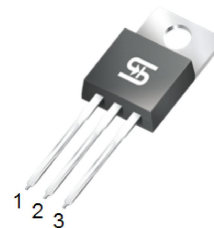


30A, 45V - 60V Trench Schottky Rectifiers

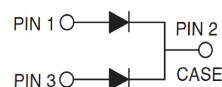
FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ High efficiency
- High forward surge capability
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition


TO-220AB


TYPICAL APPLICATIONS

Trench Schottky barrier rectifier is designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.



MECHANICAL DATA

Case: TO-220AB

Molding compound meets UL 94 V-0 flammability rating

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 0.56 Nm max.

Weight: 1.88 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted)								
PARAMETER			SYMBOL	TST30L45CW		TST30L60CW		UNIT
Maximum repetitive peak reverse voltage			V _{RRM}	45		60		V
Maximum average forward rectified current	per device		I _{F(AV)}	30				A
	per diode			15				
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	180				A
Voltage rate of change (Rated V _R)			dV/dt	10000				V/μs
				TYP.	MAX.	TYP.	MAX.	
Instantaneous forward voltage per diode (Note1)	I _F = 15A	T _J = 25°C	V _F	0.48	0.55	0.53	0.60	V
	I _F = 15A	T _J = 125°C		0.44	0.51	0.49	0.56	
Maximum instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	I _R	500				μA
		T _J = 125°C		100				mA
Typical thermal resistance per diode			R _{θJC}	3				°C/W
			R _{θJL}	2				
Operating junction temperature range			T _J	- 55 to +150				°C
Storage temperature range			T _{STG}	- 55 to +150				°C

Note 1: Pulse test with pulse width = 300μs, 1% duty cycle

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TST30LXXCW	C0	G	TO-220AB	50 / Tube

Note 1: "XX" defines voltage from 45V (TST30L45CW) to 60V (TST30L60CW)

EXAMPLE				
PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TST30L60CW C0G	TST30L60CW	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

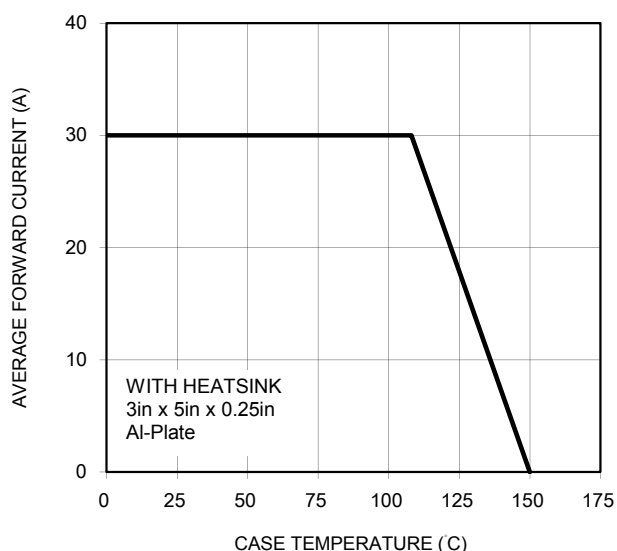


FIG.2 TYPICAL FORWARD CHARACTERISTICS

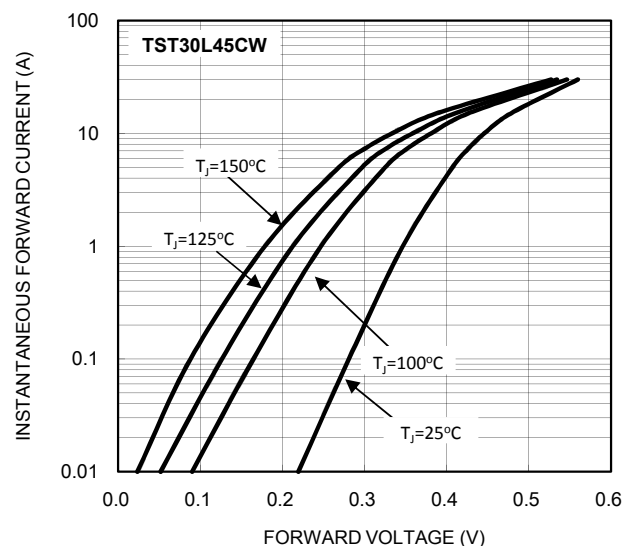


FIG.3 TYPICAL FORWARD CHARACTERISTICS

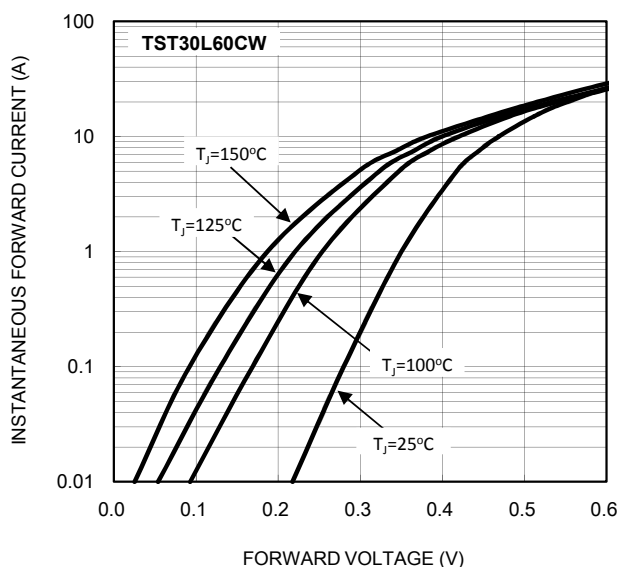


FIG.4 TYPICAL REVERSE CHARACTERISTICS

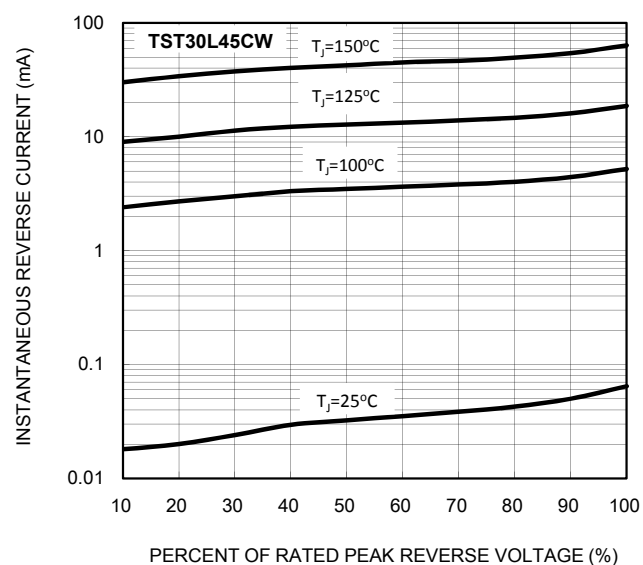


FIG.5 TYPICAL REVERSE CHARACTERISTICS

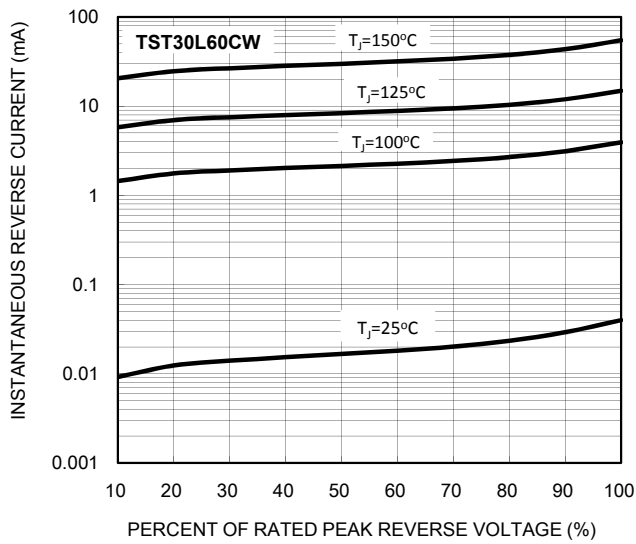
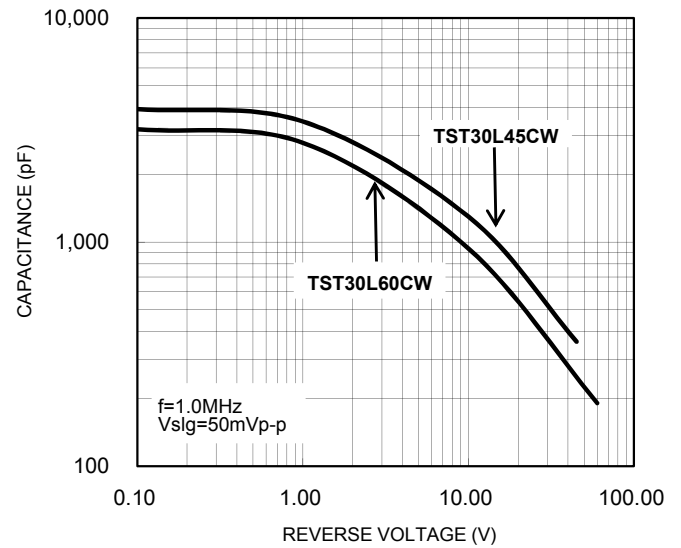
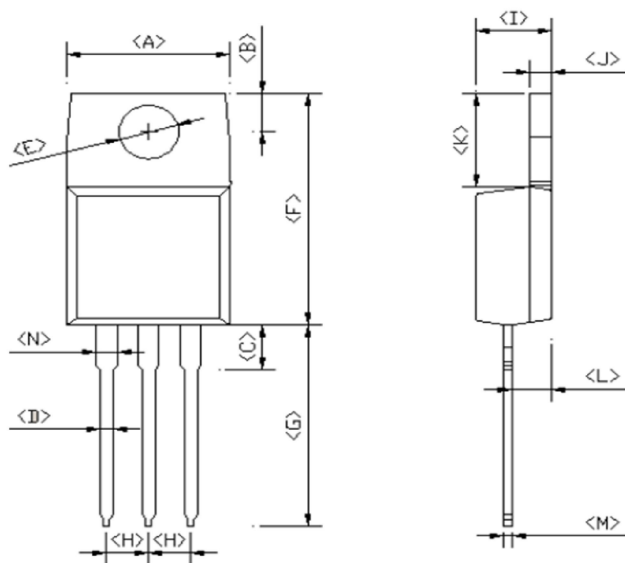


FIG.6 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

TO-220AB



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.54	3.44	0.100	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	13.19	14.79	0.519	0.582
H	2.41	2.67	0.095	0.105
I	4.42	4.76	0.174	0.187
J	1.14	1.40	0.045	0.055
K	5.84	6.86	0.230	0.270
L	2.20	2.80	0.087	0.110
M	0.35	0.64	0.014	0.025
N	0.95	1.45	0.037	0.057

MARKING DIAGRAM



P/N = Specific Device Code
 G = Green Compound
 YWW = Date Code
 F = Factory Code

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