



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD
DO-214AA(SMB) Plastic-Encapsulate Diodes

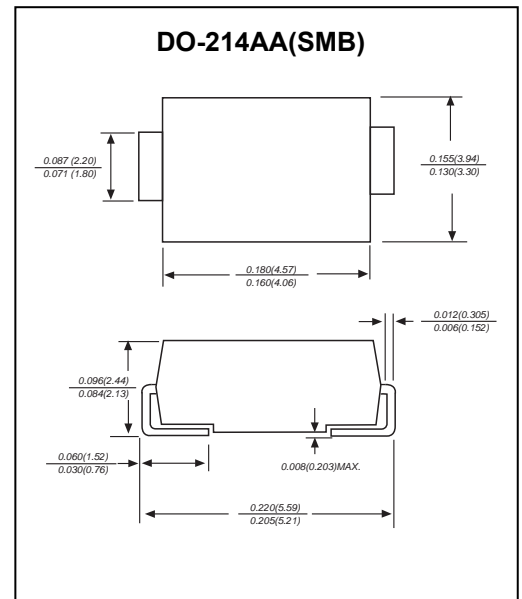
SB510L SHOTTKY BARRIER DIODE

Features

- I_o 5.0A
- VRRM 100V
- High surge current capability

Applications

- Rectifier



Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

Parameter	Symbol	Limit	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Average Forward Current	$I_{F(AV)}$	5.0	A
Average Rectified Output Current	I_o	5.0	A
Surge(Non-Repetitive) Forward Current	I_{FSM}	120	A
Junction Temperature	T_j	150	°C
Storage Temperature	T_{STG}	-55~+150	°C

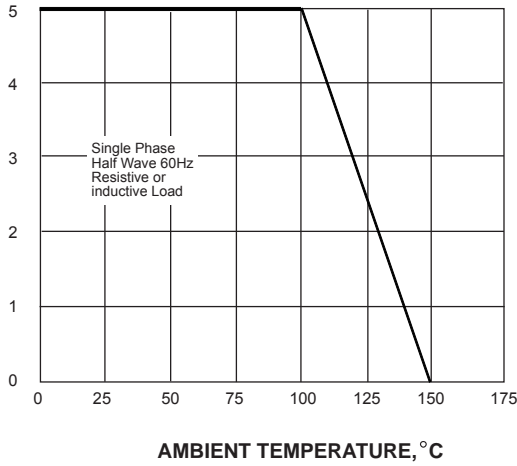
Electrical Ratings @Ta=25°C

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Peak Forward Voltage	V_{F1}		0.43	0.49	V	$I_F=1A$
	V_{F2}		0.52	0.58	V	$I_F=3A$
	V_{F3}		0.61	0.68	V	$I_F=5A$
Peak Reverse Current	I_{R1}		10	30	uA	$V_R=100V, T_a=25°C$
	I_{R2}			30	mA	$V_R=100V, T_a=125°C$
Thermal Resistance	$R_{\theta J-A}$		45		°C/W	Between junction and ambient
	$R_{\theta J-L}$		8		°C/W	Between junction and lead

Typical Characteristics

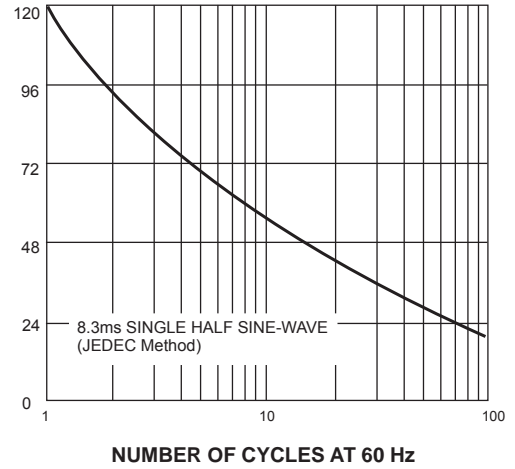
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



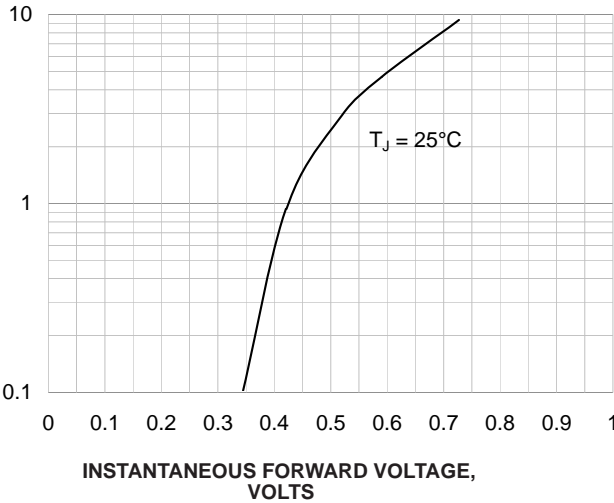
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



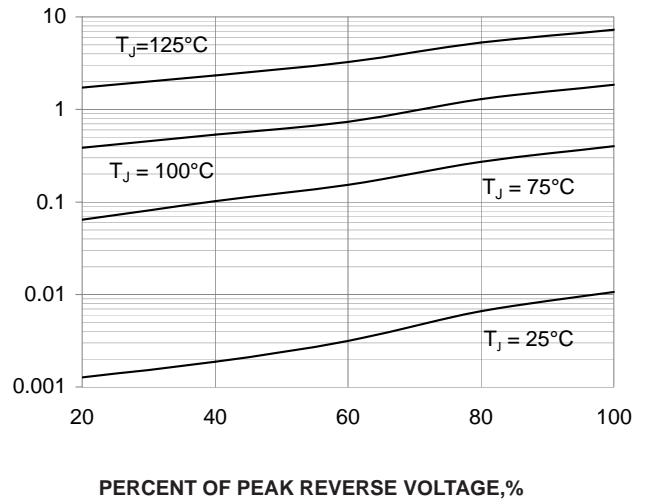
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



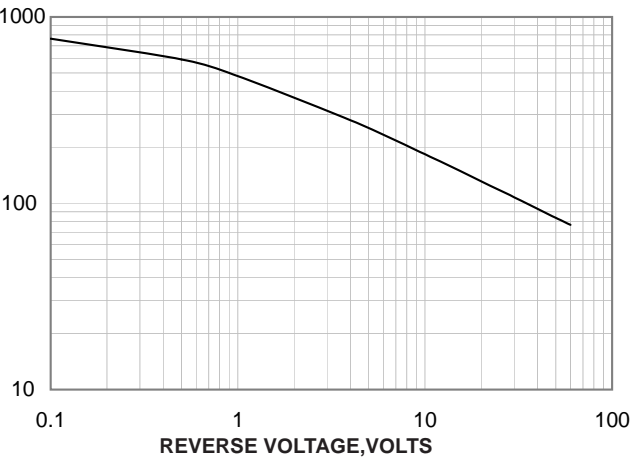
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

