



SBL3045C

Preliminary

DIODE

LOW DROP POWER SCHOTTKY RECTIFIER

■ DESCRIPTION

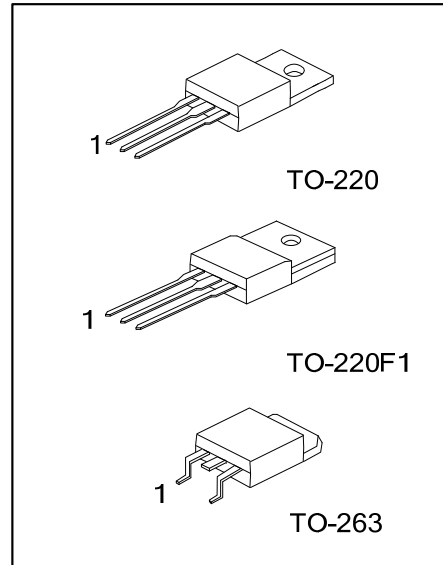
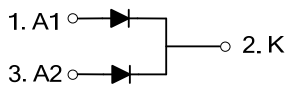
The UTC **SBL3045C** is a dual center tap schottky rectifiers, it uses UTC's advanced technology to provide the customers with low forward voltage, high switching speed and low thermal resistance, etc.

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



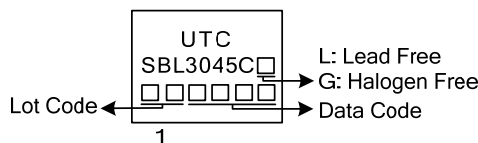
■ ORDERING INFORMATION

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"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) T: Tube (2) TA3 : TO-220, TF1: TO-220F1, TQ2: TO-263 (3) L: Lead Free, G: Halogen Free and Lead Free
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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/ μs
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		θ_{JA}	62.5	$^\circ\text{C/W}$
Junction to Case	TO-220/TO-263	θ_{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 μs 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 cm² copper pad area.

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