



**SBL3045C**

Preliminary

**DIODE**

**LOW DROP POWER SCHOTTKY RECTIFIER**

■ DESCRIPTION

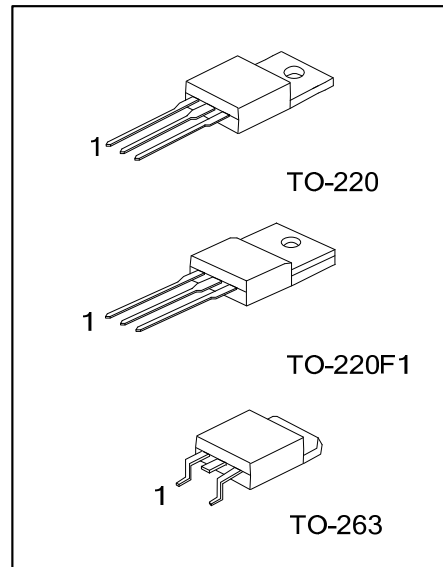
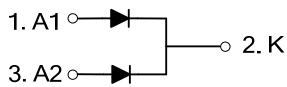
The UTC **SBL3045C** is a dual center tap schottky rectifiers, it uses UTC's advanced technology to provide the customers with low forward voltage, high switching speed and low thermal resistance, etc.

The UTC **SBL3045C** is suitable for high frequency DC-DC converter and switched mode power supplies, etc.

■ FEATURES

- \* High switching speed
- \* Low forward voltage drop
- \* Low thermal resistance

■ SYMBOL



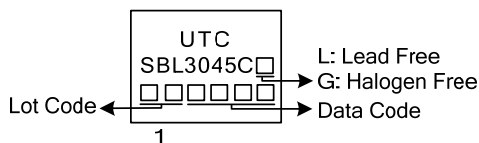
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
SBL3045CL-TA3-T	SBL3045CG-TA3-T	TO-220	A1	K	A2	Tube
SBL3045CL-TF1-T	SBL3045CG-TF1-T	TO-220F1	A1	K	A2	Tube
SBL3045CL-TQ2-T	SBL3045CG-TQ2-T	TO-263	A1	K	A2	Tube
SBL3045CL-TQ2-R	SBL3045CG-TQ2-R	TO-263	A1	K	A2	Tape Reel

Note: Pin Assignment: A1: Anode K: Cathode A2: Anode

<p>SBL3045CL-TA3-T</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) T: Tube</li> <li>(2) TA3 : TO-220, TF1: TO-220F1, TQ2: TO-263</li> <li>(3) L: Lead Free, G: Halogen Free and Lead Free</li> </ul>
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■ MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Recurrent Peak Reverse Voltage		$V_{RRM}$	45	V
RMS Voltage		$V_{RWM}$	45	V
RMS Reverse Voltage		$V_{R(RMS)}$	32	V
DC Blocking Voltage		$V_R$	45	V
Average Forward Rectified Current	Per Leg	$I_o$	15	A
	Per Package		30	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load Per Diode		$I_{FSM}$	180	A
Critical Rate of Rise of Reverse Voltage		$dV/dt$	10000	V/ $\mu\text{s}$
Operating Junction Temperature		$T_J$	150	$^{\circ}\text{C}$
Storage Temperature		$T_{STG}$	-65~+150	$^{\circ}\text{C}$

Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2.  $\frac{dP_{tot}}{dT_J} < \frac{1}{R_{th(j-a)}}$  thermal runaway condition for a diode on its own heatsink

■ THERMAL RESISTANCES

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient		$\theta_{JA}$	62.5	$^{\circ}\text{C/W}$
Junction to Case	TO-220/TO-263	$\theta_{JC}$	1.60	$^{\circ}\text{C/W}$
	TO-220F1		3.31	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	45			V
Forward Voltage Drop	$V_{FM}$	$T_J=25^{\circ}\text{C}$ , $I_F=15\text{A}$		0.56	0.62	V
		$T_J=125^{\circ}\text{C}$ , $I_F=15\text{A}$			0.57	V
Leakage Current (Note 3)	$I_{RM}$	$V_R=V_{RM}$ , $T_J=25^{\circ}\text{C}$			1	mA
		$V_R=V_{RM}$ , $T_J=125^{\circ}\text{C}$			75	mA

Notes: 1. Pulse Test: 380 $\mu\text{s}$  pulse width, 2% duty cycle.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Short duration pulse test used to minimize self-heating effect.

4. Thermal resistance junction to case mounted on heatsink.

5. Mounted on an FR4 PCB, single-sided copper, with 100  $\text{cm}^2$  copper pad area.

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