

## CDSV5-4448C2 CDSV6-4448A2 / S2

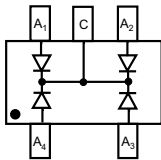
Current :500 mA Voltage:100 Volts

### Features

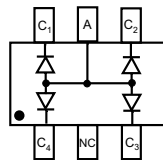
- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

### Features

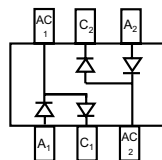
- Case: SOT-353 and SOT-363, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Weight: 0.006 grams (approx.)



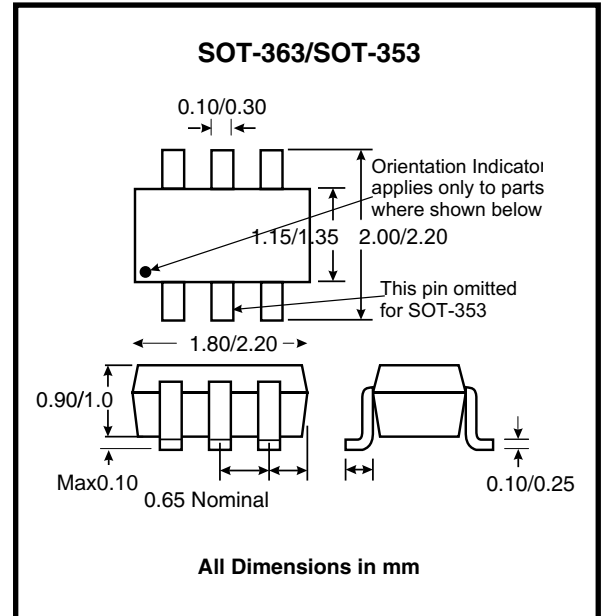
CDSV5-4448C2



CDSV6-4448A2



CDSV6-4448S2



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

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	80	V
RMS Reverse Voltage	$V_{R(RMS)}$	57	V
Forward Continuous Current	$I_{FM}$	500	mA
Average Rectified Output Current	$I_O$	250	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	$I_{FSM}$	4.0 2.0	A
Power Dissipation	$P_d$	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{BR(R)}$	80	—	V	$I_R = 100\mu\text{A}$
Maximum Forward Voltage (Note 2)	$V_{FM}$	0.62 — — —	0.72 0.855 1.0 1.25	V	$I_F = 5.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 100\text{mA}$ $I_F = 150\text{mA}$
Maximum Peak Reverse Current (Note 2)	$I_{RM}$	—	100 50 30 25	nA $\mu\text{A}$ $\mu\text{A}$ nA	$V_R = 70\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ $V_R = 20\text{V}$
Junction Capacitance	$C_j$	—	3.5	pF	$V_R = 6\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	4.0	ns	$V_R = 6\text{V}, I_F = 5\text{mA}$

Notes: 2. Short duration pulse test used to minimize self-heating effect.

## Rating and Characteristic Curves

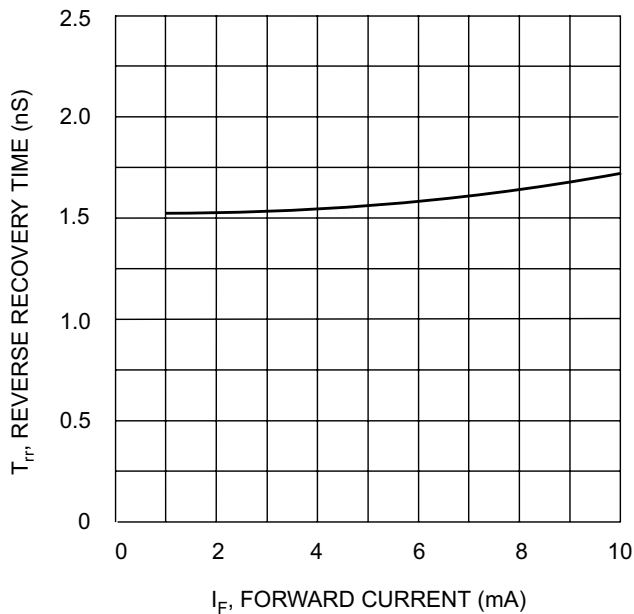


Fig. 1. Reverse Recovery Time vs. Forward Current

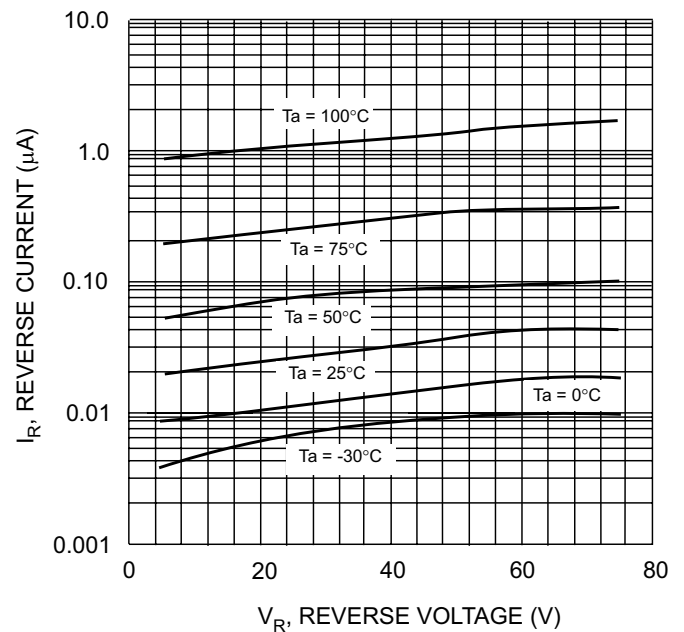


Fig. 2 Reverse Current vs Reverse Voltage

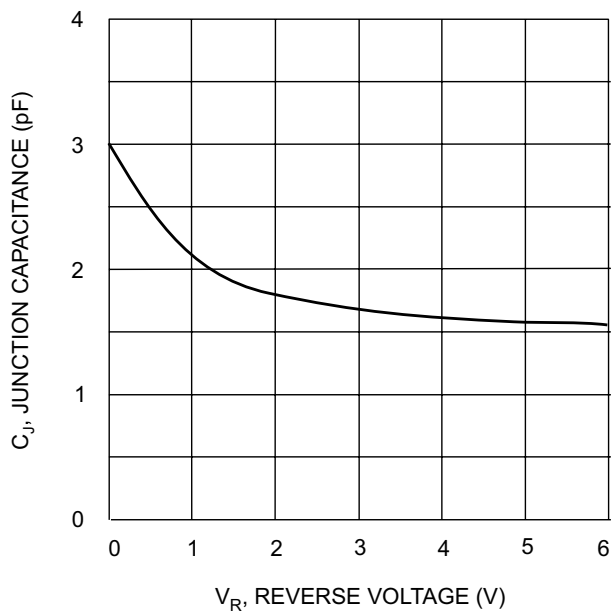


Fig. 3. Typical Junction Capacitance vs. Reverse Voltage

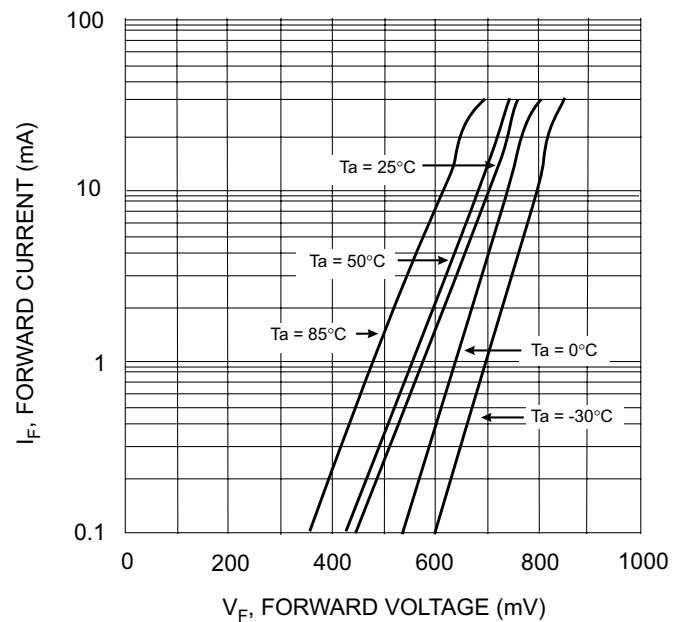


Fig. 4 Forward Current vs. Forward Voltage