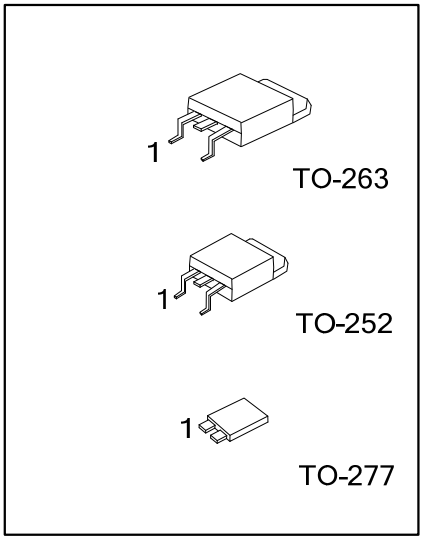
TGBR15U45

Preliminary ***DIODE***

TRENCH MOS SCHOTTKY BARRIER RECTIFIER



■ DESCRIPTION

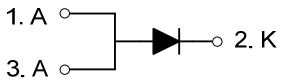
The UTC **TGBR15U45** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR15U45** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

* Ultra low forward voltage drop
* High current capability
* High surge capability
* High efficiency

■ SYMBOL



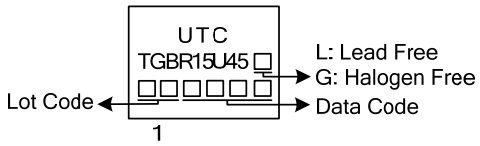
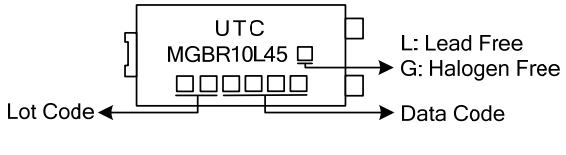
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR15U45L-TN3-R	TGBR15U45G-TN3-R	TO-252	A	K	A	Tape Reel
TGBR15U45L-TQ2-T	TGBR15U45G-TQ2-T	TO-263	A	K	A	Tube
TGBR15U45L-TQ2-R	TGBR15U45G-TQ2-R	TO-263	A	K	A	Tape Reel
TGBR15U45L-T27-R	TGBR15U45G-T27-R	TO-277	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Common Cathode

TGBR15U45G-TN3-R (1)Packing Type	(1) T: Tube, R: Tape Reel
(2)Package Type	(2) TN3: TO-252, TQ2: TO-263, T27: TO-277
(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

TO-252 / TO-263	TO-277
	

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

PARAMETER		SYMBOL	RATINGS	UNIT
DC Blocking Voltage		V_{RM}	45	V
Working Peak Reverse Voltage		V_{RWM}	45	V
Peak Repetitive Reverse Voltage		V_{RRM}	45	V
Average Rectified Output Current	T_C=125°C	I_O	15	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	250	A
Operating Junction Temperature		T_J	-65 ~ +150	°C
Storage Temperature		T_{STG}	-65 ~ +150	°C

Note: 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.

■ THERMAL CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-252	θ_{JC}	6	°C/W
	TO-263		3	°C/W
	TO-277		13 (Note 3)	°C/W

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A =25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.45mA	45			V
Forward Voltage Drop	V_{FM}	I_F=5A, T_J=25°C		0.41		V
		I_F=5A, T_J=125°C		0.29		V
		I_F=10A, T_J=25°C		0.44		V
		I_F=10A, T_J=125°C		0.33		V
		I_F=15A, T_J=25°C		0.46	0.50	V
		I_F=15A, T_J=125°C		0.37	0.45	V
Peak Reverse Current at Rated DC Blocking Voltage	I_{RM}	V_R=45V, T_J=25°C		10	500	μA
		V_R=45V, T_J=125°C		10	100	mA

Notes: 1. Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.
2. Mounted on an FR4 PCB, single-sided copper, with 100 cm^2 copper pad area.