TAYCHIPST

High-Current Density Surface Mount Schottky Rectifier

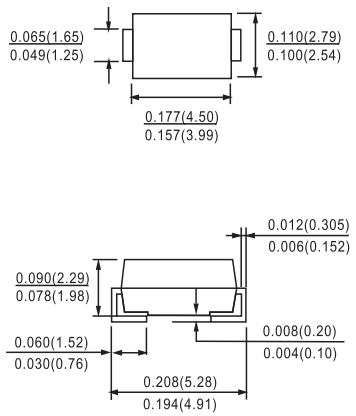
SSA23L and SSA24

30V-40V 2.0A

FEATURES

- Low power loss, high efficiency
- Low profile surface mount package
- Built-in strain relief
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic body
Terminals: Solder plated, solderable per MIL-STD750, Method 2026
High temperature soldering guaranteed: 250°C/10 seconds at terminals
Polarity: Color band denotes cathode end
Weight: 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	SSA23L	SSA24	Unit
Device marking code		23L	S24	V
Maximum repetitive peak reverse voltage	V_{RRM}	30	40	V
Maximum RMS voltage	V_{RMS}	21	28	V
Maximum DC blocking voltage	V_{DC}	30	40	V
Maximum average forward rectified current at T_L (See Fig. 1)	$I_{F(AV)}$	2.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60		A
Non-repetitive avalanche energy at TA = 25°C, IAS = 1.5A, L = 10mH	EAS	11.25		mJ
Typical thermal resistance (2)	$R_{\Theta JA}$ $R_{\Theta JL}$	110 28		°C/W
Voltage rate of change (rated V_R)	dv/dt	10,000		V/μs
Operating junction temperature range	T_J	-65 to + 150		°C
Storage temperature range	T_{STG}	-65 to + 150		°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter		Symbol	Typ.	Max.	Typ.	Max.	Unit
Maximum instantaneous forward voltage at 2.0A(1)	T_J=25°C T_J=125°C	V_F	0.43 0.32	0.45 0.38	0.45 0.36	0.49 0.42	V
Maximum DC reverse current at rated DC blocking voltage (1)	T_J=25°C T_J=125°C	I_R	– 15	0.5 25	– 12	0.2 20	mA

Notes: (1) Pulse test: 300μs pulse width, 1% duty cycle
(2) Aluminum substrate mounted

RATINGS AND CHARACTERISTIC CURVES SSA23L and SSA24

Fig. 1 – Forward Current Derating Curve

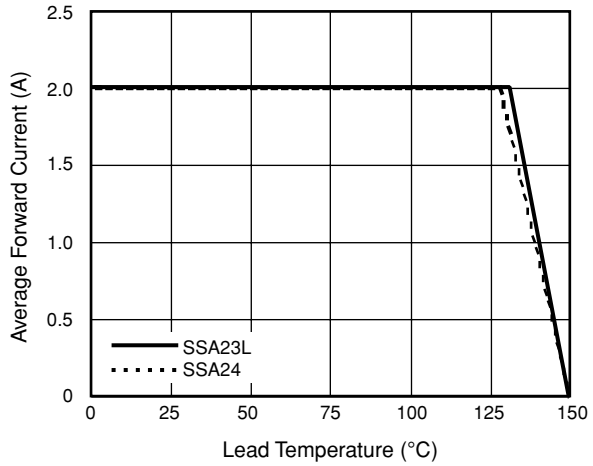


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

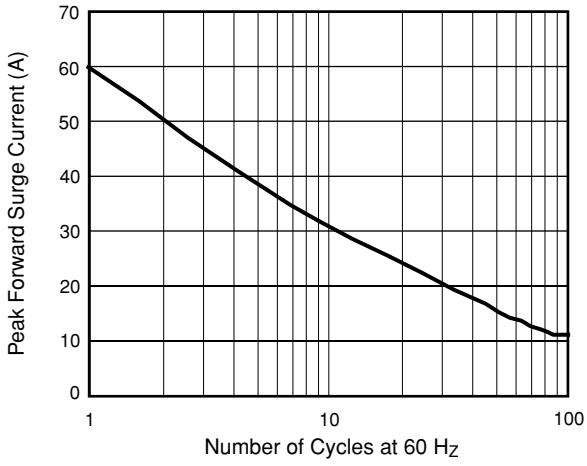


Fig. 3 - Typical Instantaneous Forward Characteristics

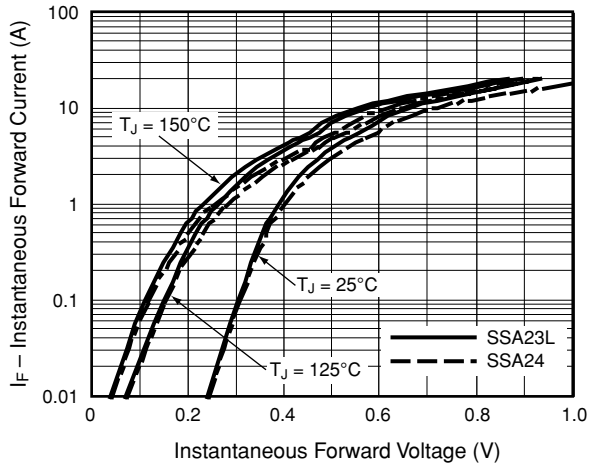


Fig. 4 - Typical Reverse Characteristics

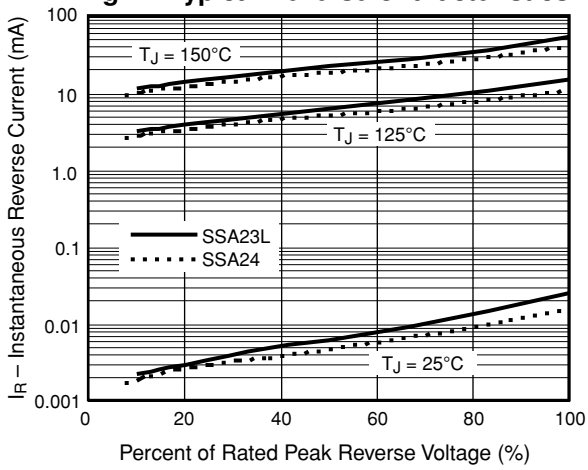


Fig. 5 - Typical Junction Capacitance

