

3A, 60V Trench Schottky Surface Mount Rectifier

FEATURES

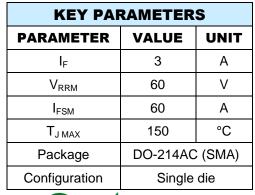
- Patented Trench Schottky technology
- Low power loss, high efficiency
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

• Trench Schottky barrier rectifier are designed for high frequency miniature switched mode power supplies such as adapters, lighting

MECHANICAL DATA

- Case: DO-214AC (SMA)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: Indicated by cathode band
- Weight: 0.060g (approximately)







DO-214AC (SMA)



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)			
PARAMETER	SYMBOL	TSSA3U60	UNIT
Marking code on the device		3U60	
Repetitive peak reverse voltage	V _{RRM}	60	V
Reverse voltage, total rms value	V _{R(RMS)}	42	V
Forward current	I _F	3	А
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	60	А
Junction temperature	TJ	- 55 to +150	°C
Storage temperature	T _{STG}	- 55 to +150	°C



THERMAL PERFORMANCE			
PARAMETER	SYMBOL	ТҮР	UNIT
Junction-to-lead thermal resistance	R _{θJL}	27	°C/W
Junction-to-ambient thermal resistance	R _{θJA}	70	°C/W
Junction-to-case thermal resistance	R _{eJC}	20	°C/W

Thermal Performance Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

ELECTRICAL SPECIFICATIONS (T _A = 25°C unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	ТҮР	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 3A, T_J = 25^{\circ}C$	V _F	0.48	0.54	V
	$I_F = 3A, T_J = 125^{\circ}C$		0.41	0.50	V
Reverse current @ rated V _R ⁽²⁾	$T_J = 25^{\circ}C$	I _R	-	500	μA
	T _J = 125°C		12	30	mA
Junction capacitance	1MHz, V _R = 4.0V	CJ	450	610	pF
Reverse recovery time	$I_F = 0.5A, I_R = 1.0A,$ $I_{rr} = 0.25A$	t _{rr}	20	25	ns

Notes:

- 1. Pulse test with PW = 0.3ms
- 2. Pulse test with PW = 30ms

ORDERING INFORMATION	l	
ORDERING CODE	PACKAGE	PACKING
TSSA3U60	DO-214AC (SMA)	7,500 / Tape & Reel



CHARACTERISTICS CURVES

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

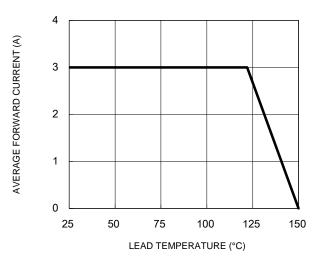
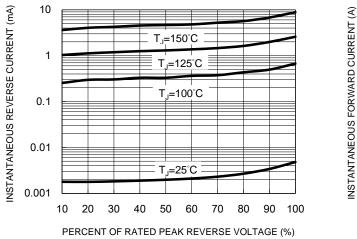


Fig.1 Forward Current Derating Curve

Fig.3 Typical Reverse Characteristics



1000 100 100 100 100 f=1.0MHz Vsig=50mVp-p 10 0 1 10 10 KEVERSE VOLTAGE (V)

Fig.2 Typical Junction Capacitance



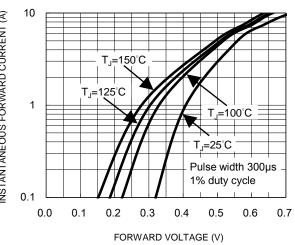
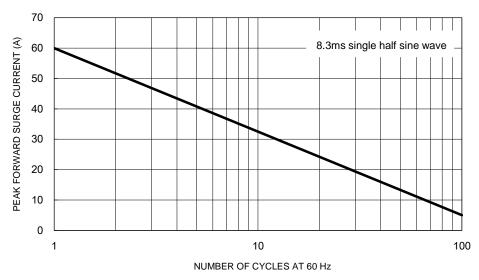


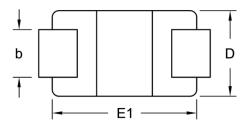
Fig.5 Maximum Non-Repetitive Forward Surge Current

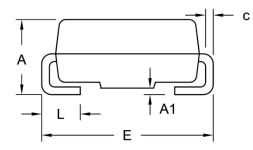


TSSA3U60 Taiwan Semiconductor

PACKAGE OUTLINE DIMENSIONS

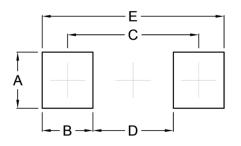
DO-214AC (SMA)





DIM.	Unit (mm)		Unit	Unit (inch)	
	Min.	Max.	Min.	Max.	
A	1.99	2.50	0.078	0.098	
A1	0.10	0.20	0.004	0.008	
b	1.27	1.58	0.050	0.062	
с	0.15	0.31	0.006	0.012	
D	2.29	2.83	0.090	0.111	
E	4.95	5.33	0.195	0.210	
E1	4.06	4.60	0.160	0.181	
L	0.90	1.41	0.035	0.056	

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
В	1.52	0.060
С	3.93	0.155
D	2.41	0.095
E	5.45	0.215

MARKING DIAGRAM



P/N	= Marking Code
G	= Green Compound
YW	= Date Code

F = Factory Code



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