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20A, 60V Trench Schottky Rectifier

FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ High efficiency
- High forward surge capability
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- DC to DC converters

MECHANICAL DATA

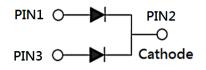
- Case: TO-220AB
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Mounting torque: 0.56 N·m maximum
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 1.88g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I _F	20	А
V _{RRM}	60	V
I _{FSM}	120	А
T _{J MAX}	150	°C
Package	TO-220AB	
Configuration	Dual dies	









ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)			
PARAMETER	SYMBOL	TST20L60CW	UNIT
Marking code on the device		TST20L60CW	
Repetitive peak reverse voltage	V _{RRM}	60	V
Reverse voltage, total rms value	V _{R(RMS)}	42	V
Forward current	I _F	20	А
Surge peak forward current, 8.3ms single half sine wave superimposed on rated load	I _{FSM}	120	А
Critical rate of rise of off-state voltage	dv/dt	10,000	V/µs
Junction temperature	TJ	-55 to +150	°C
Storage temperature	T _{STG}	-55 to +150	°C





THERMAL PERFORMANCE			
PARAMETER	SYMBOL	ТҮР	UNIT
Junction-to-case thermal resistance	R _{eJC}	3	°C/W

ELECTRICAL SPECIFICATIONS (T _A = 25°C unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	ТҮР	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 10A, T_J = 25^{\circ}C$	VF	0.56	0.65	V
	$I_F = 20A, T_J = 25^{\circ}C$		0.69	0.78	V
	$I_F = 10A, T_J = 125^{\circ}C$		0.52	0.61	V
	$I_F = 20A, T_J = 125^{\circ}C$		0.67	0.76	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^{\circ}C$	1	-	500	μA
	T _J = 125°C	I _R	-	50	mA

Notes:

1. Pulse test with PW = 0.3ms

2. Pulse test with PW = 30ms

ORDERING INFORMATION		
ORDERING CODE	PACKAGE	PACKING
TST20L60CW	TO-220AB	50 / Tube



CHARACTERISTICS CURVES

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

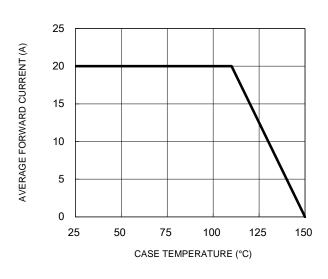


Fig.1 Forward Current Derating Curve

Fig.3 Typical Reverse Characteristics

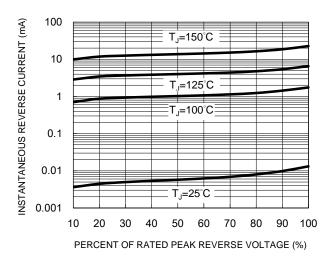


Fig.4 Typical Forward Characteristics

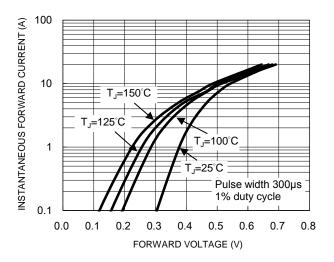
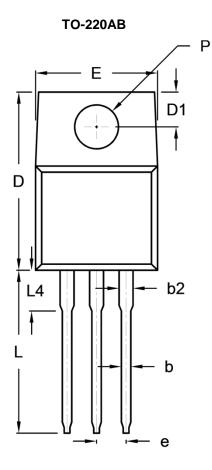


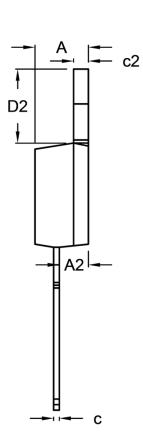
Fig.2 Typical Junction Capacitance

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PACKAGE OUTLINE DIMENSIONS





DIM.	Unit	Unit (mm)		(inch)
DIN.	Min.	Max.	Min.	Max.
А	4.42	4.76	0.174	0.187
A2	2.20	2.80	0.087	0.110
b	0.68	0.94	0.027	0.037
b2	0.95	1.45	0.037	0.057
с	0.35	0.64	0.014	0.025
c2	1.14	1.40	0.045	0.055
D	14.60	16.00	0.575	0.630
D1	2.54	3.44	0.100	0.135
D2	5.84	6.86	0.230	0.270
Е	-	10.50	-	0.413
е	2.41	2.67	0.095	0.105
L	13.19	14.79	0.519	0.582
L4	2.80	4.20	0.110	0.165
Р	3.54	4.00	0.139	0.157

MARKING DIAGRAM



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



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