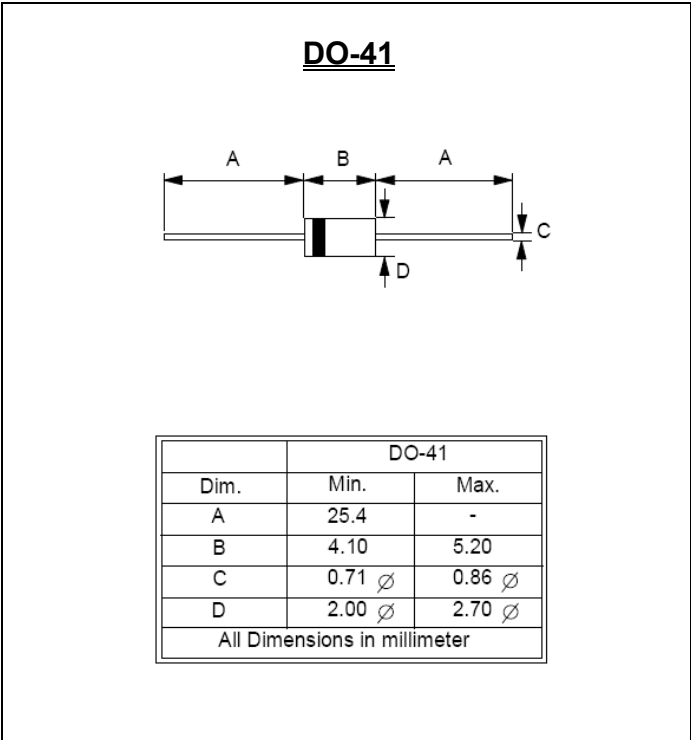


**SCHOTTKY BARRIER RECTIFIERS**

**REVERSE VOLTAGE - 20 to 40 Volts**  
**FORWARD CURRENT - 1.0 Amperes**

- FEATURES**
- Metal-Semiconductor junction with guard ring
  - Epitaxial construction
  - Low forward voltage drop
  - High current capability
  - The plastic material carries UL recognition 94V-0
  - For use in low voltage, high frequency inverters, free wheeling, and polarity protection application
  - IEC 61000-4-2, level 4 (ESD), > 15KV (air)
- MECHANICAL DATA**
- Case: JEDEC DO-41 molded plastic
  - Polarity: Color band denotes cathode
  - Weight: 0.012 ounces, 0.34 grams
  - Mounting position: Any

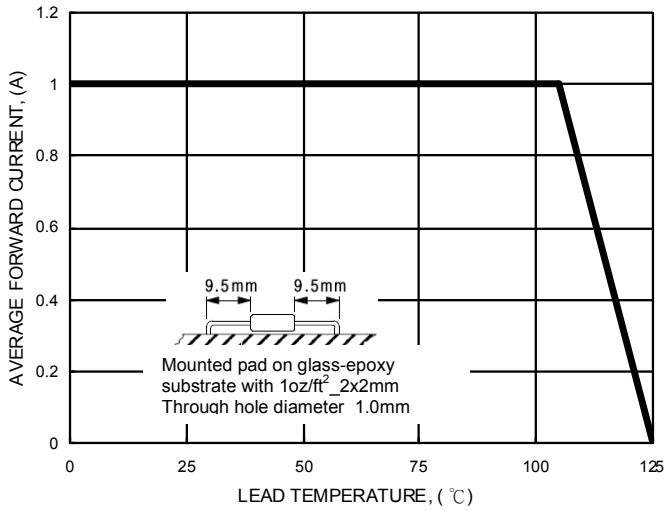


**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**  
 Ratings at 25°C ambient temperature unless otherwise specified.

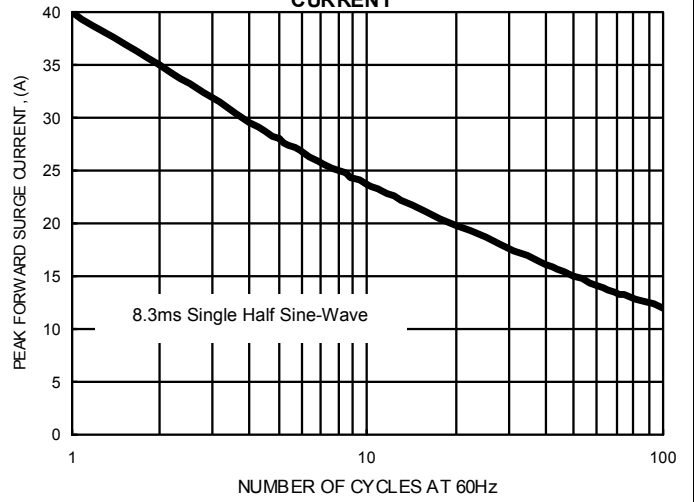
CHARACTERISTICS	SYMBOL	SB120	SB130	SB140	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	VDC	20	30	40	V
Maximum Average Forward Rectified Current 0.395" (9.5mm) Lead length @ $T_L=105^\circ\text{C}$	$I_{AV}$	1.0			A
Peak Forward Surge 8.3ms single half sine-wave super imposed on rated load	$I_{FSM}$	40			A
Maximum forward Voltage at 1.0A DC	$V_F$	0.5			V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_J=100^\circ\text{C}$	$I_R$	0.1 10			mA
Typical Junction Capacitance(Note 1)	$C_j$	50			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	35			$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to +125			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150			$^\circ\text{C}$

Note : (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
 (2) Thermal Resistance Junction to Lead

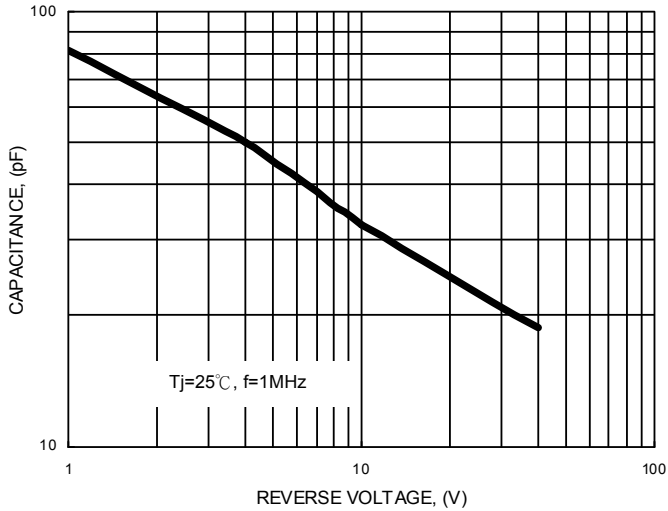
**FIG.1- FORWARD CURRENT DERATING CURVE**



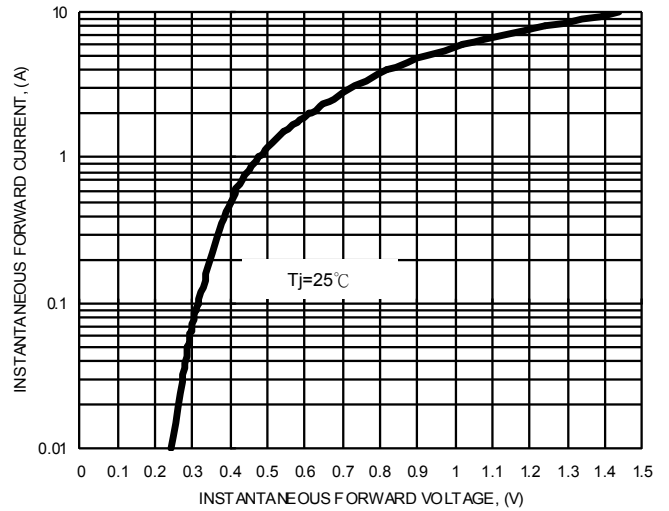
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



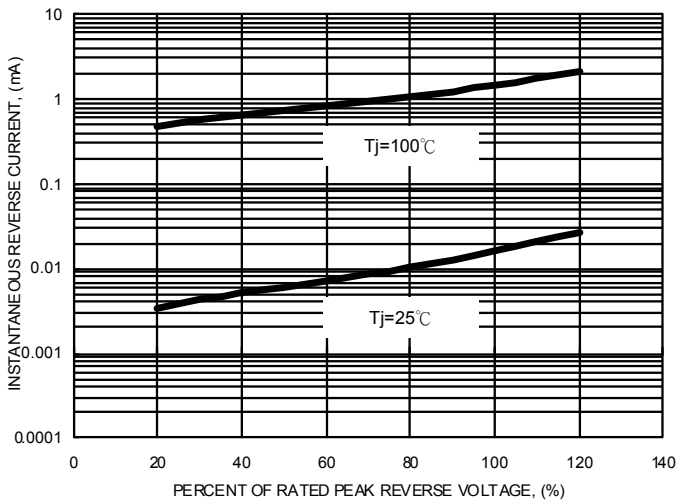
**FIG.3- TYPICAL JUNCTION CAPACITANCE**



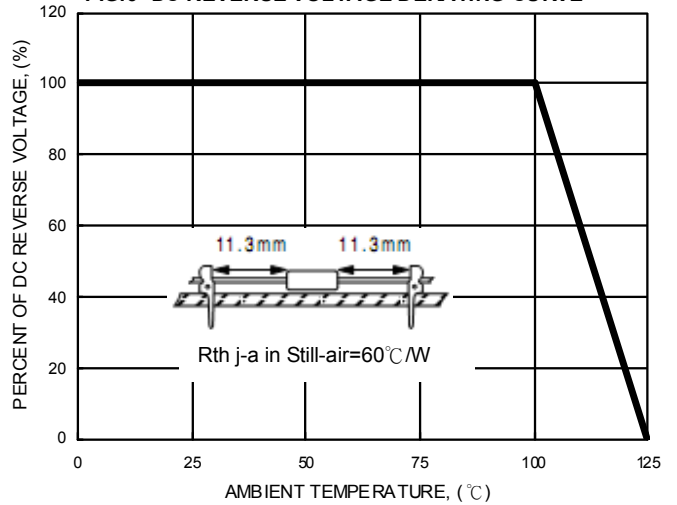
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



**FIG.6- DC REVERSE VOLTAGE DERATING CURVE**



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