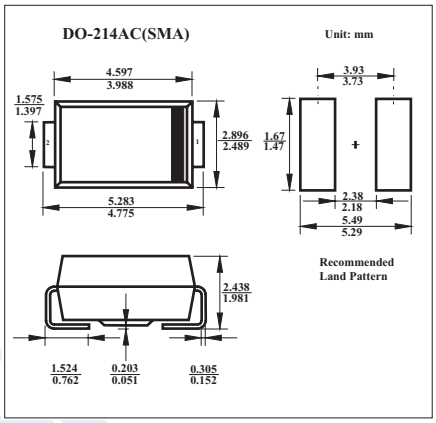
Surface Mount Ultrafast Efficient Plastic Rectifier

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℃

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℃	$I_{(AV)}$	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℃ T_A= 100℃	I_R	5 100				uA
Maximum reverse recovery time *1	t_{rr}	15				ns
Reverse recovery time T_A= 25℃ T_A= 100℃ *3	t_{rr}	25 35				ns
Maximum stored charge T_A= 25℃ T_A= 100℃ *3	Q_{rr}	10 25				nC
Typical junction capacitance *2	C_J	7				pF
Maximum thermal resistance *1	$R_{\theta JA}$	85				℃/W
	$R_{\theta JL}$	35				
Operating and storage temperature range	T_J, T_{STG}	-55 to 150				℃

*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}