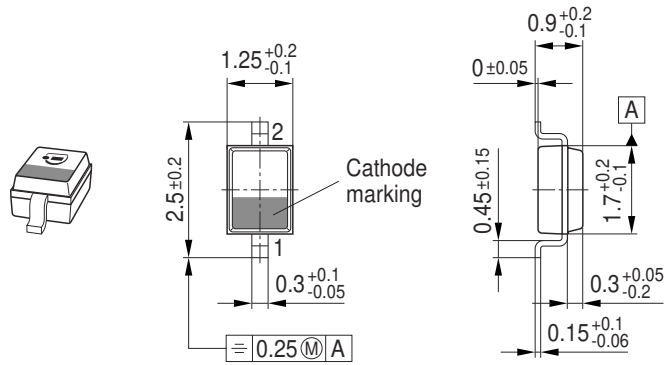


Reverse current $I_R = f(V_R)$

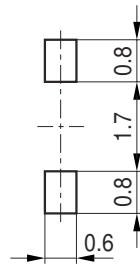
$T_A = \text{Parameter}$



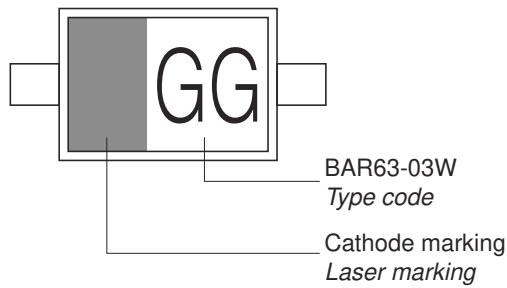
Package Outline



Foot Print

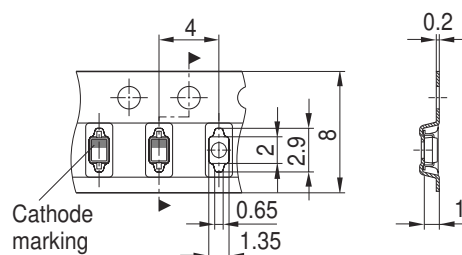


Marking Layout (Example)



Standard Packing

Reel \varnothing 180 mm = 3.000 Pieces/Reel
 Reel \varnothing 330 mm = 10.000 Pieces/Reel



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