WON-TOP ELECTRONICS

S40D30C – S40D100C

40A DUAL SCHOTTKY BARRIER RECTIFIER

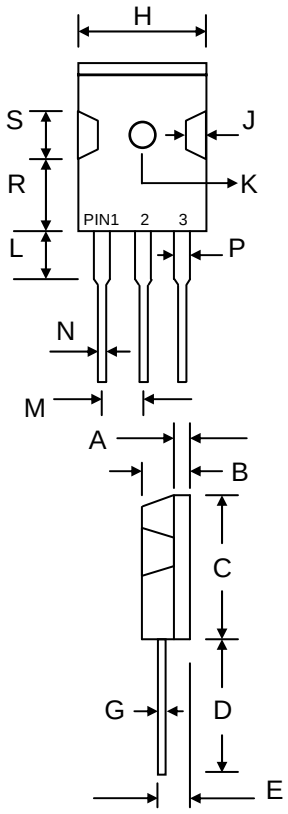
RoHS Pb

Features

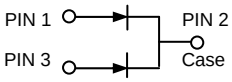
- Schottky Barrier Chip
- Guard Ring for Transient Protection
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Current Capability
- Epoxy Meets UL 94V-0 Classification
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: TO-3P, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 1.2 N.m Max.
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



TO-3P		
Dim	**Min**	**Max**
A	1.85	2.15
B	4.70	5.30
C	—	23.00
D	19.00	—
E	2.80	3.20
G	0.45	0.85
H	—	16.20
J	1.70	2.70
K	3.15 Ø	3.65 Ø
L	—	4.50
M	5.25	5.65
N	1.10	1.40
P	—	2.50
R	11.70	12.70
S	5.00	6.00
All Dimensions in mm		



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	S40D 30C	S40D 35C	S40D 40C	S40D 45C	S40D 50C	S40D 60C	S40D 80C	S40D 100C	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	80	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	35	42	56	70	V
Average Rectified Output Current Total Device @T_C = 100°C Per Diode	I_O	40 20								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	300								A
Forward Voltage per diode @I_F = 20A, T_J = 25°C @I_F = 20A, T_J = 125°C	V_{FM}	0.70 0.60				0.75 0.65		0.85 0.75		V
Peak Reverse Current @T_J = 25°C At Rated DC Blocking Voltage @T_J = 100°C	I_{RM}	1.0 20								mA
Typical Junction Capacitance (Note 1)	C_J	1100				650				pF
Thermal Resistance Junction to Ambient per diode Thermal Resistance Junction to Case per diode	$R_{\theta JA}$ $R_{\theta JC}$	40 1.4								°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150								°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

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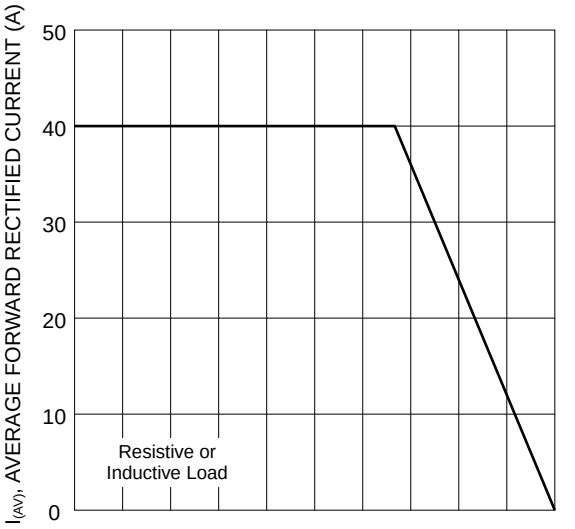


Fig. 1 Forward Current Derating Curve

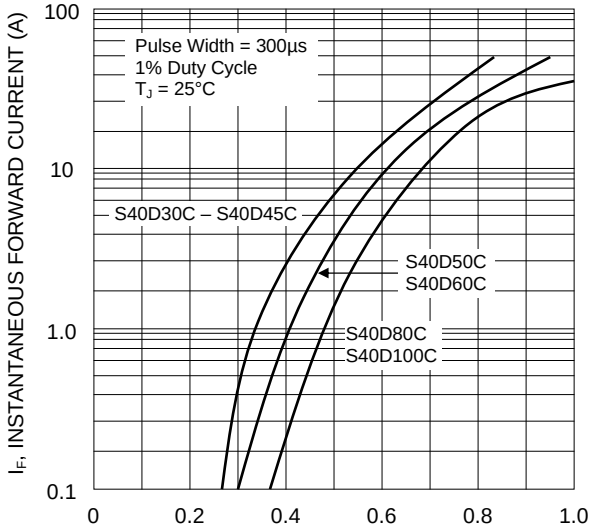


Fig. 2 Typical Forward Characteristics

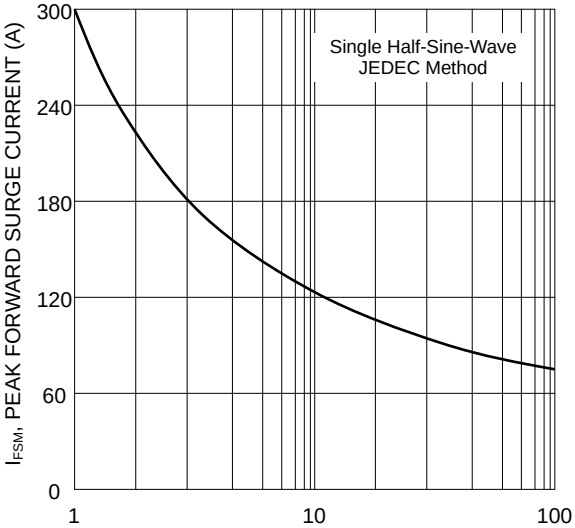


Fig. 3 Forward Surge Current Derating Curve

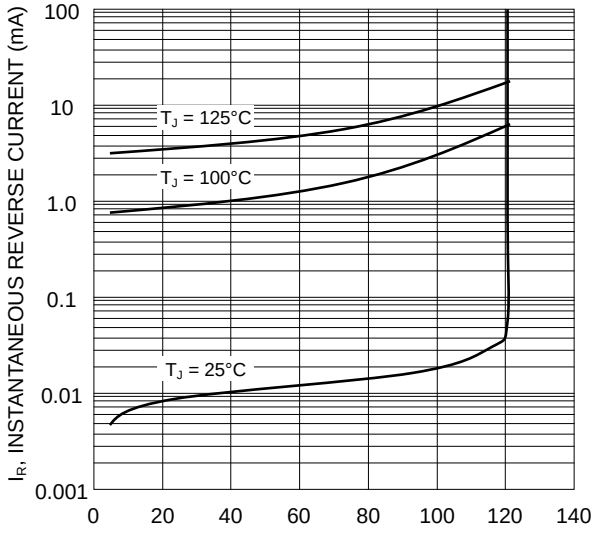


Fig. 4 Typical Reverse Characteristics

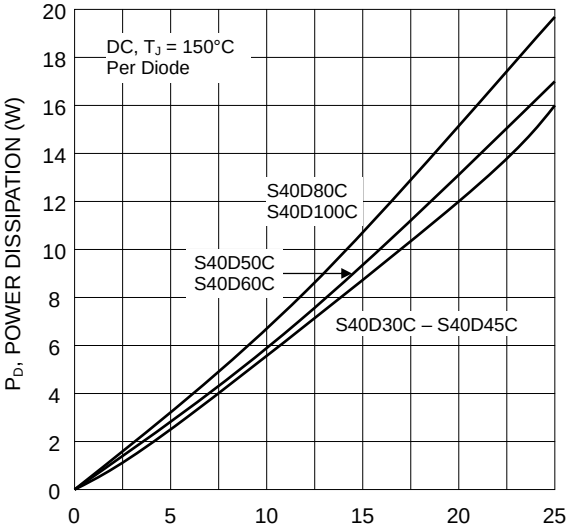


Fig. 5 Forward Power Dissipation

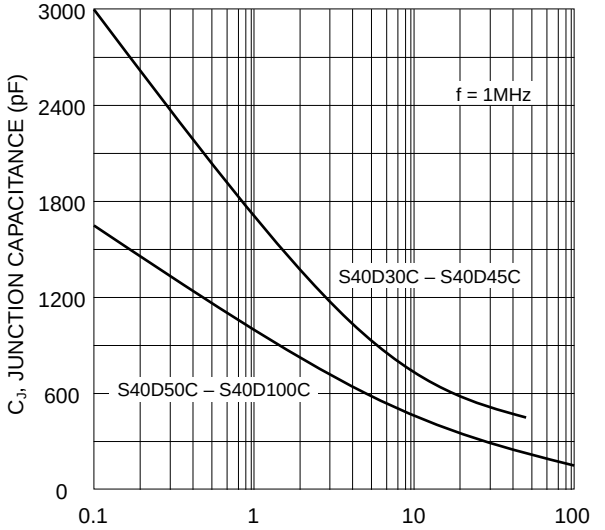
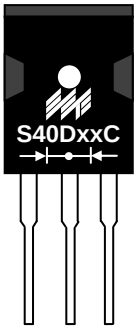


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



S40DxxC = Device Number
xx = 30, 35, 40, 45, 50, 60, 80 or 100
Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
505 x 46 x 6.5	30	520 x 145 x 95	1,200	540 x 306 x 115	2,400	18.0

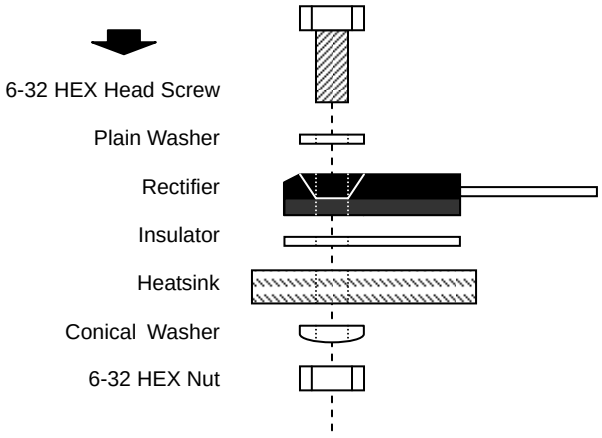
Note: 1. Anti-static tube, water clear color.

RECOMMENDED SCREW MOUNTING ARRANGEMENT

Recommended isolated mounting when screw is at heatsink potential. 6-32 hardware is used.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package.

The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation.



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ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
S40D30C	TO-3P	30 Units/Tube
S40D35C	TO-3P	30 Units/Tube
S40D40C	TO-3P	30 Units/Tube
S40D45C	TO-3P	30 Units/Tube
S40D50C	TO-3P	30 Units/Tube
S40D60C	TO-3P	30 Units/Tube
S40D80C	TO-3P	30 Units/Tube
S40D100C	TO-3P	30 Units/Tube

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, S40D30C-LF**.

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We power your everyday.