



**SBL3045C**

Preliminary

**DIODE**

**LOW DROP POWER  
SCHOTTKY RECTIFIER**

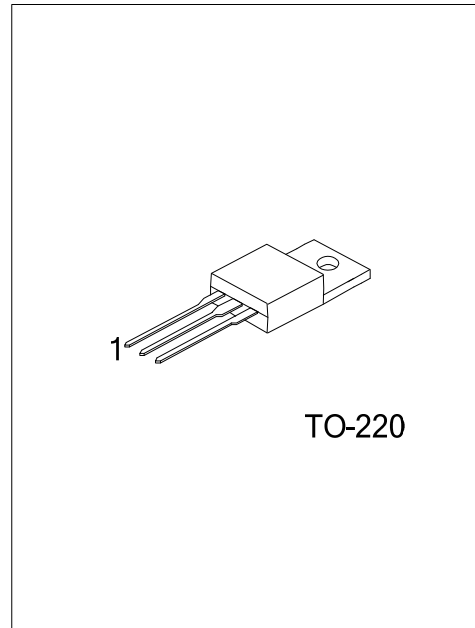
■ **DESCRIPTION**

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



■ **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

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) Halogen Free</li> </ul>	<ul style="list-style-type: none"> <li>(1) T: Tube</li> <li>(2) TA3 : TO-220</li> <li>(3) G: Halogen Free, L: Lead Free</li> </ul>
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■ **ABSOLUTE MAXIMUM RATINGS** (limiting values, per diode)

PARAMETER		SYMBOL	RATINGS	UNIT
Peak Reverse Voltage		$V_{RM}$	45	V
RMS Forward Current		$I_{F(RMS)}$	30	A
Average Forward Current	$T_c=135^{\circ}C, \delta=0.5$	$I_{F(AV)}$	30	A
Surge Non Repetitive Forward Current	$t_p=10ms$ Sinusoidal	$I_{FSM}$	220	A
Repetitive Peak Reverse Current	$t_p=2\mu s$ Square $F=1KHz$	$I_{RRM}$	1	A
Non Repetitive Peak Reverse Current	$t_p=100\mu s$ Square	$I_{RSM}$	3	A
Repetitive Peak Avalanche Power	$t_p=1\mu s, T_J=25^{\circ}C$	$P_{ARM}$	6000	W
Critical Rate of Rise of Reverse Voltage		$dV/dt$	10000	V/ $\mu s$
Storage Temperature		$T_{STG}$	-65~+150	$^{\circ}C$
Operating Junction Temperature (Note 2)		$T_J$	150	$^{\circ}C$

Notes: 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 Case	Per Diode	$\theta_{JC}$	1.60	$^{\circ}C/W$
	Total		0.85	$^{\circ}C/W$
Coupling		$\theta_C$	0.10	$^{\circ}C/W$

■ **ELECTRICAL CHARACTERISTICS** (per diode)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Current	$I_R$ (Note 1)	$V_R=V_{RM}, T_J=25^{\circ}C$			0.4	mA
		$V_R=V_{RM}, T_J=125^{\circ}C$		100	200	mA
Forward Voltage Drop	$V_F$ (Note 1)	$T_J=25^{\circ}C, I_F=15A$			0.55	V
		$T_J=125^{\circ}C, I_F=15A$		0.42	0.50	V
		$T_J=25^{\circ}C, I_F=30A$			0.74	V
		$T_J=125^{\circ}C, I_F=30A$		0.59	0.67	V

Note: Pulse test:  $t_p=380\mu s, \delta < 2\%$

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