



AUTOMOTIVE SILICON RECTIFIERS TYPE 40A

Features

- High Surge Capability
- High Current Capability
- Types up to 1000V V_{RRM}
- Open junction

Maximum Ratings

Operating Temperature: -50 °C to +150 °C
Storage Temperature: -50 °C to +150 °C

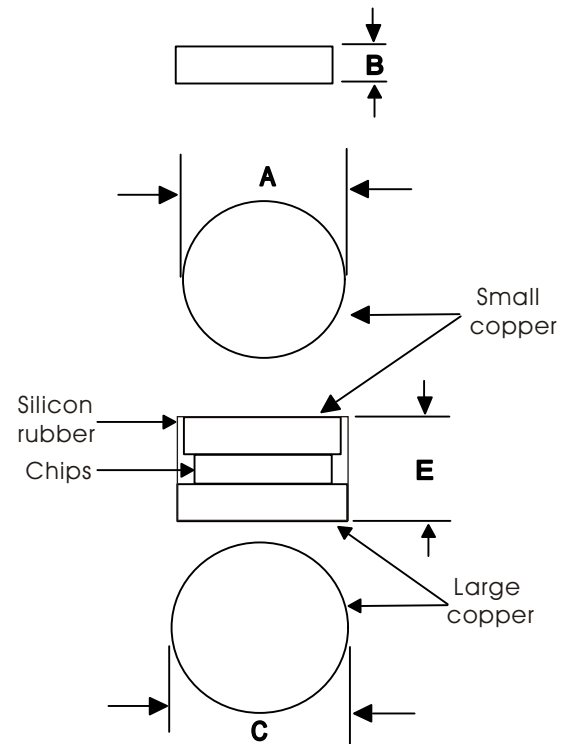
Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SC4001	50V	35V	50V
SC4002	100V	70V	100V
SC4003	200V	140V	200V
SC4004	400V	280V	400V
SC4005	600V	420V	600V
SC4006	800V	560V	800V
SC4007	1000V	700V	1000V

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	40 A	$T_C = 100^\circ C$
Peak Forward Surge Current	I_{FSM}	650A	8.3ms, Halfsine
Maximum Instantaneous Forward Voltage *	V_F	1.0V	$I_{FM} = 40A;$ $T_J = 25^\circ C$
Maximum Instantaneous DC Reverse Current At Rated DC Blocking Voltage	I_R	10 uA 500 uA	$T_J = 25^\circ C$ $T_J = 150^\circ C$
Maximum thermal resistance, junction to Ambient	$R_{\theta JA}$	1.0 °C /w	
Typical Junction Capacitance	C_j	300pF	Measured at 1.0MHz, $V_R = 4.0V$

*Pulse Test: Pulse Width 300 usec, Duty Cycle 2%

**40Amp
SOZA CELL
50-1000 Volts**



DIM	INCHES	MM	NOTE
	A	.2580	
B	.0394	1.00	
C	.2841	7.23	
D	.0295	.750	
E	.0866	2.20	



FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

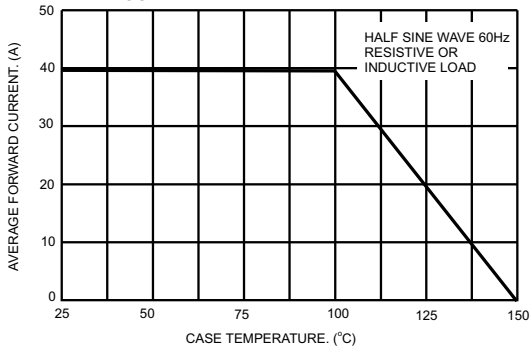


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

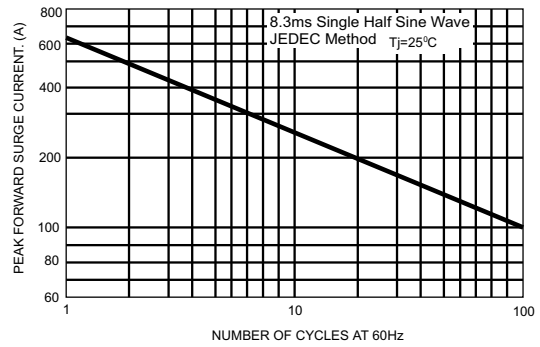


FIG.3- TYPICAL FORWARD CHARACTERISTICS

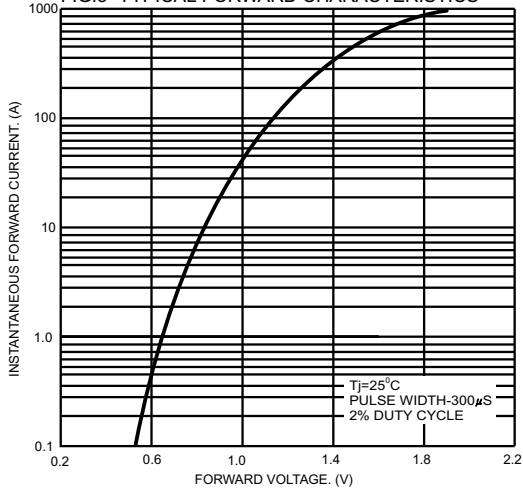


FIG.4- TYPICAL REVERSE CHARACTERISTICS

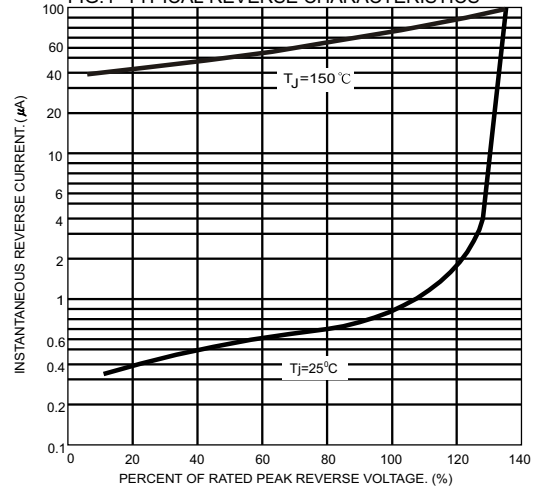


FIG.5- TYPICAL JUNCTION CAPACITANCE

