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

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

NSR0115CQP6T5G

Two Dual 15 V, 0.1 A Common Cathode Schottky Diodes

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Industry leading smallest surface mount package is excellent for hand−held and portable applications where space is limited.

Features

- Extremely Fast Switching Speed
- Low Forward Voltage − 0.4 V (Max) @ I_F = 10 mA
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

Typical Applications

- Portable Devices (Digital Cameras, MP3 Players … etc)
- Mobile Phones
- Keyboards
- Low Voltage Motor Control (Disc Drives)

MAXIMUM RATINGS (T_J = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	15	V
Forward Current (DC)	I_F	100	mA
Repetitive Peak Forward Current	I_{FRM}	0.3	A
Non−Repetitive Peak Forward Current (t < 1.0 s)	I_{FSM}	2.0	A

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

THERMAL CHARACTERISTICS

Rating	Symbol	Max	Unit
Total Device Dissipation T_A = 25°C Derate above 25°C	P_D (Note 1)	260 2.1	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$ (Note 1)	480	°C/W
Total Device Dissipation T_A = 25°C Derate above 25°C	P_D (Note 2)	360 2.9	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$ (Note 2)	347	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	−55 to +150	°C

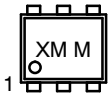
1. FR−4 @ 10 mm^2, 1 oz. copper trace, still air.
2. FR−4 @ 100 mm^2, 1 oz. copper trace, still air.

ON Semiconductor®

http://onsemi.com

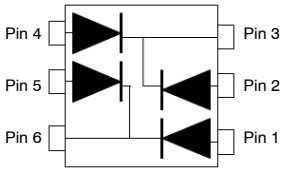
MARKING DIAGRAM

SOT−963
CASE 527AD



XM = Specific Device Code
M = Month Code

PIN CONFIGURATION



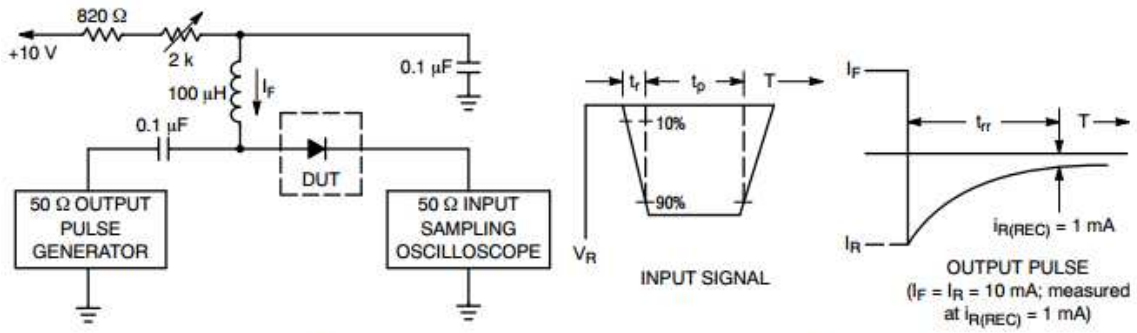
ORDERING INFORMATION

Device	Package	Shipping
NSR0115CQP6T5G	SOT−963 (Pb−Free)	8000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

ELECTRICAL CHARACTERISTICS (T_A = 25°C, Single Diode)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage (I_R = 20 μA)	$V_{(BR)R}$	15	–	Vdc
Total Capacitance (V_R = 1.0 V, f = 1.0 MHz)	C_T	–	8.0	pF
Reverse Leakage (V_R = 10 V)	I_R	–	15	uA
Forward Voltage (I_F = 10 μA)	V_F		0.18	V
Forward Voltage (I_F = 10 mA)	V_F	–	0.4	V
Reverse Recovery Time (I_F = I_R = 10 mA, $I_{R(REC)}$ = 1.0 mA, Figure 1)	t_{rr}	–	5.0	ns



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

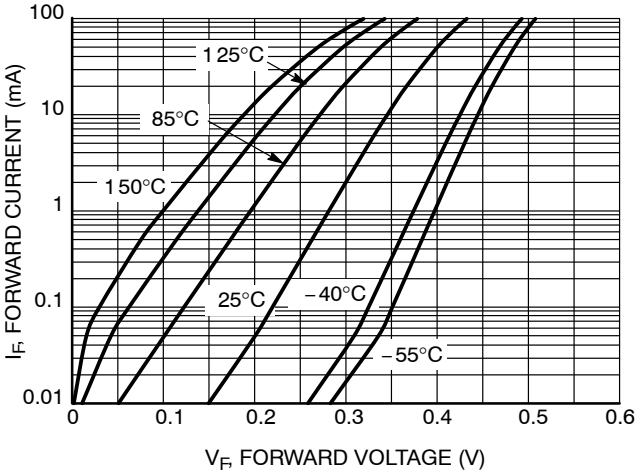


Figure 2. Forward Voltage

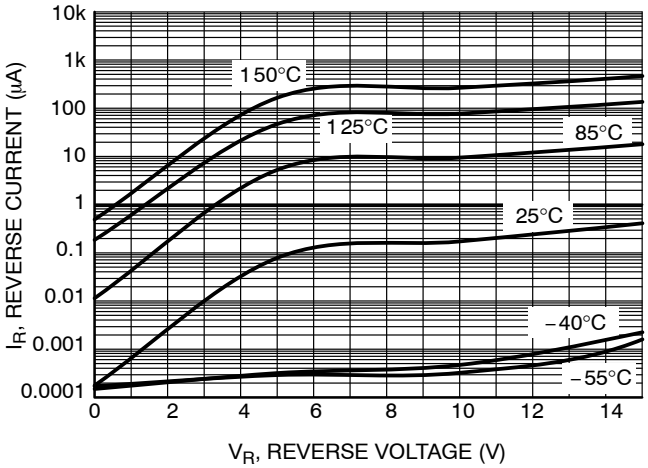


Figure 3. Leakage Current

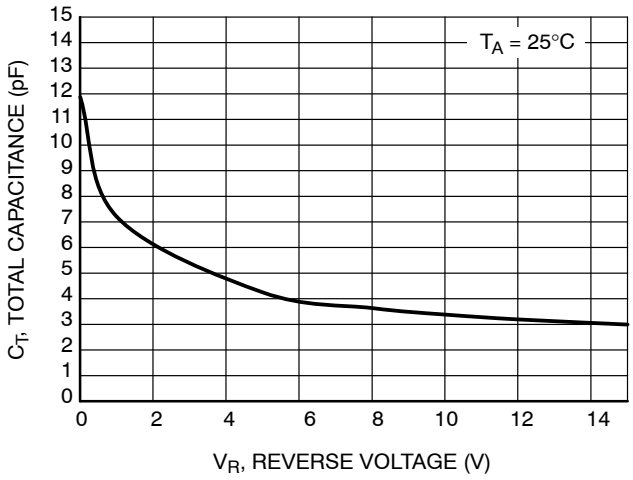
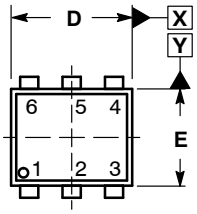


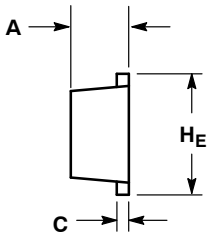
Figure 4. Total Capacitance

PACKAGE DIMENSIONS

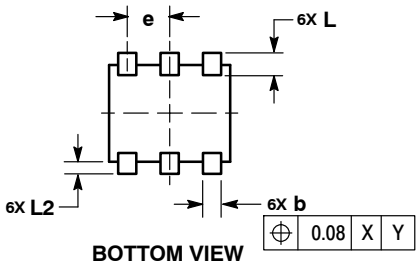
SOT−963
CASE 527AD
ISSUE E



TOP VIEW



SIDE VIEW

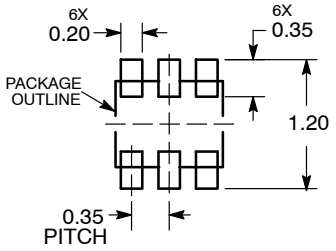


BOTTOM VIEW

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

	MILLIMETERS		
DIM	MIN	NOM	MAX
A	0.34	0.37	0.40
b	0.10	0.15	0.20
C	0.07	0.12	0.17
D	0.95	1.00	1.05
E	0.75	0.80	0.85
e	0.35 BSC		
H_E	0.95	1.00	1.05
L	0.19 REF		
L2	0.05	0.10	0.15

RECOMMENDED MOUNTING FOOTPRINT*



DIMENSIONS: MILLIMETERS

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
Fax: 303−675−2176 or 800−344−3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800−282−9855 Toll Free USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81−3−5817−1050

ON Semiconductor Website: **www.onsemi.com**

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative