



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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DUAL POWER SCHOTTKY RECTIFIERS

60A Pk, 45V

USD335C
USD345C
USD335CHR2
USD345CHR2

2

FEATURES

- Very Low Forward Voltage
- Low Recovered Charge
- Rugged Package Design (TO-3)
- High Efficiency for Low Voltage Supplies
- 45V Blocking @ Rated T_{jmax}
- 50V Repetitive Surge Voltage
- Dual Schottky Rectifier in a Single Package

ABSOLUTE MAXIMUM RATINGS (Total for USD300C Series)

Average Rectified Forward Current, I_O @ $T_C = 100^\circ\text{C}$ 30A

ABSOLUTE MAXIMUM RATINGS (Per Diode)

Working Peak Reverse Voltage V_{RWM} 35V 45V
 DC Blocking Voltage, V_R 35V 45V
 Peak Repetitive Surge Voltage, V_{RSM} @ I_{RM} 42V 54V
 Average Rectified Forward Current, I_O 30A in full wave configuration*
 Non-repetitive Peak
 Surge current (8.3 mS), I_{FSM} 500A
 Peak Reverse Transient Current, I_{RM} 2A
 Storage Temperature Range, T_{stg} -55°C to $+200^\circ\text{C}$
 Peak Operating Junction Temperature, T_{jmax} 175°C
 Thermal Resistance, Junction to Case, $R_{\theta JC}$ 1.4°C/W

* Each Anode Pin Limited to 18A Average.
 Package Capability 30A Average.

ELECTRICAL CHARACTERISTICS ($T_{CASE} = 25^\circ\text{C}$)

Characteristic	Symbol	Limit	Units	Conditions
Maximum Instantaneous Reverse Current	i_R	10 50	mA mA	$T_C = 25^\circ\text{C}$, $V_R = V_{RWM}$ $T_C = 125^\circ\text{C}$ Pulse Width = 400 μS Duty Cycle = 1 percent
Maximum Instantaneous Forward Voltage	V_F	0.57 0.66 0.60	V V V	$i_F = 10\text{A}$, $T_C = 25^\circ\text{C}$ $i_F = 20\text{A}$, $T_C = 25^\circ\text{C}$ $i_F = 20\text{A}$, $T_C = 125^\circ\text{C}$ Pulse Width = 300 μS Duty Cycle = 1 percent
Capacitance	C_t	2000	pF	$V_R = 5.0\text{V}$
Voltage Rate of Change	dv/dt	1000	v/ μS	$V_R = V_{RWM}$

MECHANICAL SPECIFICATIONS

NOTE:
 Leads may be soldered to within $1/16"$ of base provided temperature-time exposure is less than 260°C for 10 seconds.

ANODE 2 ANODE 1
 CASE (CATHODE)

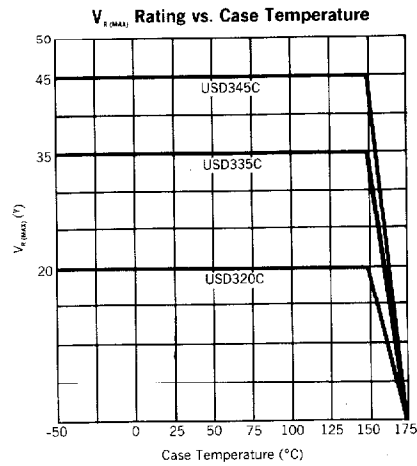
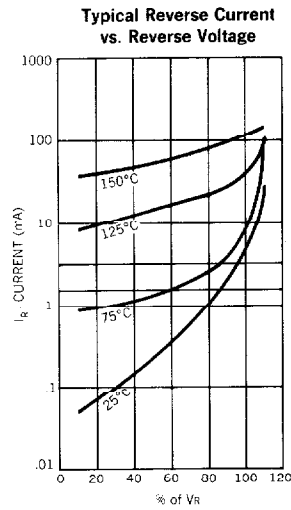
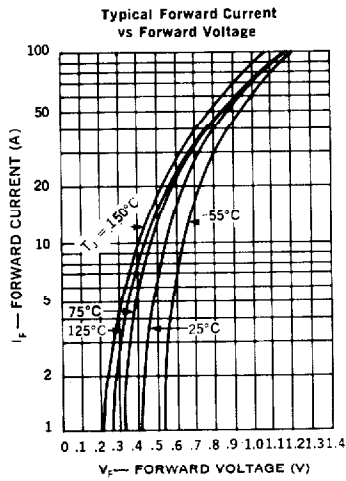
USD300C SERIES
 USD300CHR2 SERIES

	ins.	mm.
A	.875 MAX.	22.23 MAX.
B	.135 MAX.	3.43 MAX.
C	.250-.450	6.35-11.43
D	.312 MIN.	7.92 MIN.
E	.038-.043 DIA.	0.97-1.09 DIA.
F	.188 MAX. RAD.	4.78 MAX. RAD.
G	1.177-1.197	29.90-30.40
H	.655-.675	16.64-17.15
J	.205-.225	5.21-5.72
K	.420-.440	10.67-11.18
L	.525 MAX. RAD.	13.34 MAX. RAD.
M	.151-.161 DIA.	3.84-4.09 DIA.

TO-204AA (TO-3)

Notes: All metal surfaces tin plated.

Microsemi Corp.
Watertown
 The diode experts



OPTIONAL HIGH RELIABILITY (HR2) SCREENING

The following tests are performed on 100% of the devices specified USD335CHR2, 345CHR2.

SCREEN	MIL-STD-750 METHOD	CONDITIONS
1. High Temperature	1032	2411 hours @ $T_A = 150^\circ\text{C}$
2. Temperature Cycle	1051	F, 20 Cycles, -55 to $+150^\circ\text{C}$. No dwell required @ 25°C , $t \geq 10$ min. @ extremes
3. Hermetic Seal a. Fine Leak b. Gross Leak	1071	H, Helium C, Liquid
4. Thermal Impedance		Sage Test
5. Interim Electrical Parameters	GO/NO GO	V_F and I_R @ 25°C
6. High Temperature Reverse Blocking	Similar to Method 1040	$\frac{1}{2}$ Sine Reverse, $t = 48$ Hours, $T_C = 125^\circ\text{C}$, $VRW_M = \text{rating}$, $F = 50-60$ Hz, $I_O = OA$
7. Final Electrical Parameters	GO/NO GO	$V_F + I_R$ @ 25°C PDA = 10% (Final Electricals)