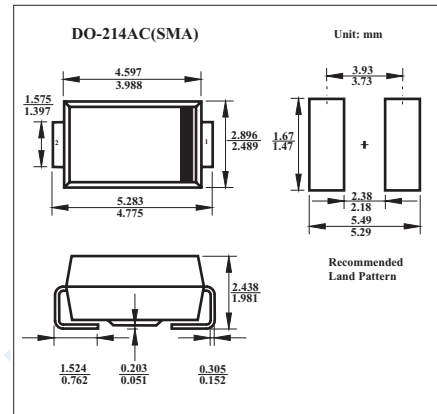


Surface Mount Ultrafast Efficient Plastic Rectifier

KS1A THRU KS1D (ES1A THRU ES1D)

■ Features

- For surface mount applications
- Low profile package
- Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diodes
- Ultrafast recovery times for high efficiency
- Low forward voltage
- Low leakage current
- Glass passivated chip junction



■ Absolute Maximum Ratings $T_A=25^\circ\text{C}$

Characteristic	Symbol	KS1A	KS1B	KS1C	KS1D	Unit
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	V
Maximum average forward rectified current at $T_L=25^\circ\text{C}$	I(AV)	1				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30				A
Maximum instantaneous forward voltage at 1.0A	V _F	0.92				V
Maximum DC reverse current at rated $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I _R	5 100				uA
Maximum reverse recovery time *1	t _{rr}	15				ns
Reverse recovery time $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ *3	t _{rr}	25 35				ns
Maximum stored charge $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ *3	Q _{rr}	10 25				nC
Typical junction capacitance *2	C _J	7				pF
Maximum thermal resistance *1	R θ JA	85				°C/W
	R θ JL	35				
Operating and storage temperature range	T _J , T _{STG}	-55 to 150				°C

*1 Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

*2 Measured at 1.0MHz and applied reverse voltage of 4.0V

*3 t_{rr} and Q_{rr} measured at: I_F=0.6A, V_R=30V, di/dt=50A/ms, I_{rr} =10% I_{RM} for measurement of t_{rr}