

DUAL POWER SCHOTTKY RECTIFIERS

16A Av, up to 50V

USD735C
USD740C
USD745C
USD750C

2

FEATURES

- Very Low Forward Voltage
- Reverse Transient Capability
- Economical Convenient Plastic Package
- Mechanically Rugged
- 50V Working Voltage @ Rated $T_{j(max)}$

DESCRIPTION

The USD700C series of power Schottky rectifiers, in the industry standard TO-220 package, is specifically designed for operation in power switching circuits to frequencies in excess of 100 KHz. The series combines Schottky rectifiers in one convenient package; thus, simplifying installation, reducing heatsink requirements and component parts count.

ABSOLUTE MAXIMUM RATINGS (Per Diode Unless Otherwise Noted)

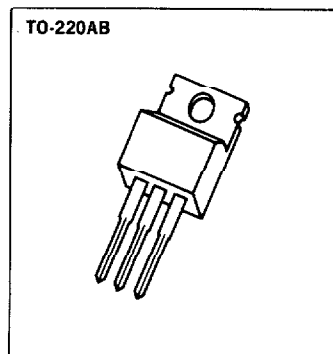
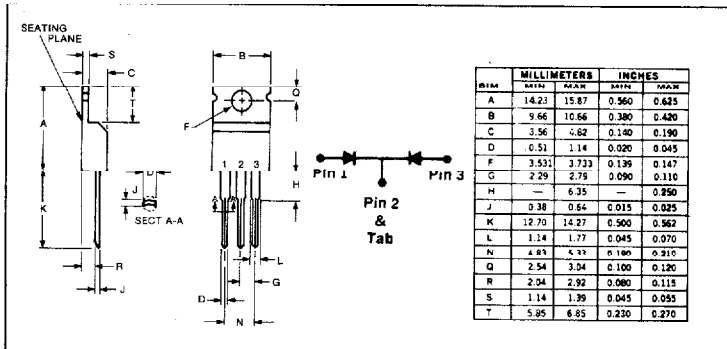
	USD735C	USD740C	USD745C	USD750C
Working Peak Reverse Voltage, V_{RWM}	.35V	.40V	.45V	.50V
DC Blocking Voltage, V_R	.35V	.40V	.45V	.50V
Peak Repetitive Surge Voltage, V_{RSM} @ I_{RM}	.42V	.48V	.54V	.60V
Average Rectified Forward Current @ $T_C = 115^\circ\text{C}$, I_o^*	.16A			
Non-repetitive Peak Surge Current (8.3ms), I_{FSM}	200A			
Peak Reverse Transient Current, I_{RM}	1A			
Operating Junction Temperature, T_j	150°C			
Storage Temperature Range, T_{stg}	-55°C to +150°C			
Thermal Resistance, Junction to Case, $R_{\theta jc}$	2.8°C/W			

*Full Wave Center-Tap; I_o (AV) 20KHz Square Wave

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^\circ\text{C}$) (Per Diode)

CHARACTERISTIC	SYMBOL	LIMIT	UNITS	CONDITIONS
Maximum Instantaneous Reverse Current	i_R	5	mA	$V_R = V_{RWM}$ Pulse Width = 400 μs Duty Cycle = 1 percent
Maximum Instantaneous Reverse Current	I_R	50	mA	$V_R = V_{RWM}$ Pulse Width = 400 μs Duty Cycle = 1 percent $T_C = 125^\circ\text{C}$
Maximum Instantaneous Forward Voltage	V_F	0.55	V	$i_F = 8A$ $i_F = 16A$ } $T_C = 125^\circ\text{C}$
		0.65	V	
		0.48 0.60	V	
Capacitance	C_t	1000	pF	$V_R = 5V$
Voltage Rate of Change	dv/dt	1000	V/ μs	$V_R = V_{RWM}$

MECHANICAL SPECIFICATIONS



Microsemi Corp.
Watertown
The diode experts

