TOP ONE SEMI CONDUCTOR

SURFACE MOUNT RECTIFIER

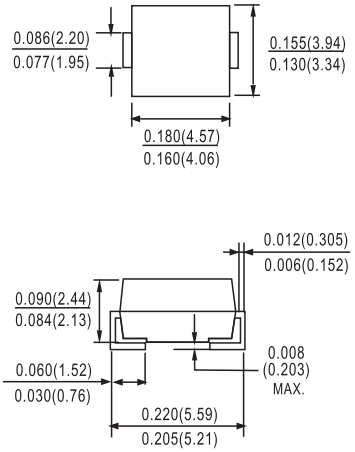
ES3A THRU ES3M

50V-1000V 3.0A

FEATURES

- Low cost
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Alcohol,Isopropanol
- and similar solvents
- The plastic material carries U/L recognition 94V-0

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case:JEDEC DO-214AA,molded plastic
Terminals: Solderable per
MIL- STD-202,Method 208
Polarity: Color band denotes cathode
Weight: 0.007 ounces,0.21 grams
Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave ,60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	ES3A	ES3B	ES3D	ES3G	ES3J	ES3K	ES3M	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T_A=55 ℃	$I_{(AV)}$	3.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I_{FSM}	125							A
Peak Forward Voltage at 3.0A DC	V_F	0.95			1.25	1.70			V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Blocking Voltage @T_J=100℃	I_R	5.0 100							μA
Maximum Reverse Recovery Time(Note 1)	T_{RR}	35							nS
Typical Junction Capacitance (Note2)	C_J	70				45			pF
Typical Thermal Resistance (Note3)	R_{JA}	20							℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

NOTES: 1.Measured with I_F=0.5A, I_R=1A, I_{RR}=0.25A

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

3.Thermal resistance junction to ambient.

RATINGS AND CHARACTERISTIC CURVES ES3A THRU ES3M

FIG.1 - FORWARD CURRENT DERATING CURVE

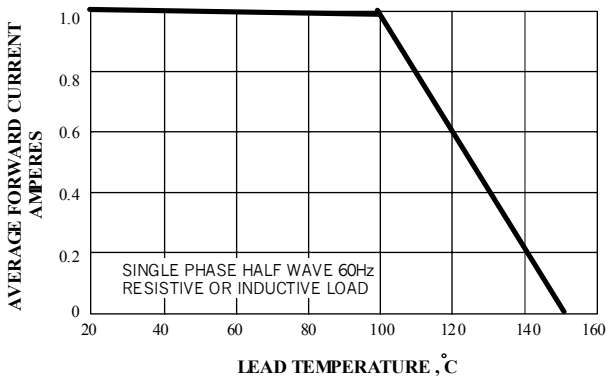


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

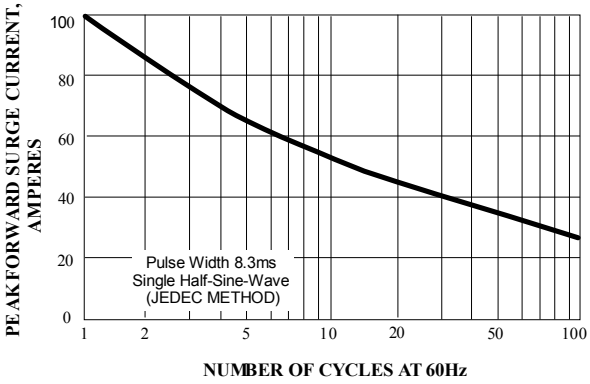


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

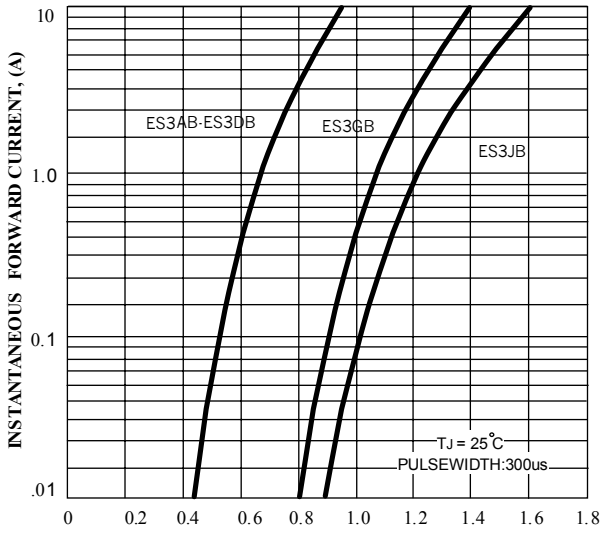


FIG.4 - TYPICAL REVERSE CHARACTERISTICS