

POWER SCHOTTKY RECTIFIERS

40A Av, Up to 45V

USD4030C
USD4040C
USD4045C

2

FEATURES

- Economical Convenient TO-3P Package
- Insulated Mounting Hole
- Can Be Clip Mounted
- Mechanically Rugged
- Low Thermal Resistance
- Extremely Low V_F

DESCRIPTION

The USD4000C Series, in the economical, convenient TO-3P package, is specifically designed for operation in power switching circuits to frequencies in excess of 100kHz. The very low forward voltage and low recovered charge translates to extremely high efficiency making them particularly suited for low voltage switching type power supplies.

ABSOLUTE MAXIMUM RATINGS, either leg unless noted

	USD4030C	USD4040C	USD4045C
Working Peak Inverse Voltage	V_{RWM}, V_{RRM} 30V	40V	45V
D.C. Blocking Voltage	V_R 30V	40V	45V
Peak Repetitive Surge Voltage	$V_{RSM} @ I_{RM}$ 36V	48V	54V
Maximum Average D.C. Output Current @ $T_C = 125^\circ\text{C}$, full wave operation (see curves)	$I_F(AV)$	40A	
Non-Repetitive Sinusoidal Surge Current, 8.3ms	I_{FSM}	400A	
Peak Reverse Transient Current	I_{RM}	2A	
Thermal Resistance Junction to Case	$R_{\theta JC}$	1.4°C/W	
Thermal Resistance Junction to Ambient either leg, or both legs together	$R_{\theta JA}$	40°C/W	
Operating and Storage Temperature Range	T_{OP}, T_{STG}	-55°C to +150°C	

ELECTRICAL SPECIFICATIONS

Type	V_{RWM}	Maximum Forward Voltage (V_F)		Maximum Reverse Current (I_R) @ V_{RWM}		Maximum Capacitance C_T at $V_R = 5.0V$	Voltage Rate of Change (dv/dt)
		$T_J = 25^\circ\text{C}$	$T_J = 125^\circ\text{C}$	$T_J = 25^\circ\text{C}$	$T_J = 125^\circ\text{C}$		
USD4030C	30V	0.65 @ 20A	0.60 @ 20A	10mA	50mA	2000pF	1000V/ μs
USD4040C	40V						
USD4045C	45V						

MECHANICAL SPECIFICATIONS



