



**DIOTEC ELECTRONICS CORP.**  
 18020 Hobart Blvd., Unit B  
 Gardena, CA 90248 U.S.A  
 Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SBBDT-4000-1B

## 40 AMP SCHOTTKY BARRIER RECTIFIERS

### FEATURES

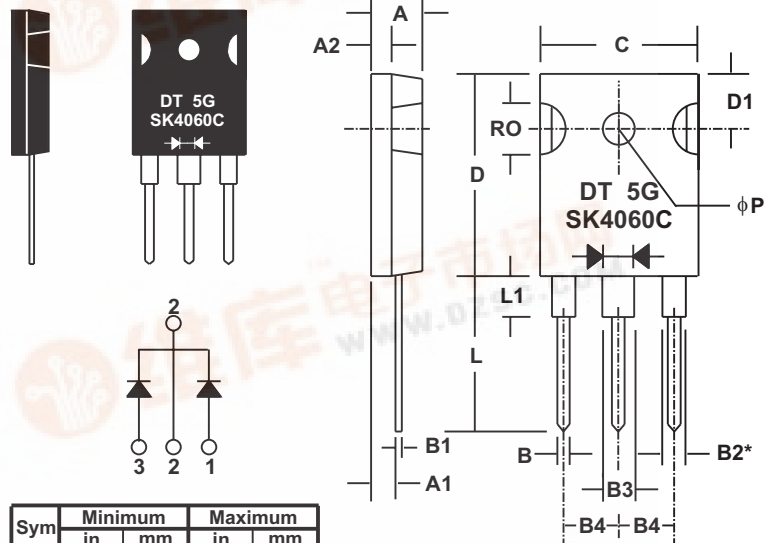
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

### MECHANICAL DATA

- Case: TO-247 (TO-3P) molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.20 Ounces (5.5 Grams)

### MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-247AB  
(TO-3PAB) PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
RO	0.209	5.3	0.224	5.7
φP	0.13	3.3	0.145	3.7

\*Applies to Pins 1 and 3

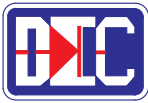
TO-247AB (TO-3PAB)

SERIES SK4040C - SK40100C

### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
		SK 4040C	SK 4050C	SK 4060C	SK 4070C	SK 40100C	
Series Number							
Maximum DC Blocking Voltage	V <sub>RM</sub>	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V <sub>RMS</sub>						
Maximum Peak Recurrent Reverse Voltage	V <sub>R</sub> RM						
Average Forward Rectified Current @ T <sub>c</sub> = 85 °C	I <sub>O</sub>	40					AMPS
Peak Forward Surge Current ( 8.3mS single half sine wave superimposed on rated load)	I <sub>FSM</sub>	200					
Maximum Forward Voltage Drop (per diode) at 20 Amps	V <sub>FM</sub>	0.6		0.7		0.92	VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage	I <sub>RM</sub>	2.0			2.0		mA
		100			50		
Typical Thermal Resistance, Junction to Case (on heat sink)	R <sub>θJC</sub>	1.2					°C/W
Junction Operating Temperature Range	T <sub>J</sub>	-65 to +150					°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +175					



## 40 AMP SCHOTTKY BARRIER RECTIFIERS

### RATING & CHARACTERISTIC CURVES FOR SK4040C - SK40100C SERIES

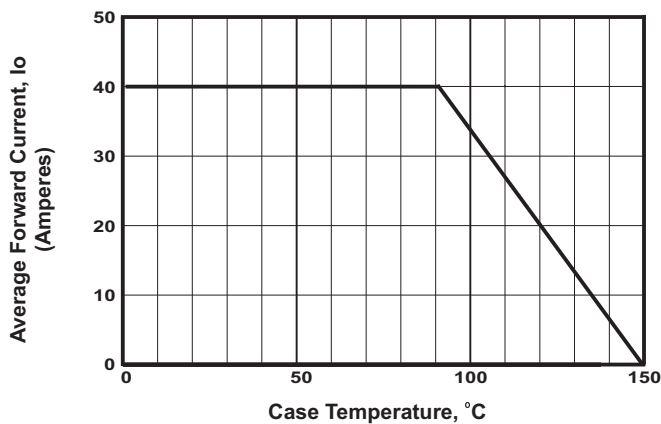


FIGURE 1. FORWARD CURRENT DERATING CURVE

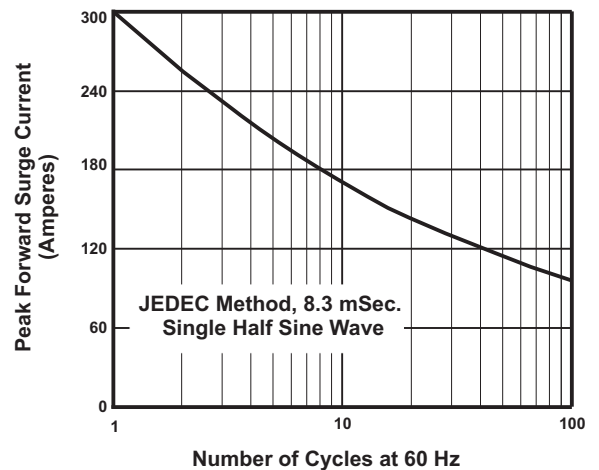


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

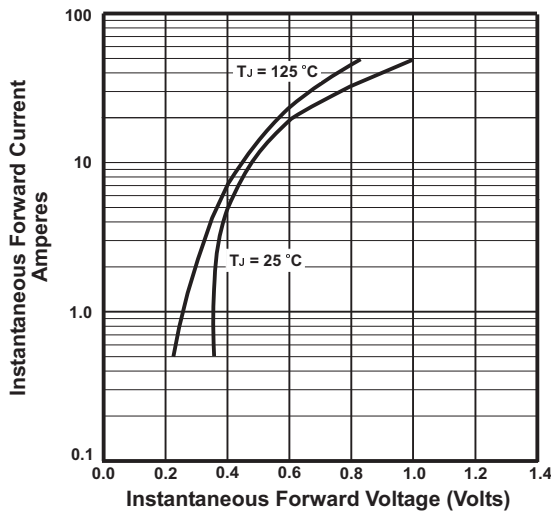


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

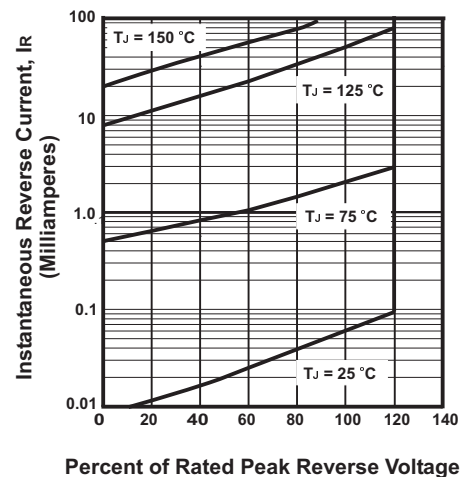


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

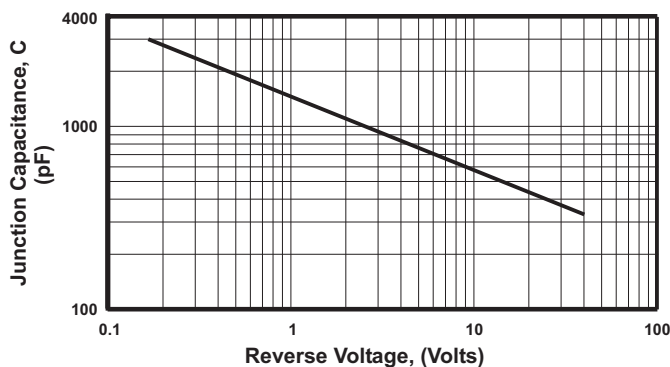


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

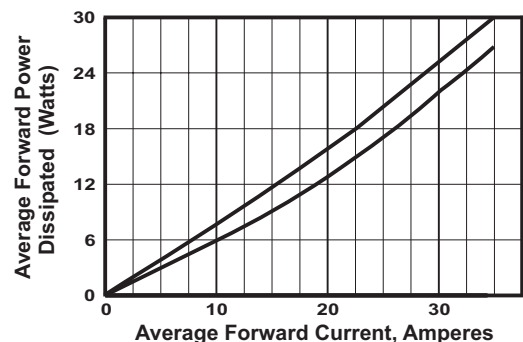


FIGURE 6. FORWARD POWER DISSIPATION