SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **16.0** Amperes

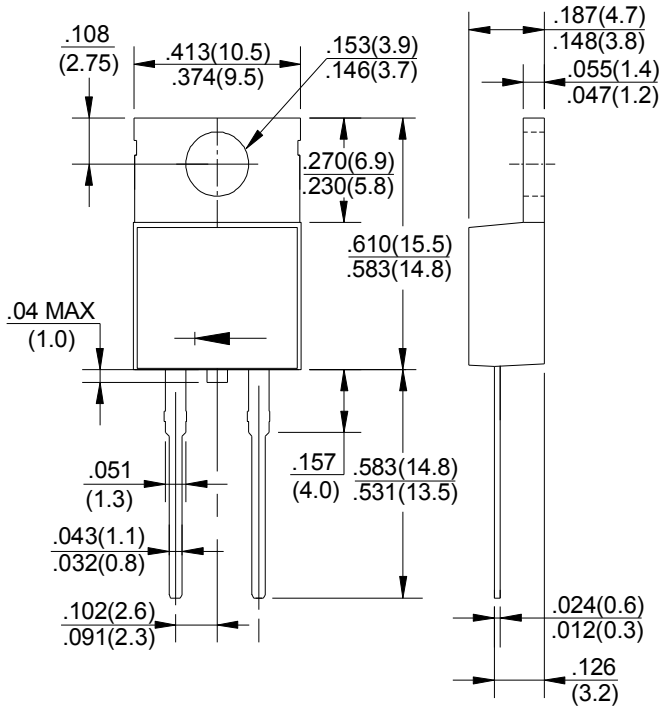
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-220AC molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

TO-220AC



Dimensions in inches and (millimeters)

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	MBR 1630	MBR 1640	MBR 1650	MBR 1660	MBR 1680	MBR 16100	MBR 16150	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	16.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note1) IF=16A @TJ=25℃ / IF=16A @TJ=125℃	V_F	0.63 / 0.57		0.75 / 0.65		0.85 / 0.75		0.95 / 0.92	V
Maximum DC Reverse Current @TJ=25℃ / at Rated DC Bolcking Voltage @TJ=125℃	I_R	0.5 / 15		0.5 / 10		0.3 / 7.5		0.1 / 5	mA
Typical Junction Capacitance (Note2)	C_J	500							pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	3.0							℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +175							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

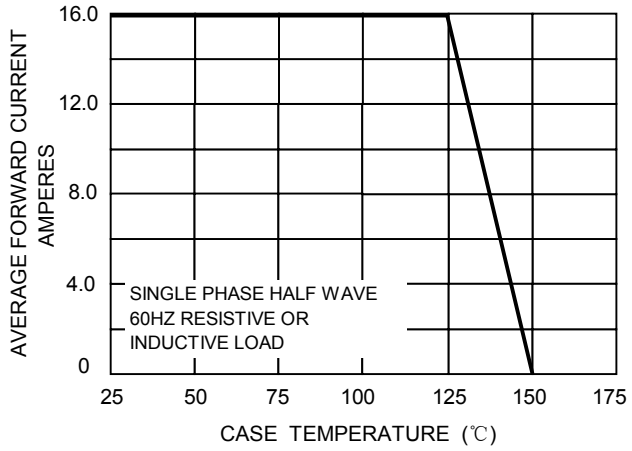


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

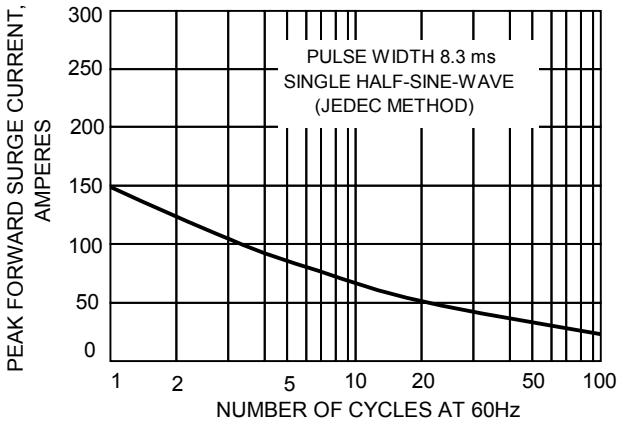


FIG.3-TYPICAL REVER CHARACTERISTICS

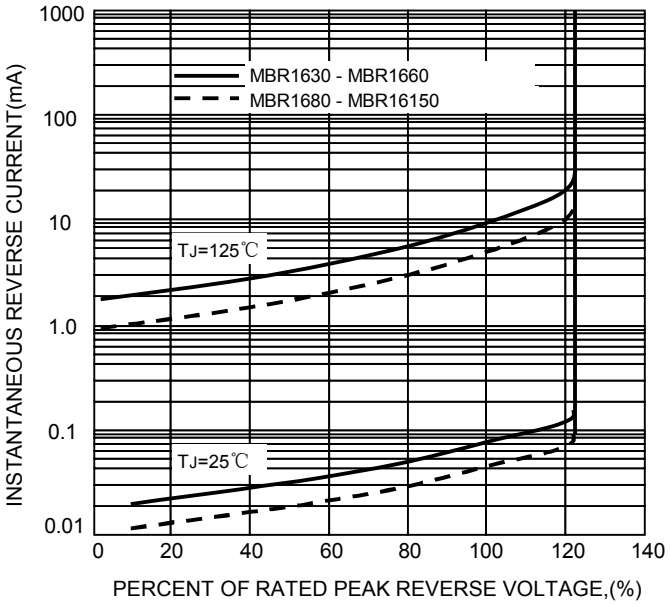


FIG.4-TYPICAL FORWARD CHARACTERISTICS

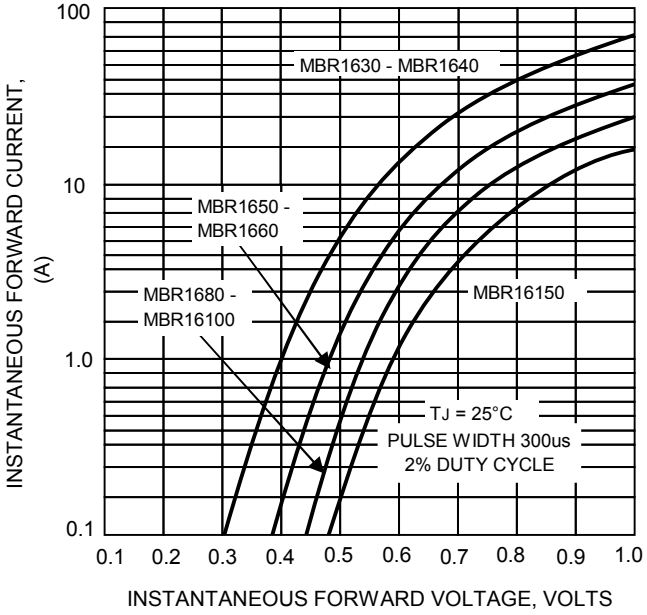
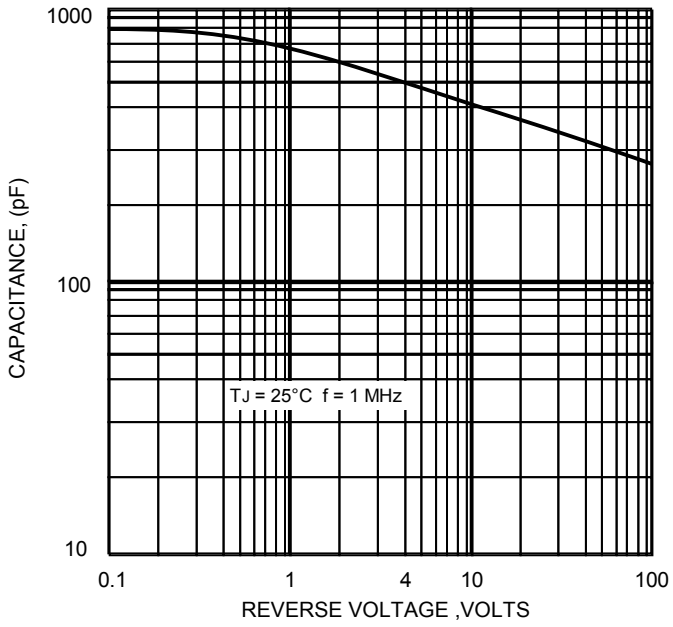


FIG.5 – TYPICAL JUNCTION CAPACITANCE



MBRF1630 thru MBRF16150

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **16.0** Amperes

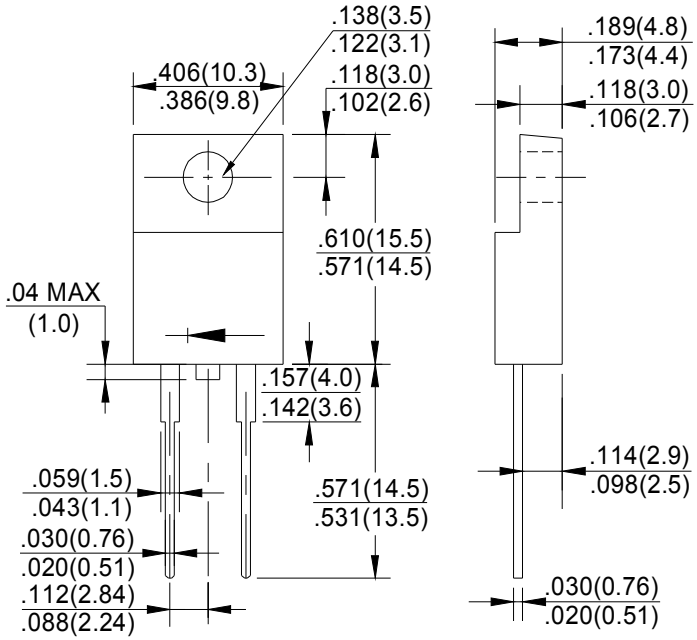
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: ITO-220AC molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

ITO-220AC



Dimensions in inches and (millimeters)

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	MBRF 1630	MBRF 1640	MBRF 1650	MBRF 1660	MBRF 1680	MBRF 16100	MBRF 16150	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	16.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note1) IF=16A @T_J=25℃	V_F	0.63		0.75		0.85		0.95	V
IF=16A @T_J=125℃		0.57		0.65		0.75		0.92	
Maximum DC Reverse Current @T_J=25℃	I_R	0.5		0.5		0.3		0.1	mA
at Rated DC Bolcking Voltage @T_J=125℃		15		10		7.5		5	
Typical Junction Capacitance (Note2)	C_J	500							pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	3.0							℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +175							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

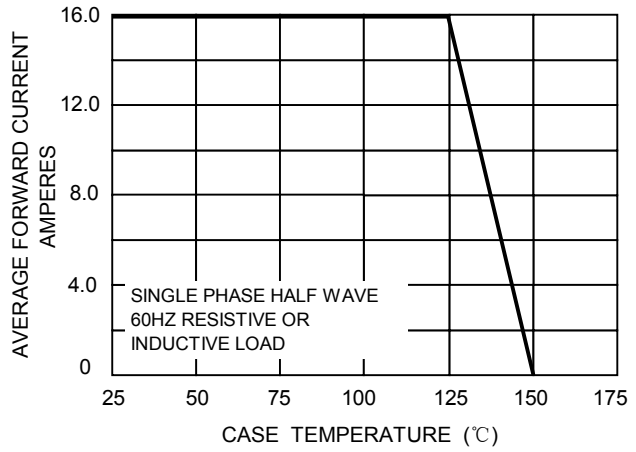


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

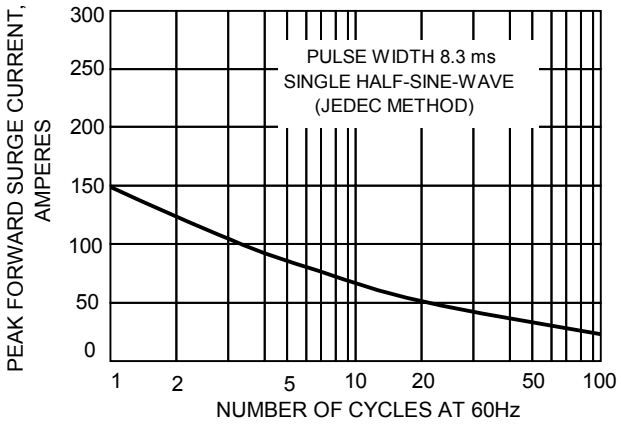


FIG.3-TYPICAL REVER CHARACTERISTICS

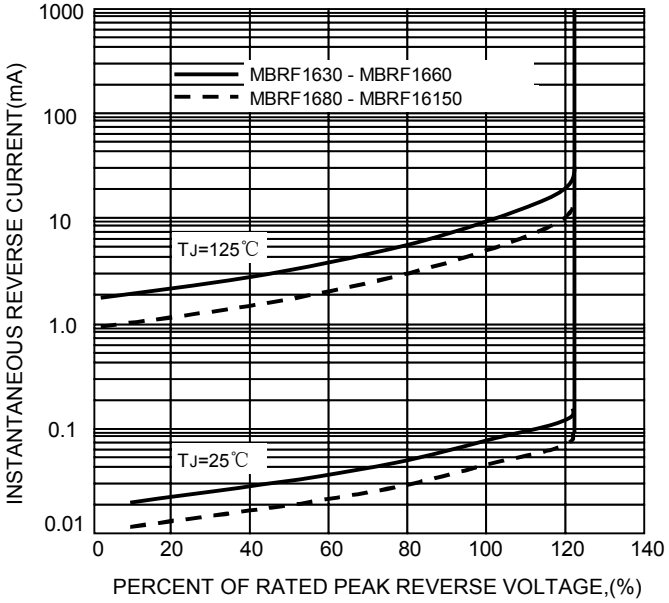


FIG.4-TYPICAL FORWARD CHARACTERISTICS

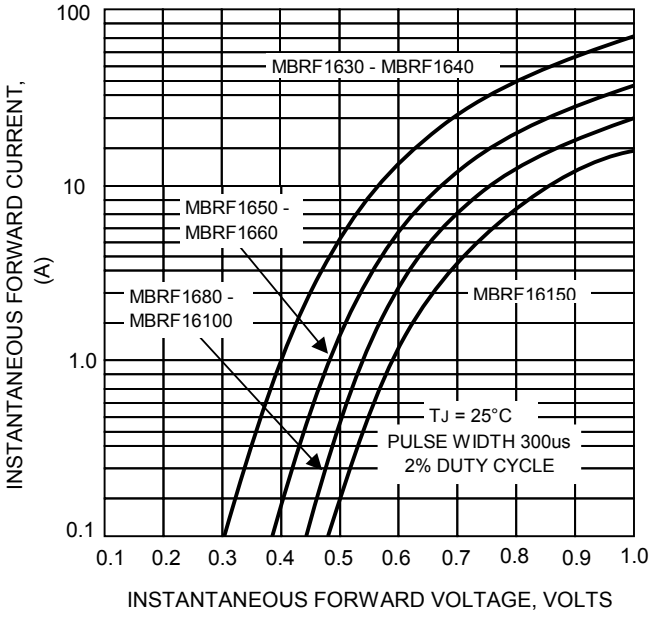
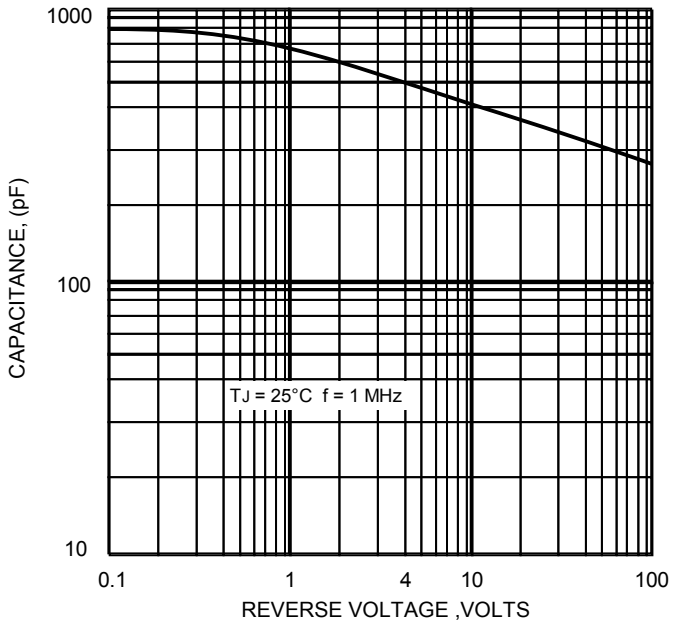


FIG.5 – TYPICAL JUNCTION CAPACITANCE



SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **16.0** Amperes

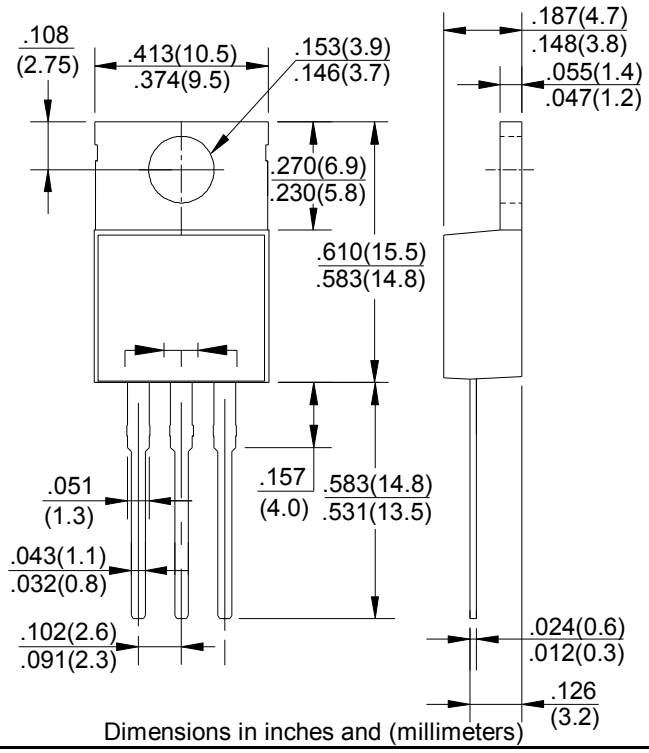
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

TO-220AB



Dimensions in inches and (millimeters)

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	SR 1630CT	SR 1640CT	SR 1650CT	SR 1660CT	SR 1680CT	SR 16100CT	SR 16150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=95 ℃	$I_{(AV)}$	16							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage at 8.0A DC(Note1)	V_F	0.55		0.70		0.85		0.95	V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=100℃	I_R	1.0 50							mA
Typical Junction Capacitance (Note2)	C_J	350							pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	2.5							℃/W
Operating Temperature Range	T_J	-55 to +125							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

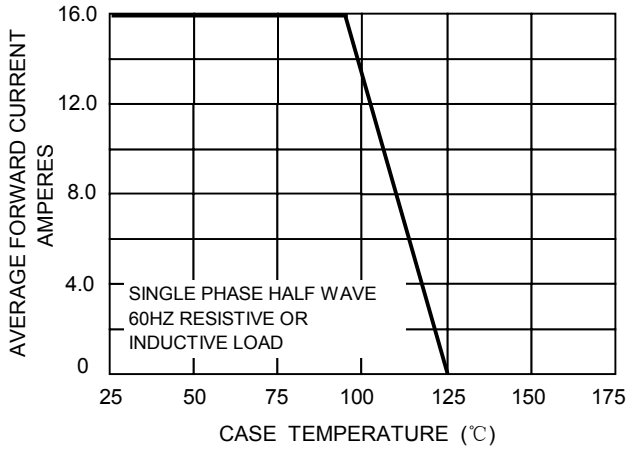


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

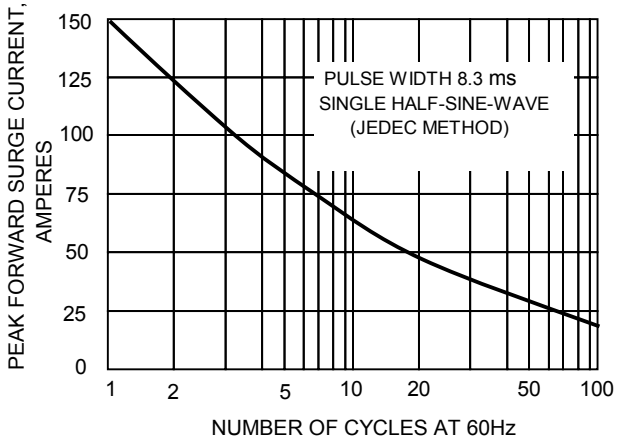


FIG.3-TYPICAL REVER CHARACTERISTICS

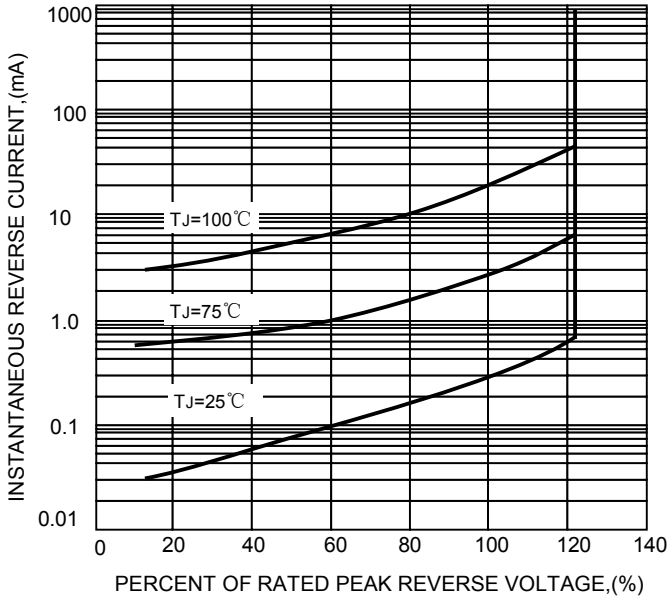


FIG.4-TYPICAL FORWARD CHARACTERISTICS

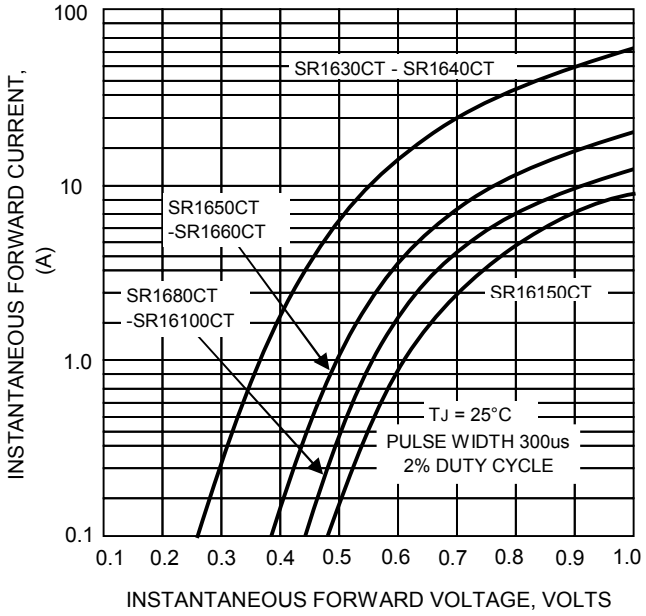
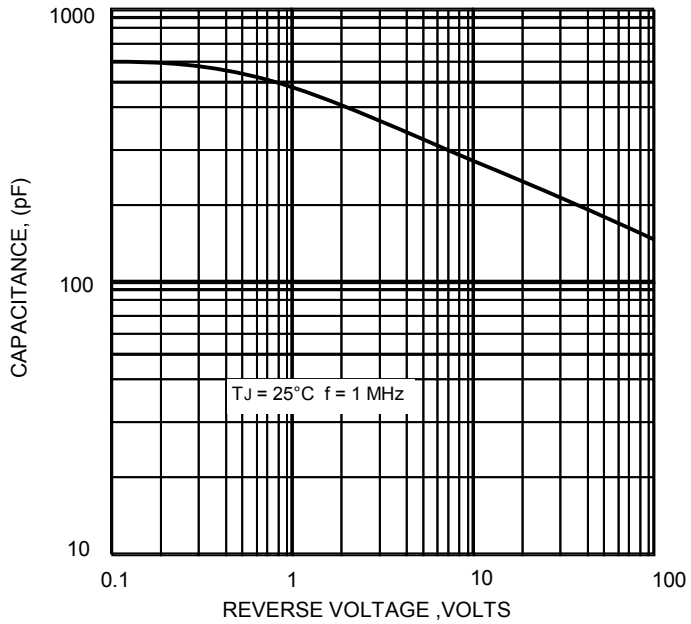


FIG.5 – TYPICAL JUNCTION CAPACITANCE



SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **16.0** Amperes

FEATURES

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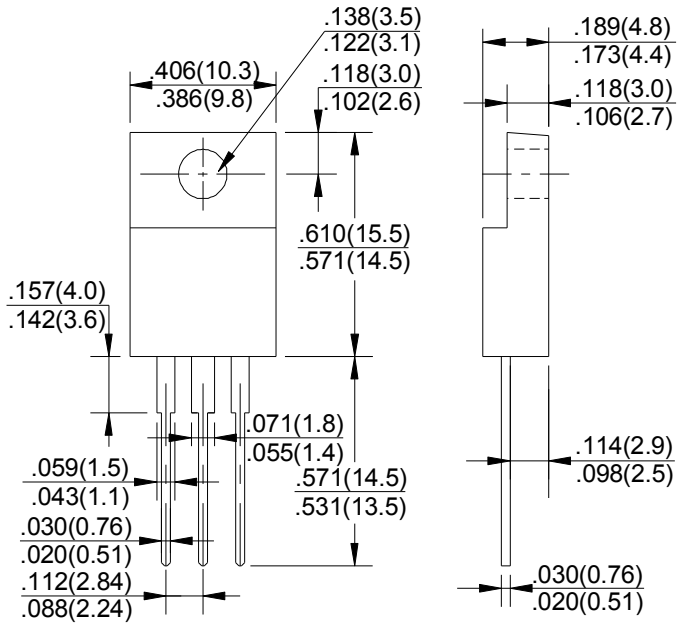
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

ITO-220AB



Dimensions in inches and (millimeters)

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	SRF 1630CT	SRF 1640CT	SRF 1650CT	SRF 1660CT	SRF 1680CT	SRF 16100CT	SRF 16150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=95 ℃	$I_{(AV)}$	16							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage at 8.0A DC(Note1)	V_F	0.55		0.70		0.85		0.95	V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=100℃	I_R	1.0 50							mA
Typical Junction Capacitance (Note2)	C_J	350							pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	2.5							℃/W
Operating Temperature Range	T_J	-55 to +125							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

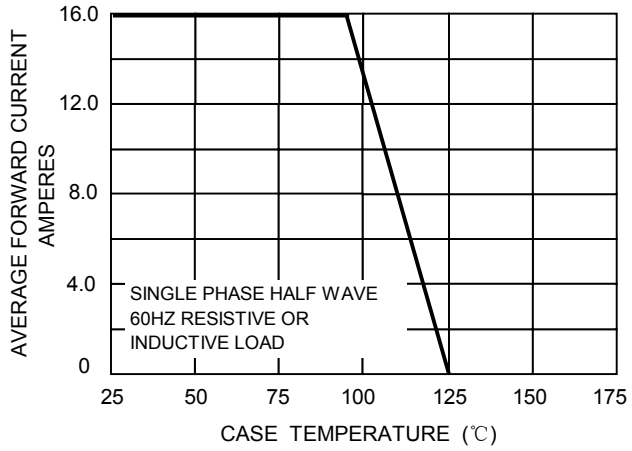


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

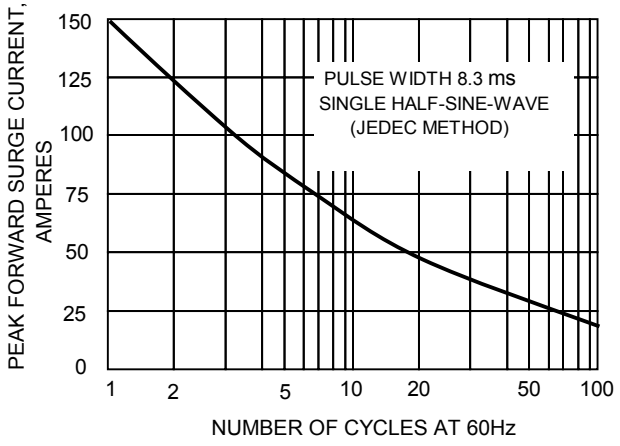


FIG.3-TYPICAL REVER CHARACTERISTICS

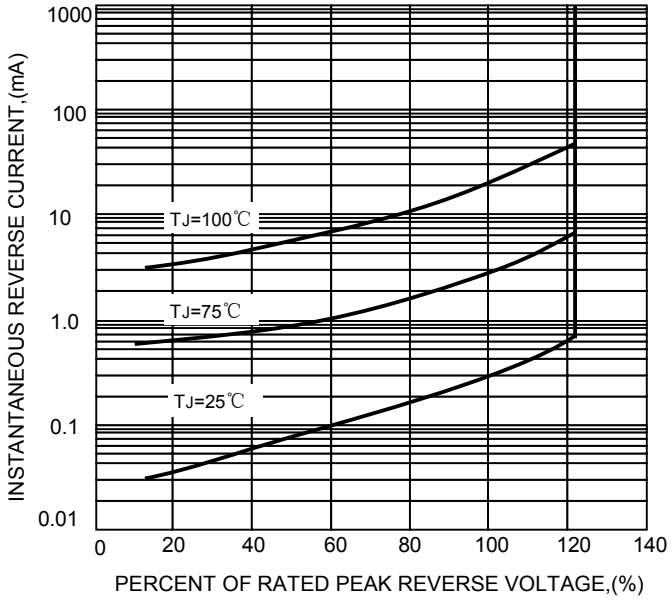


FIG.4-TYPICAL FORWARD CHARACTERISTICS

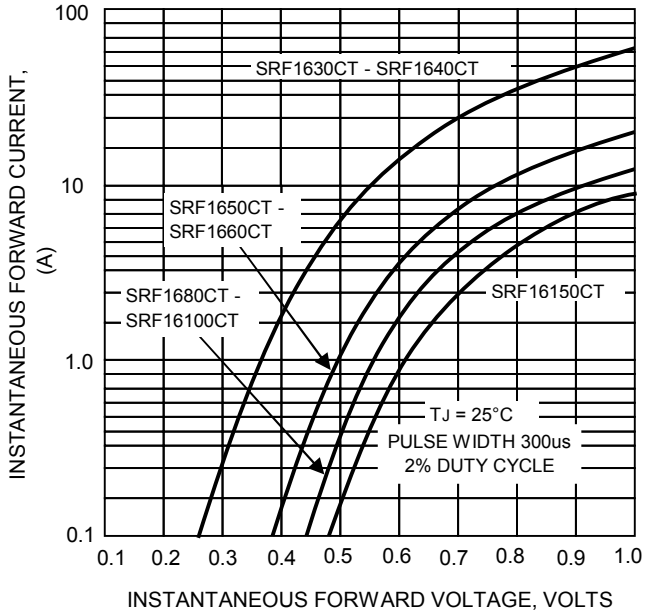
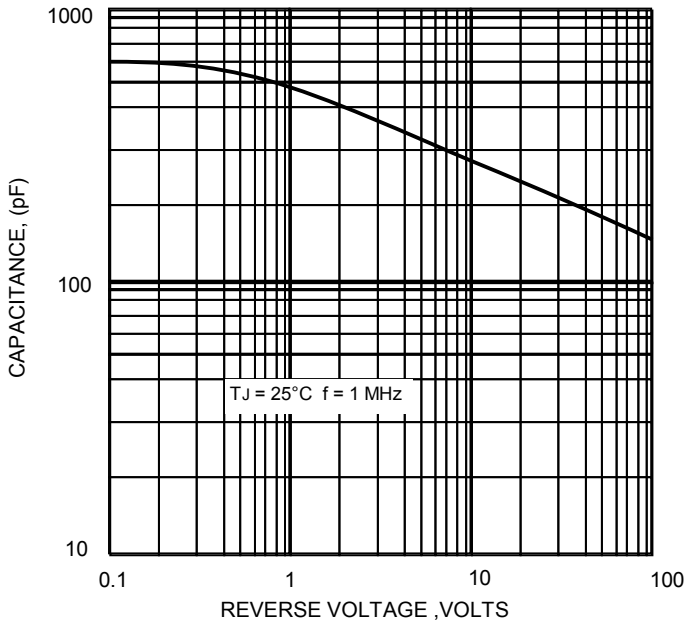


FIG.5 – TYPICAL JUNCTION CAPACITANCE



MBR1630CT thru MBR16150CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **16.0** Amperes

FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
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MECHANICAL DATA

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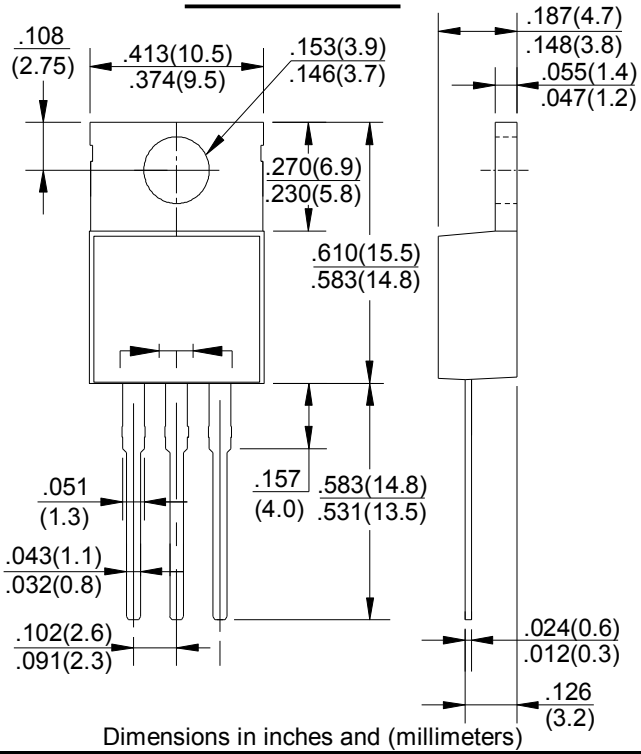
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

TO-220AB



Dimensions in inches and (millimeters)

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	MBR 1630CT	MBR 1640CT	MBR 1650CT	MBR 1660CT	MBR 1680CT	MBR 16100CT	MBR 16150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	16.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note1) IF=8A @T_J=25℃	V_F	0.84		0.75		0.85		1.05	V
IF=8A @T_J=125℃		0.57		0.65		0.75		0.92	
IF=16A @T_J=25℃		0.72		-		0.95		-	
IF=16A @T_J=125℃		-		-		0.85		-	
Maximum DC Reverse Current @T_J=25℃	I_R	0.3				0.1			mA
at Rated DC Bolcking Voltage @T_J=125℃		10				5.0			
Typical Junction Capacitance (Note2)	C_J	400				200			pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	3.0							℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +175							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

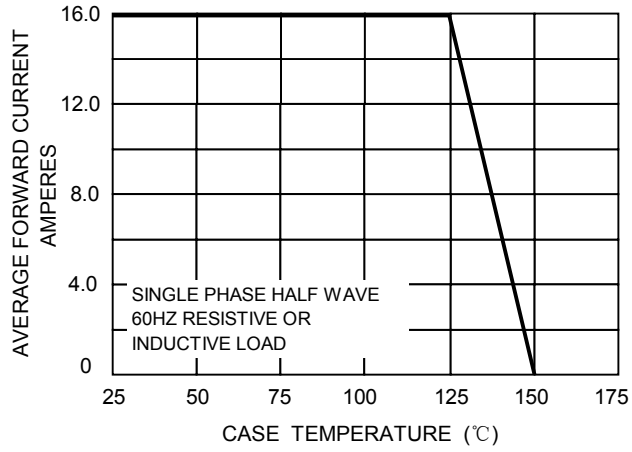


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

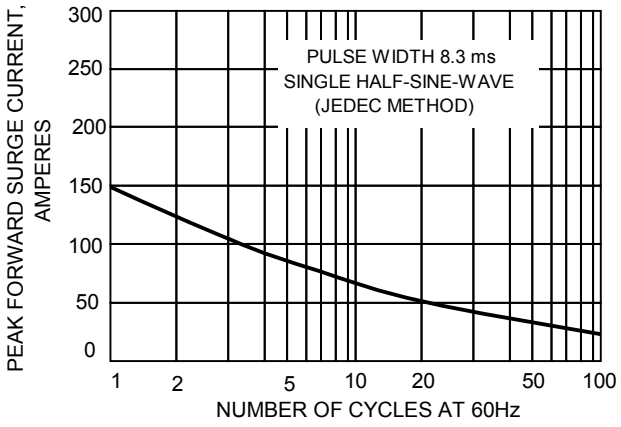


FIG.3-TYPICAL REVER CHARACTERISTICS

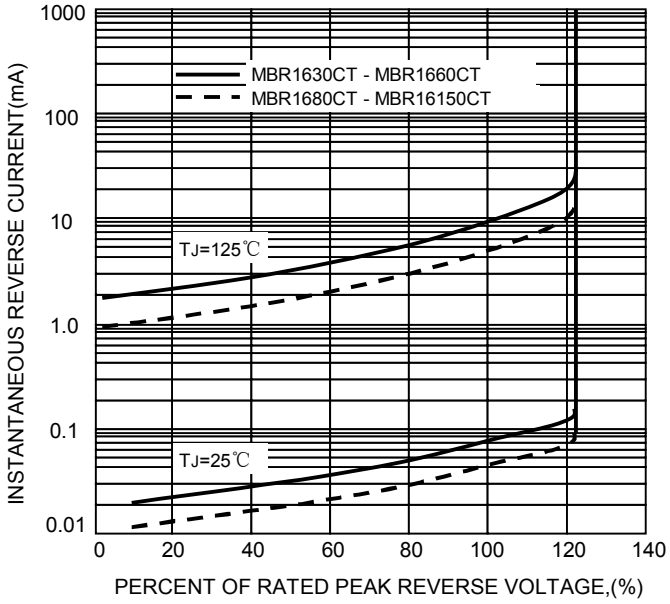
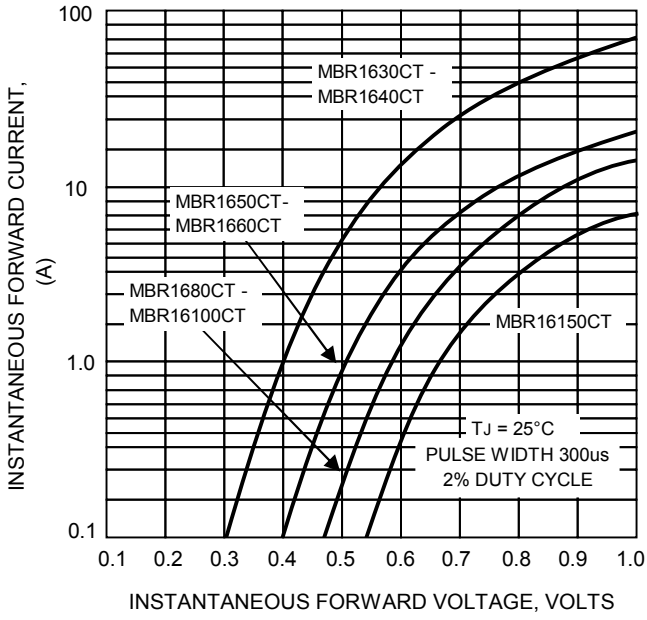


FIG.4-TYPICAL FORWARD CHARACTERISTICS



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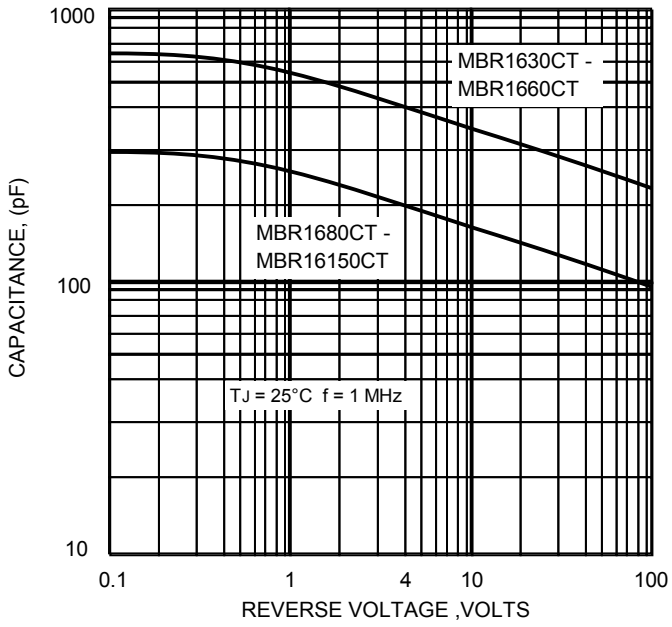


MBRF1630CT thru MBRF16150CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **16.0** Amperes

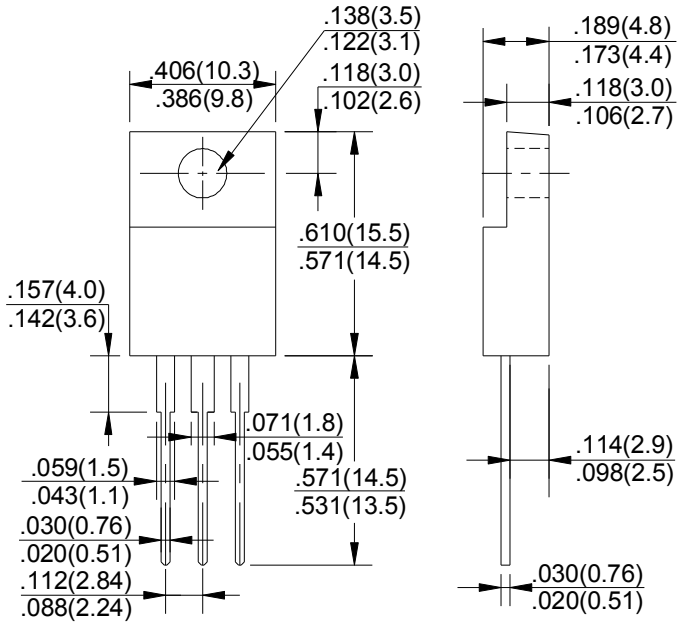
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

ITO-220AB



Dimensions in inches and (millimeters)

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	MBRF 1630CT	MBRF 1640CT	MBRF 1650CT	MBRF 1660CT	MBRF 1680CT	MBRF 16100CT	MBRF 16150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	16.0							A
Peak Forward Surage Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note1) IF=8A @T_J=25℃	V_F	0.84		0.75		0.85		1.05	V
IF=8A @T_J=125℃		0.57		0.65		0.75		0.92	
IF=16A @T_J=25℃		0.72		-		0.95		-	
IF=16A @T_J=125℃		-		-		0.85		-	
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=125℃	I_R	0.3				0.1			mA
		10				5			
Typical Junction Capacitance (Note2)	C_J	400				200			pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	3.0							℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +175							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

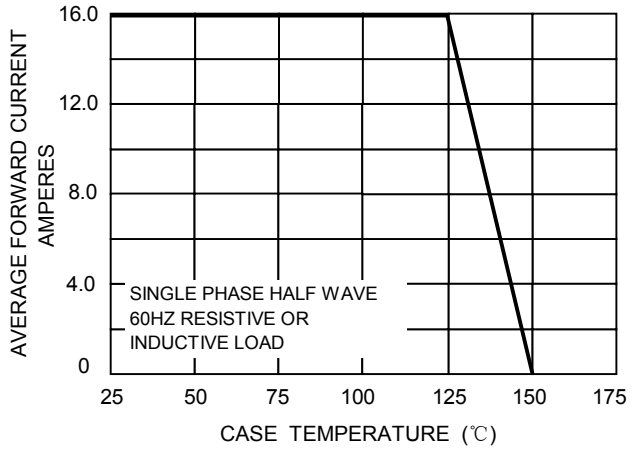


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

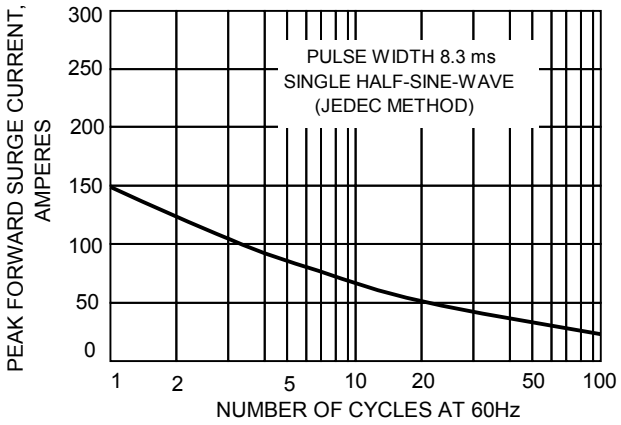


FIG.3-TYPICAL REVER CHARACTERISTICS

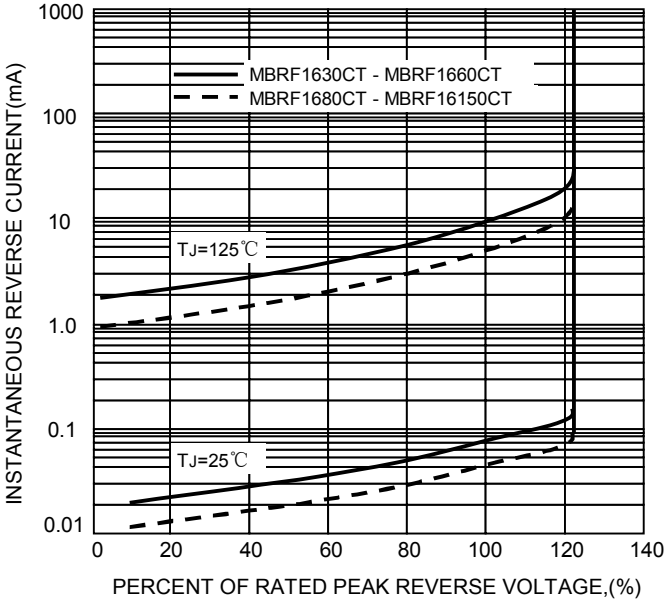


FIG.4-TYPICAL FORWARD CHARACTERISTICS

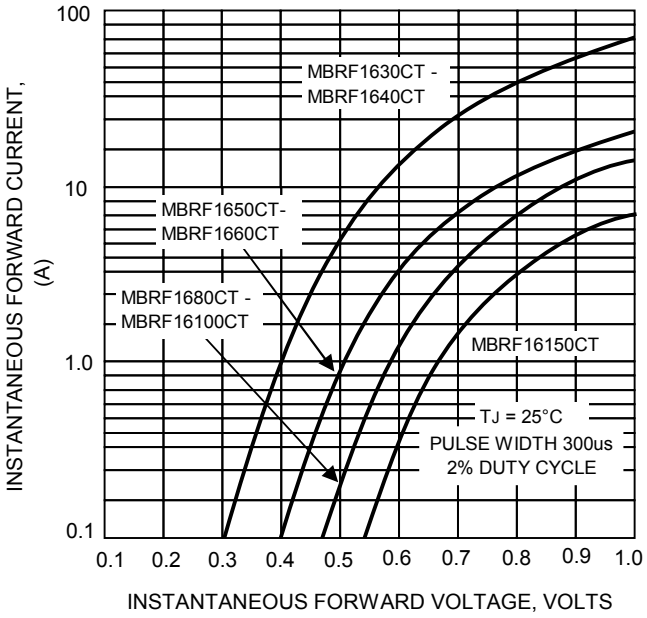
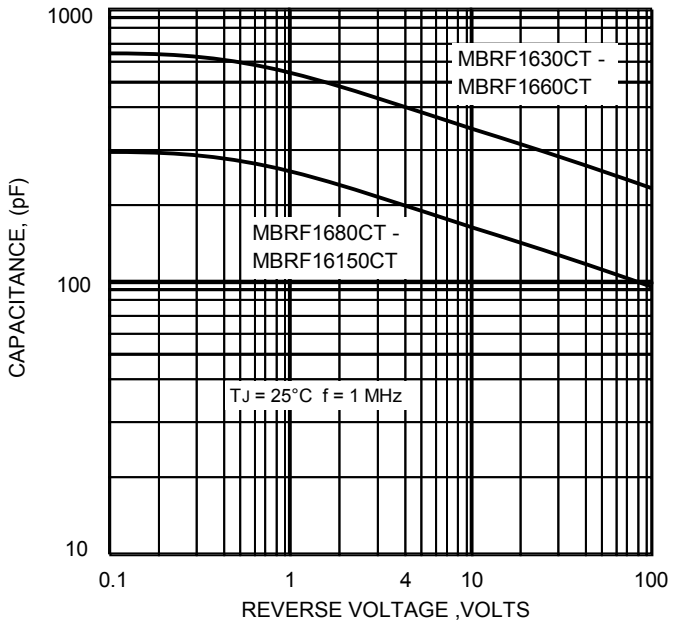


FIG.5 – TYPICAL JUNCTION CAPACITANCE



SR2030CT thru SR20150CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **20.0** Amperes

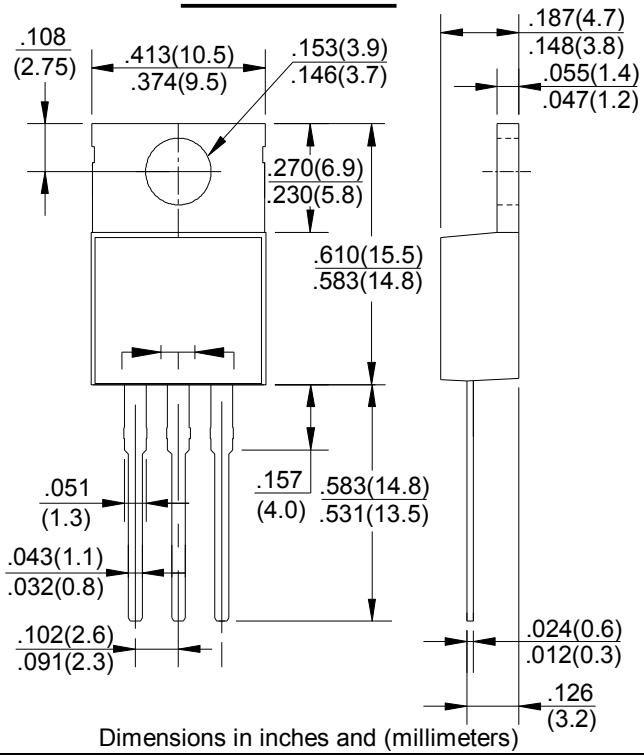
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

TO-220AB



Dimensions in inches and (millimeters)

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	SR 2030CT	SR 2040CT	SR 2050CT	SR 2060CT	SR 2080CT	SR 20100CT	SR 20150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=95 ℃	$I_{(AV)}$	20							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	250							A
Peak Forward Voltage at 10.0A DC(Note1)	V_F	0.55		0.70		0.85		0.95	V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=100℃	I_R	1.0 50							mA
Typical Junction Capacitance (Note2)	C_J	600							pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	2.0							℃/W
Operating Temperature Range	T_J	-55to+125							℃
Storage Temperature Range	T_{STG}	-55to+150							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

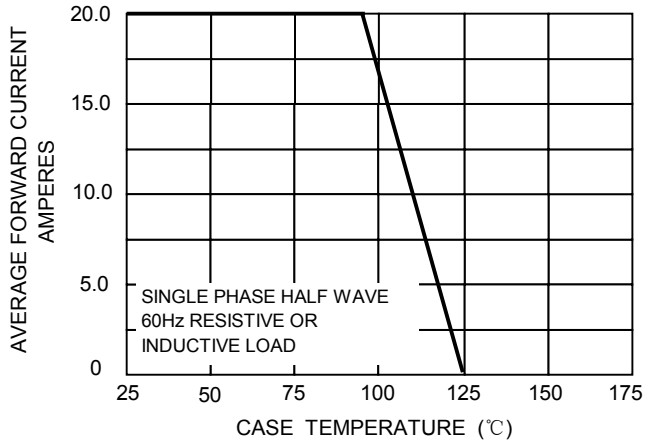


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

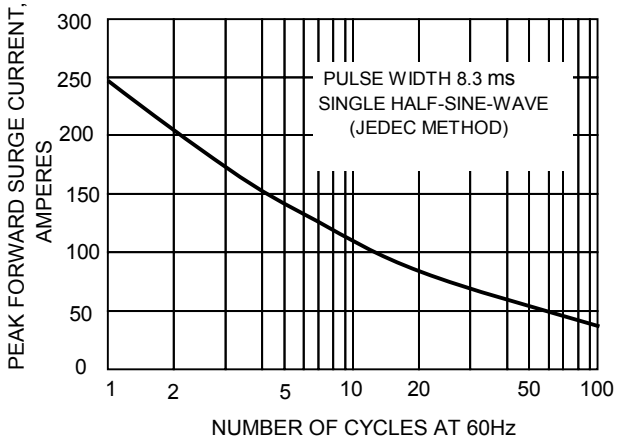


FIG.3-TYPICAL REVER CHARACTERISTICS

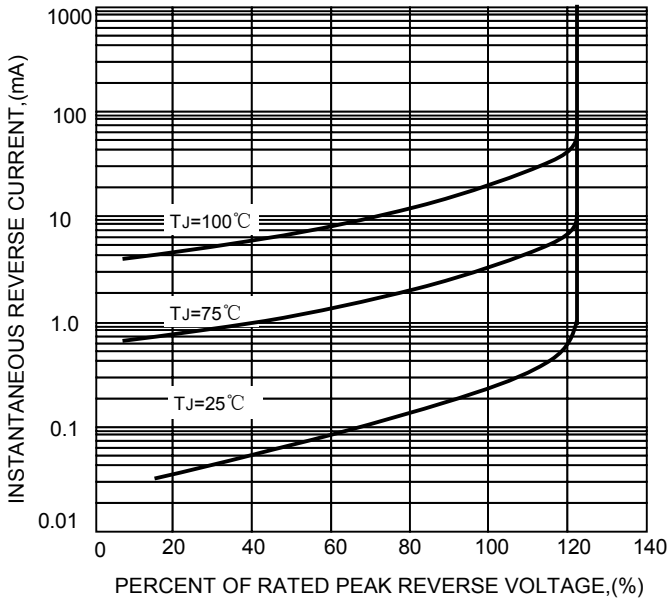


FIG.4-TYPICAL FORWARD CHARACTERISTICS

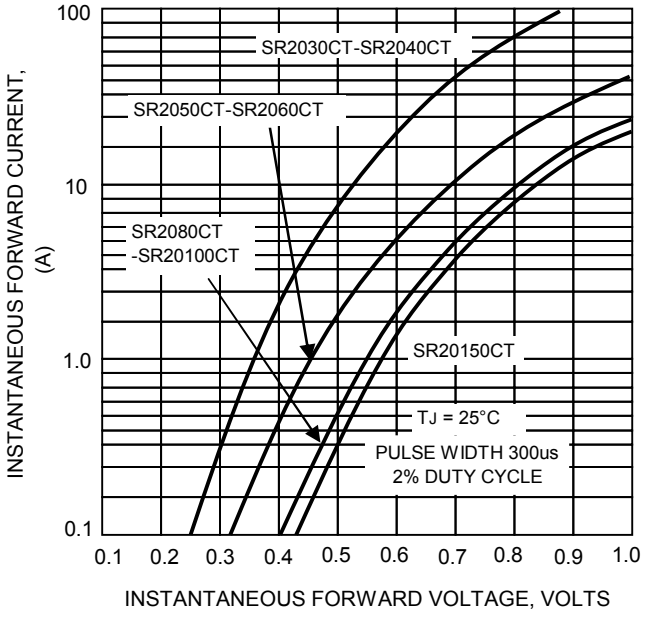
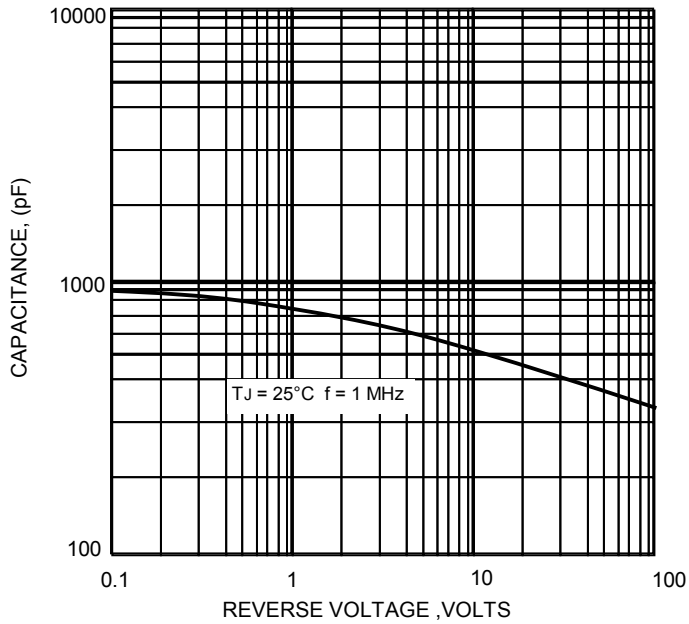


FIG.5 – TYPICAL JUNCTION CAPACITANCE



SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **100**Volts
FORWARD CURRENT - **20.0** Amperes

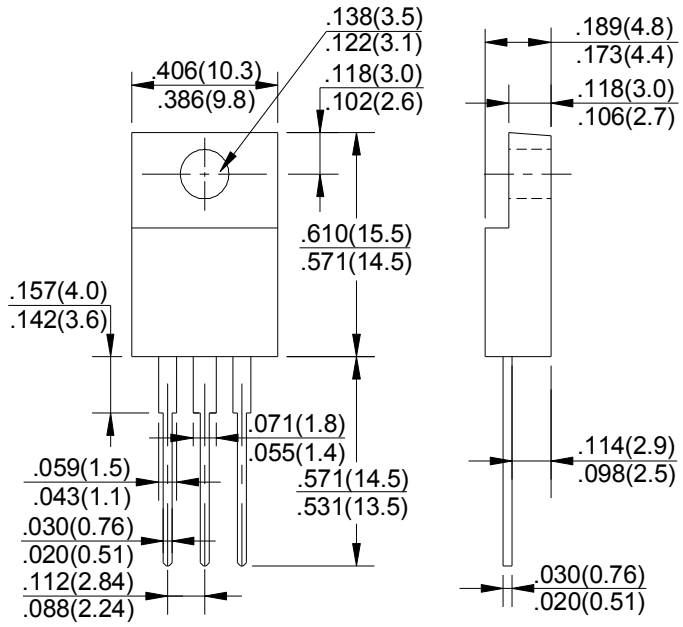
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

ITO-220AB



Dimensions in inches and (millimeters)

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	SRF 2030CT	SRF 2040CT	SRF 2050CT	SRF 2060CT	SRF 2080CT	SRF 20100CT	SRF 20150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=95 ℃	$I_{(AV)}$	20							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	250							A
Peak Forward Voltage at 10.0A DC(Note1)	V_F	0.55		0.70		0.85		0.95	V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=100℃	I_R	1.0 50							mA
Typical Junction Capacitance (Note2)	C_J	600							pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	2.0							℃/W
Operating Temperature Range	T_J	-55to+125							℃
Storage Temperature Range	T_{STG}	-55to+150							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

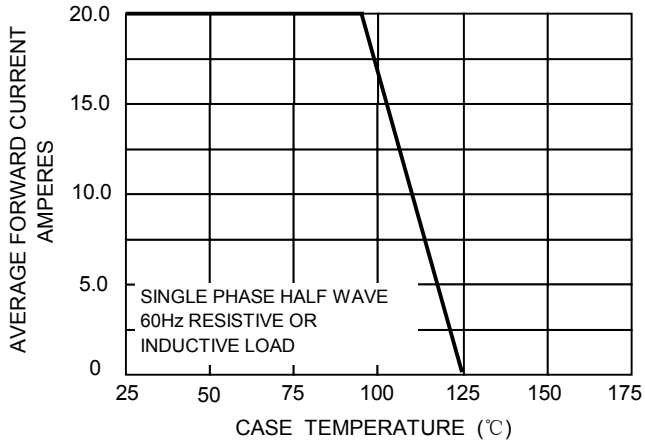


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

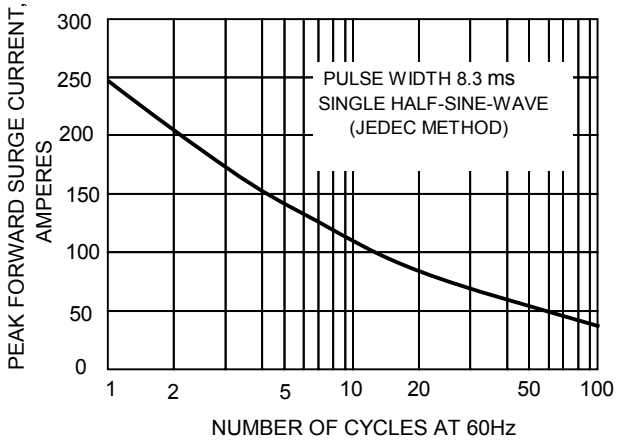


FIG.3-TYPICAL REVER CHARACTERISTICS

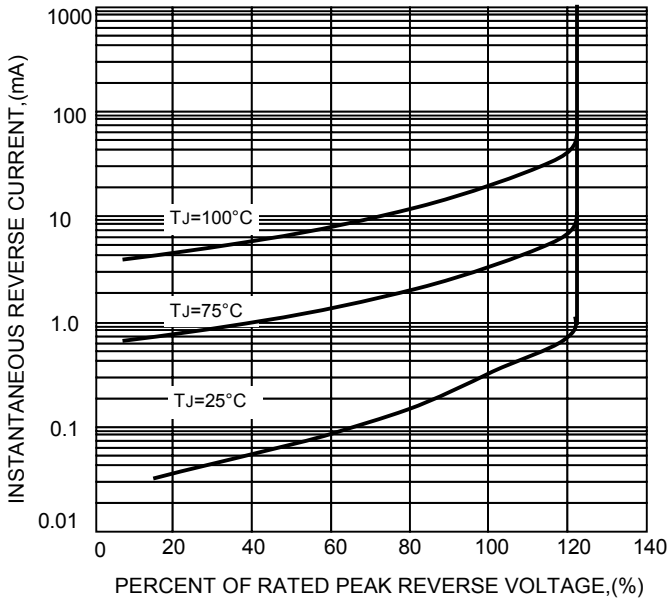


FIG.4-TYPICAL FORWARD CHARACTERISTICS

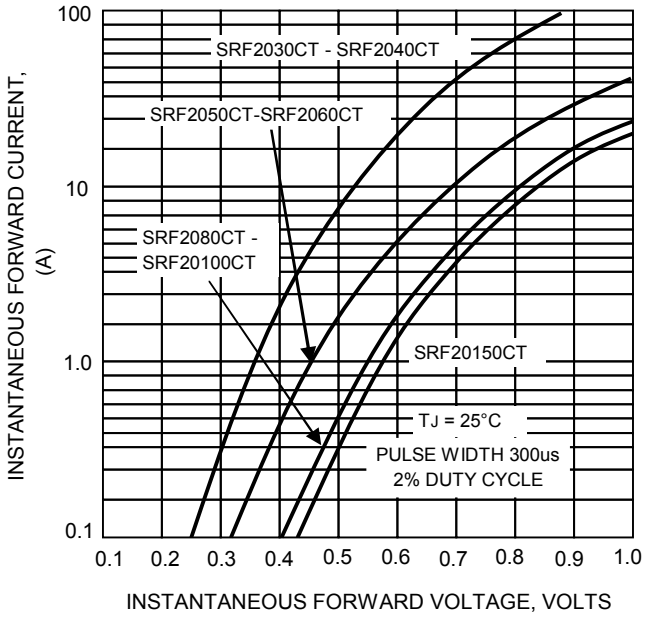
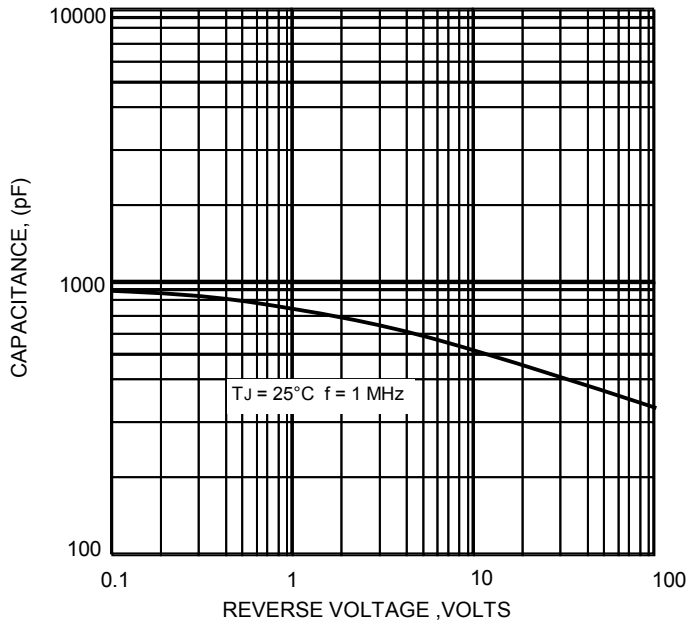


FIG.5 – TYPICAL JUNCTION CAPACITANCE



MBR2030CT thru MBR20150CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **20.0** Amperes

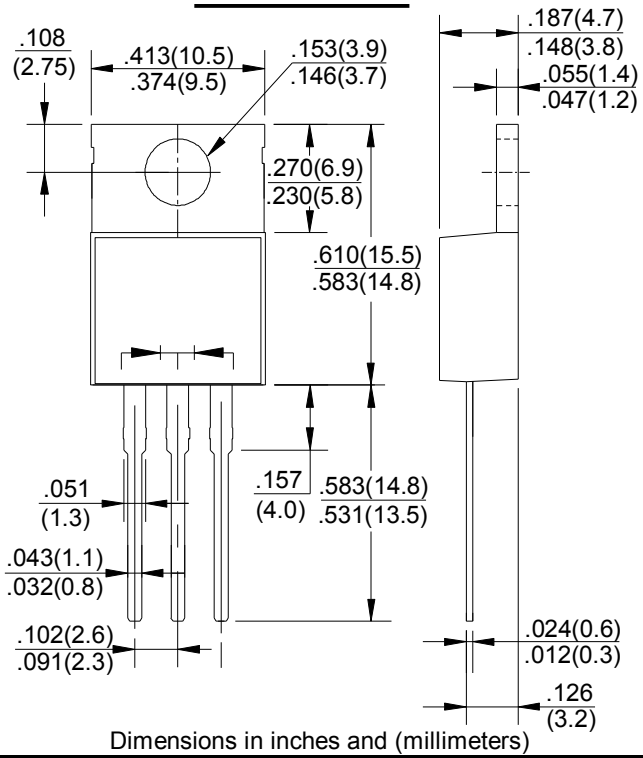
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

TO-220AB



Dimensions in inches and (millimeters)

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	MBR 2030CT	MBR 2040CT	MBR 2050CT	MBR 2060CT	MBR 2080CT	MBR 20100CT	MBR 20150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	20.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note1) IF=10A @T_J=25℃	V_F	-		0.80		0.85		0.95	V
IF=10A @T_J=125℃		0.57		0.70		0.75		0.85	
IF=20A @T_J=25℃		0.84		0.95		0.95		1.05	
IF=20A @T_J=125℃		0.72		0.85		0.85		0.95	
Maximum DC Reverse Current @T_J=25℃	I_R	0.1		0.1		0.1		0.1	mA
at Rated DC Bolcking Voltage @T_J=125℃		15		10		7.5		5.0	
Typical Junction Capacitance (Note2)	C_J	400		320					pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	1.5				3.5			℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +175							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

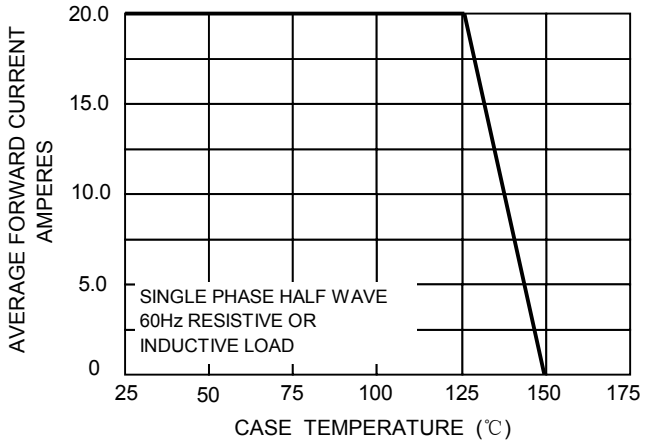


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

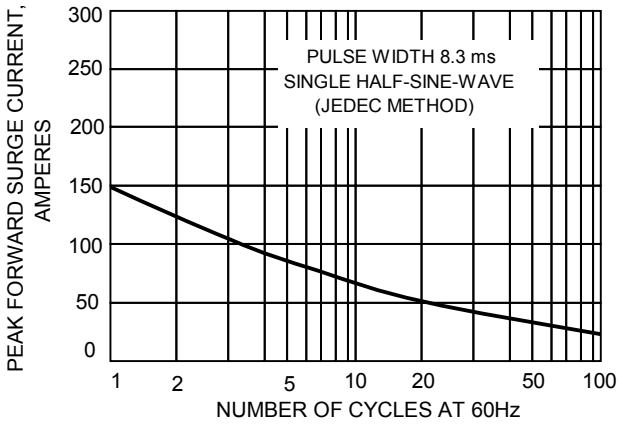


FIG.3-TYPICAL REVER CHARACTERISTICS

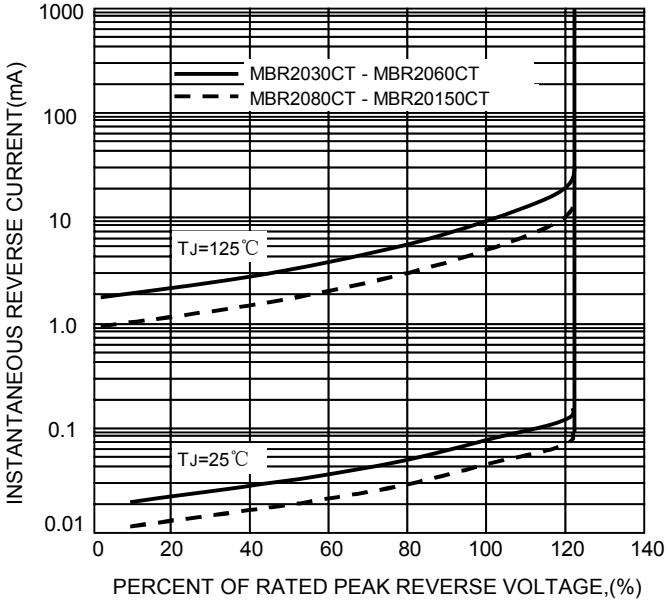


FIG.4-TYPICAL FORWARD CHARACTERISTICS

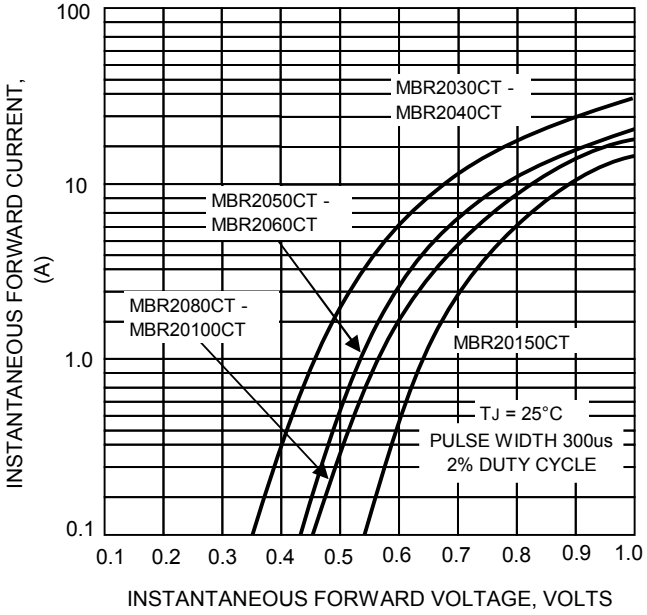
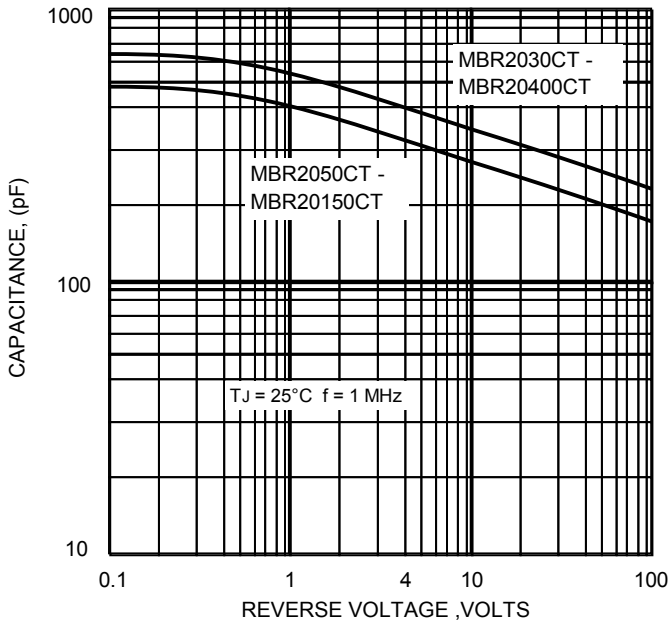


FIG.5 – TYPICAL JUNCTION CAPACITANCE



MBRF2030CT thru MBRF20150CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **20.0** Amperes

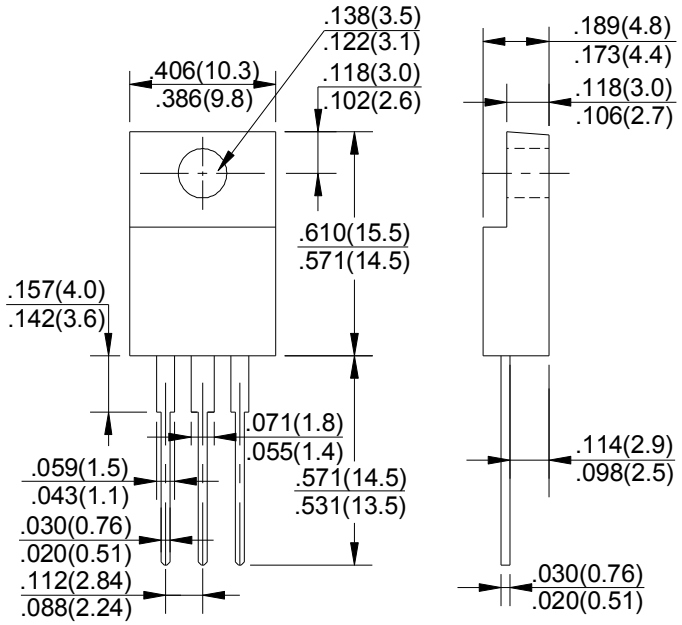
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

ITO-220AB



Dimensions in inches and (millimeters)

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	MBRF 2030CT	MBRF 2040CT	MBRF 2050CT	MBRF 2060CT	MBRF 2080CT	MBRF 20100CT	MBRF 20150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	20.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note1) IF=10A @T_J=25℃	V_F	-		0.80		0.85		0.95	V
IF=10A @T_J=125℃		0.57		0.70		0.75		0.85	
IF=20A @T_J=25℃		0.84		0.95		0.95		1.05	
IF=20A @T_J=125℃		0.72		0.85		0.85		0.95	
Maximum DC Reverse Current @T_J=25℃	I_R	0.1		0.1		0.1		0.1	mA
at Rated DC Bolcking Voltage @T_J=125℃		15		10		7.5		5.0	
Typical Junction Capacitance (Note2)	C_J	400		320					pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	1.5				3.5			℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +175							℃

NOTES:1.300us pulse width,2% duty cycle.

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

3.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

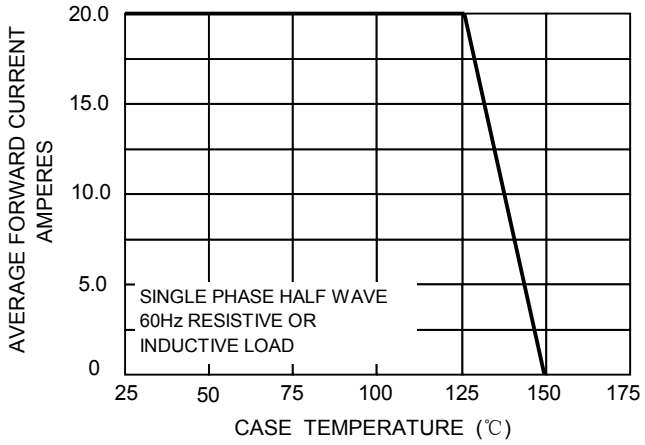


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

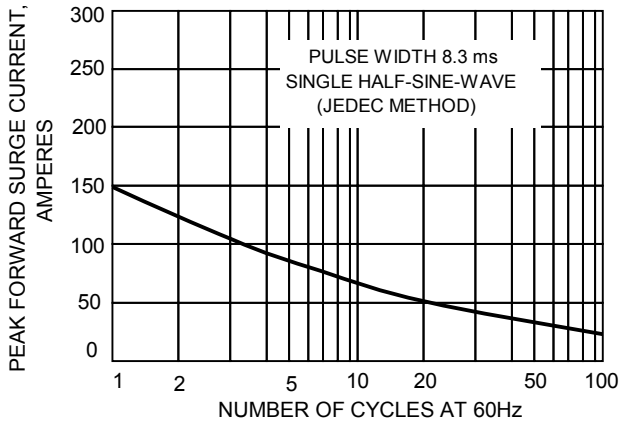


FIG.3-TYPICAL REVER CHARACTERISTICS

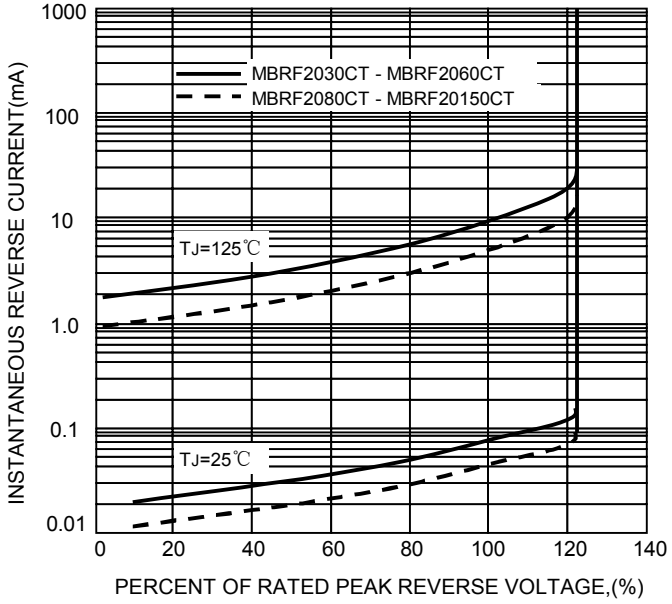


FIG.4-TYPICAL FORWARD CHARACTERISTICS

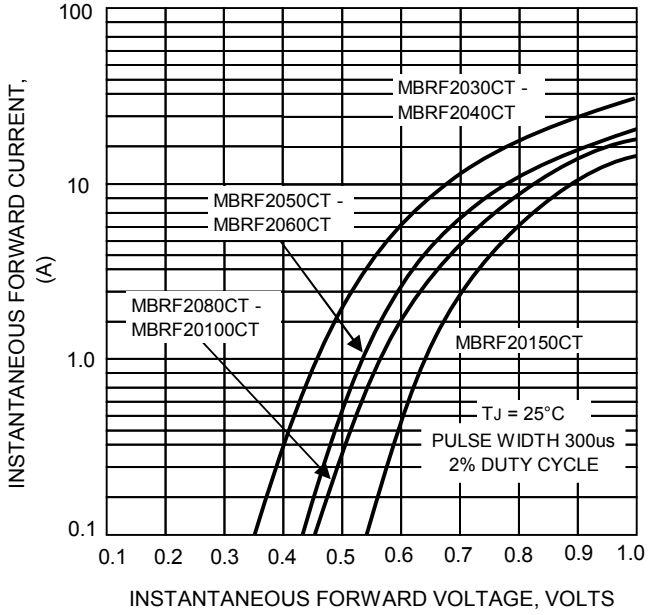
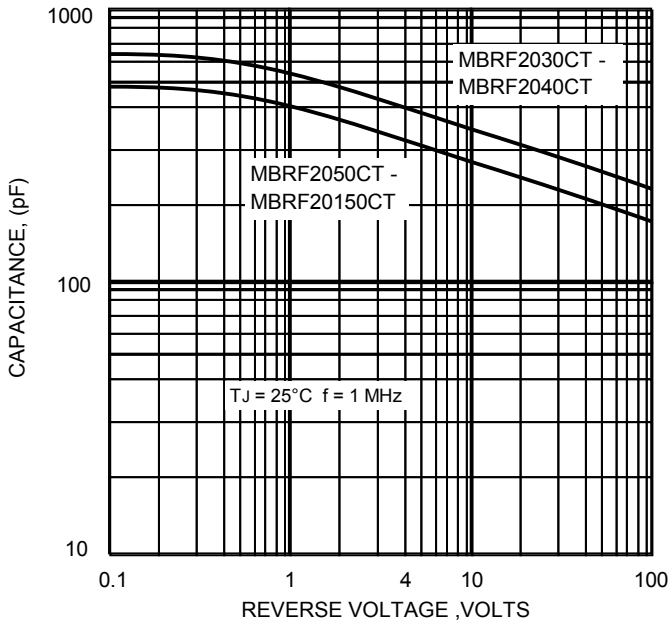


FIG.5 – TYPICAL JUNCTION CAPACITANCE



SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **60**Volts
FORWARD CURRENT - **25.0** Amperes

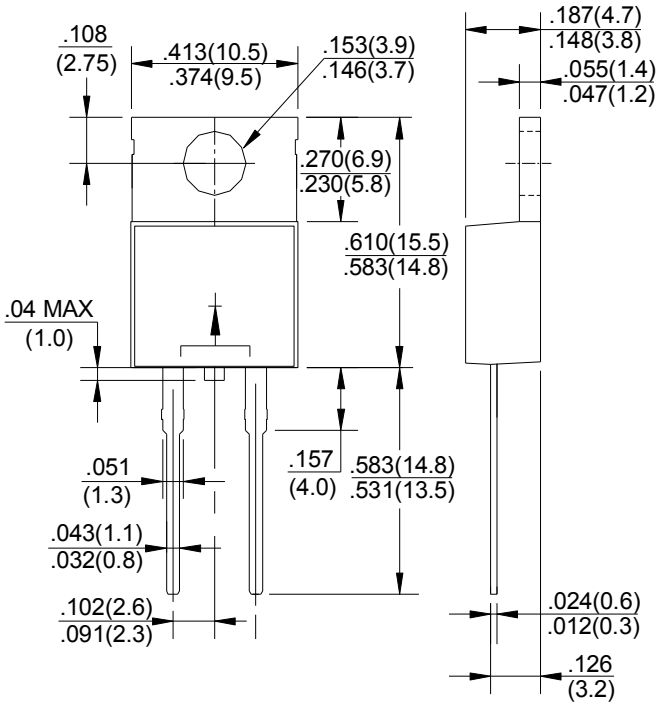
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-220AC molded plastic
- Polarity: As marked on the body
- Mounting position :Any

TO-220AC



Dimensions in inches and (millimeters)

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	25SQ 030	25SQ 035	25SQ 040	25SQ 045	25SQ 050	25SQ 055	25SQ 060	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	35	40	45	50	55	60	V
Maximum RMS Voltage	V_{RMS}	21	25	28	32	35	39	42	V
Maximum DC Blocking Voltage	V_{DC}	30	35	40	45	50	55	60	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=95 ℃	$I_{(AV)}$	25							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	275							A
Peak Forward Voltage at 12.5A DC(Note1)	V_F	0.55				0.7			V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=125℃	I_R	0.5 50							mA
Typical Thermal Resistance(Note2)	$R_{\theta Jc}$	12							℃/W
Operating Temperature Range	T_J	-55 to +200							℃
Storage Temperature Range	T_{STG}	-55 to +200							℃

NOTES:1.300us pulse width,2% dudy cycle.

2.Thermal Resistance Junction to case(without heatsink).

FIG. 1 – FORWARD CURRENT DERATING CURVE

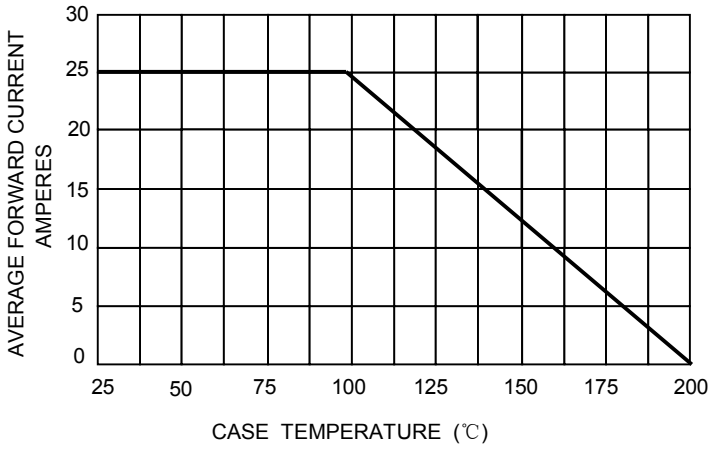


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

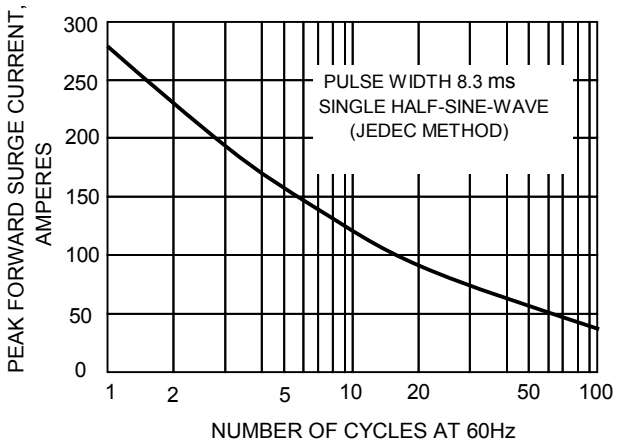


FIG.3-TYPICAL REVER CHARACTERISTICS

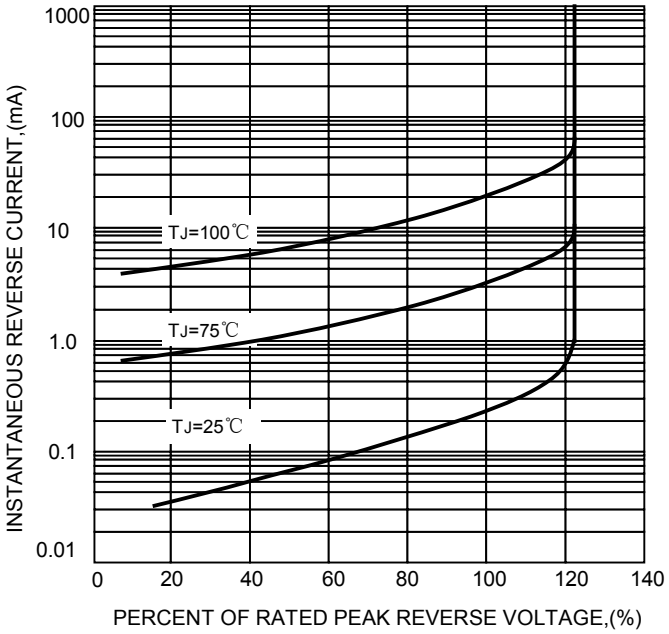
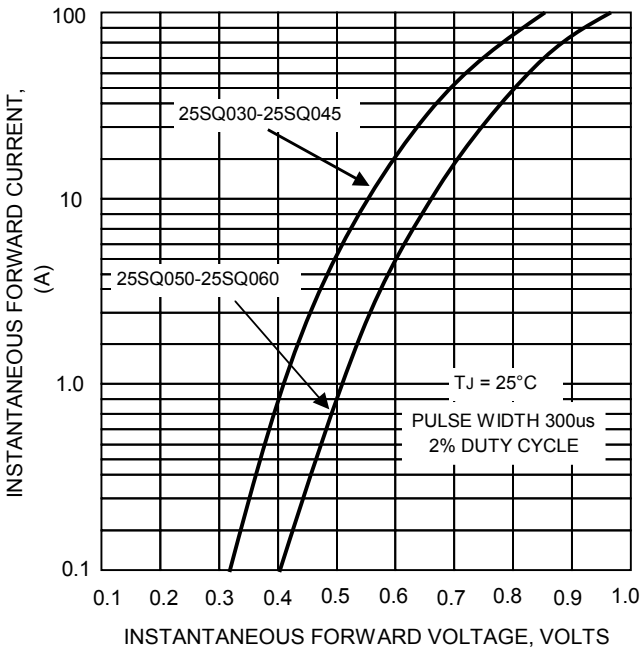


FIG.4-TYPICAL FORWARD CHARACTERISTICS



SR3030PT thru SR30150PT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **100**Volts
FORWARD CURRENT - **30.0** Amperes

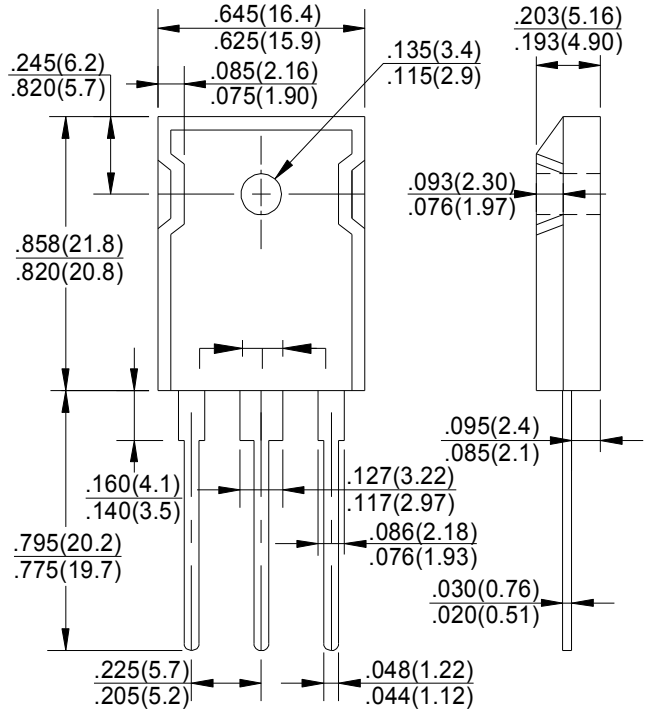
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-3P molded plastic
- Polarity: As marked on the body
- Weight: 0.2ounces,5.6 grams
- Mounting position :Any

TO-3P



Dimensions in inches and (millimeters)

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	SR 3030PT	SR 3040PT	SR 3050PT	SR 3060PT	SR 3080PT	SR 30100PT	SR 30150PT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=95℃	$I_{(AV)}$	30							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	275							A
Peak Forward Voltage at 15.0A DC	V_F	0.55		0.70		0.85		0.95	V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=100℃	I_R	1.0 75							mA
Typical Junction Capacitance (Note1)	C_J	700							pF
Typical Thermal Resistance (Note2)	$R_{\theta JC}$	2.0							℃/W
Operating Temperature Range	T_J	-55 to + 125							℃
Storage Temperature Range	T_{STG}	-55 to + 150							℃

NOTES: 1.Measured at 1.0 MHz and applied reverse voltage of 4.0VDC.

2.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

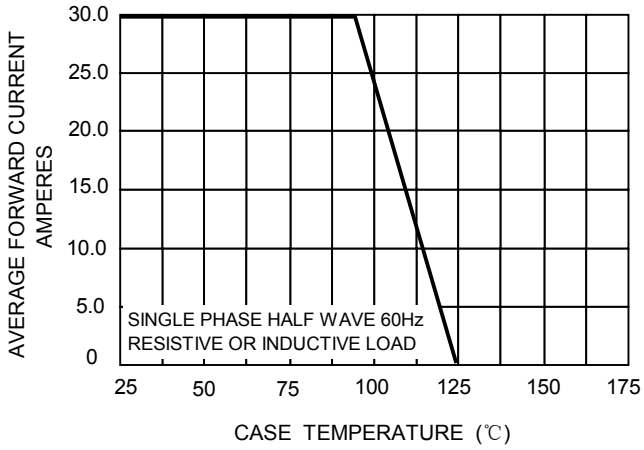


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

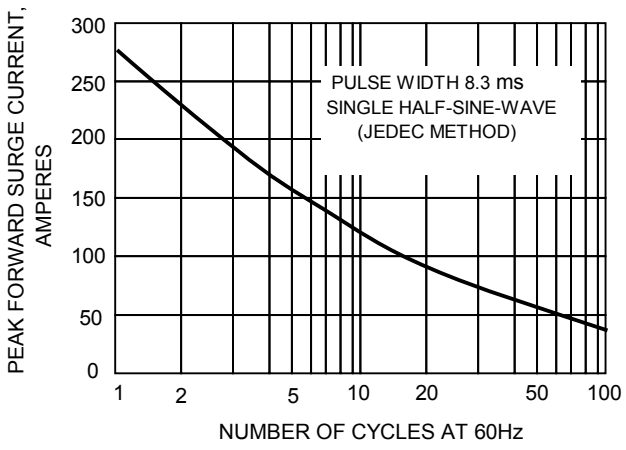


FIG.3-TYPICAL REVER CHARACTERISTICS

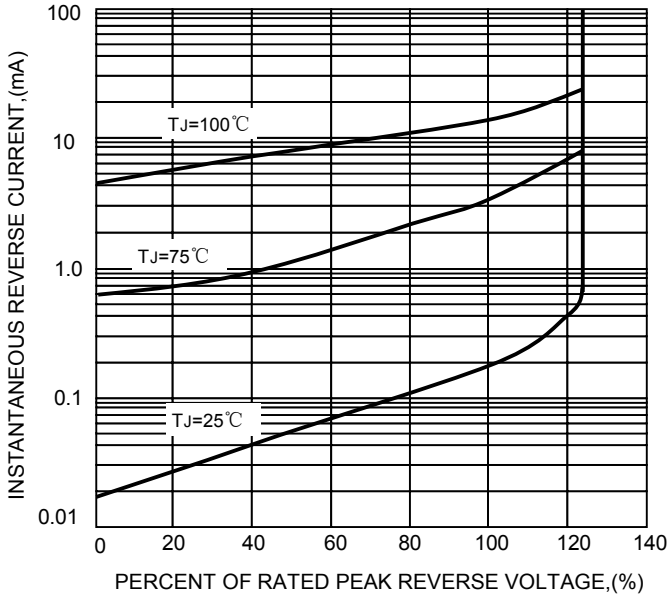


FIG.4-TYPICAL FORWARD CHARACTERISTICS

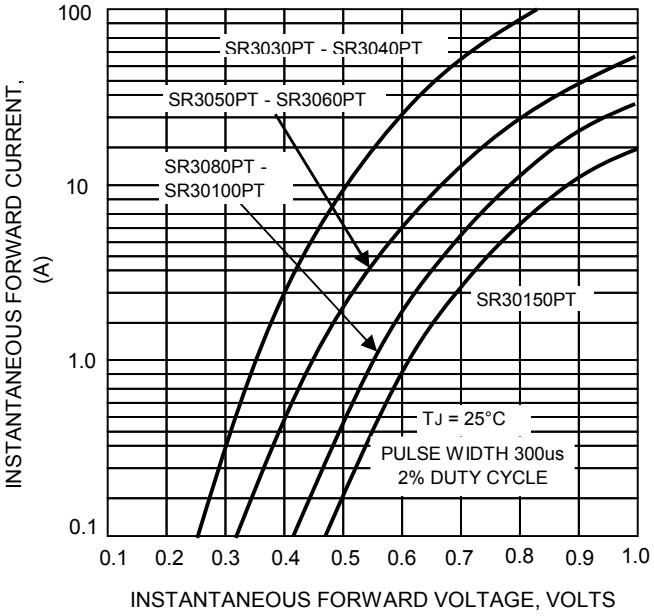
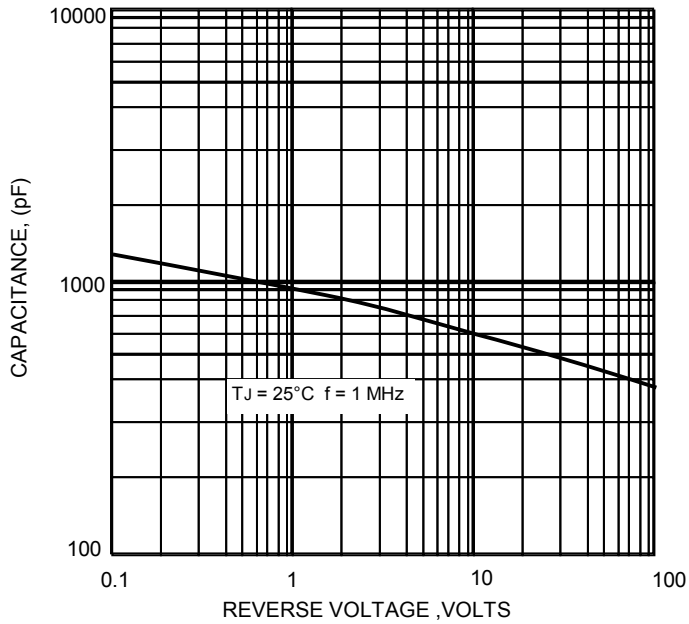


FIG.5 – TYPICAL JUNCTION CAPACITANCE



SR4030PT thru SR40150PT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **40.0** Amperes

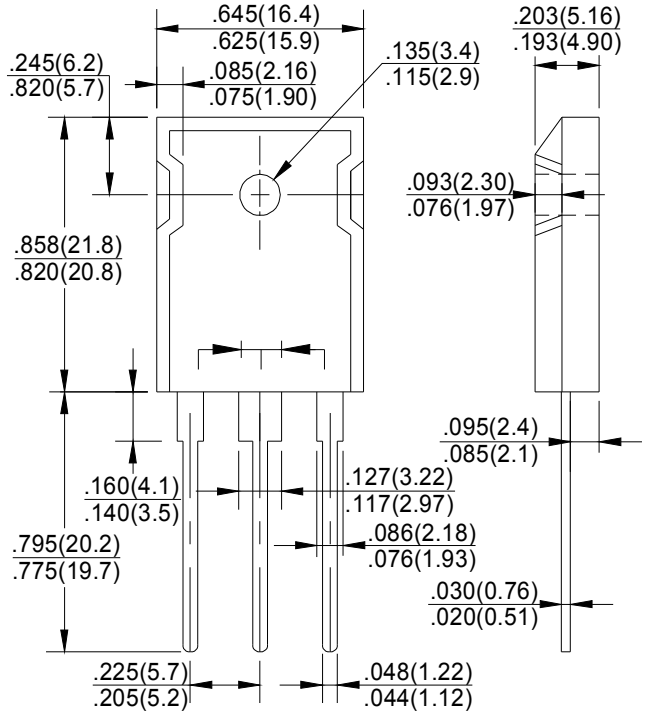
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-3P molded plastic
- Polarity: As marked on the body
- Weight: 0.2ounces,5.6 grams
- Mounting position :Any

TO-3P



Dimensions in inches and (millimeters)

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	SR 4030PT	SR 4040PT	SR 4050PT	SR 4060PT	SR 4080PT	SR 40100PT	SR 40150PT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=100℃	$I_{(AV)}$	40							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	375							A
Peak Forward Voltage at 20.0A DC	V_F	0.55		0.70		0.85		0.95	V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=100℃	I_R	1.0 100							mA
Typical Junction Capacitance (Note1)	C_J	800							pF
Typical Thermal Resistance (Note2)	$R_{\theta JC}$	1.4							℃/W
Operating Temperature Range	T_J	-55 to + 125							℃
Storage Temperature Range	T_{STG}	-55 to + 150							℃

NOTES: 1.Measured at 1.0 MHz and applied reverse voltage of 4.0VDC.

2.Thermal resistance junction to case.

FIG. 1 – FORWARD CURRENT DERATING CURVE

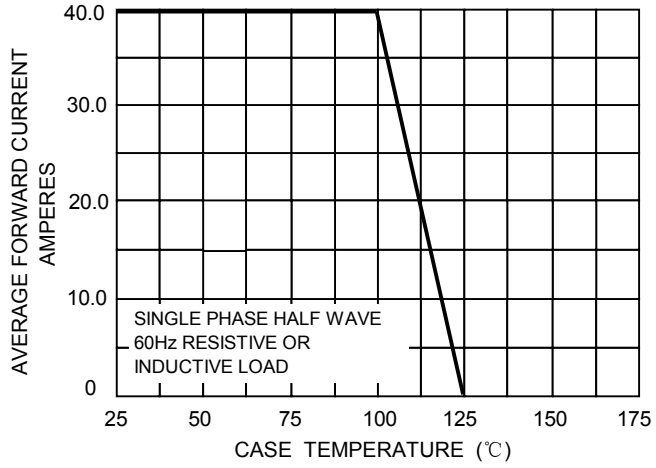


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

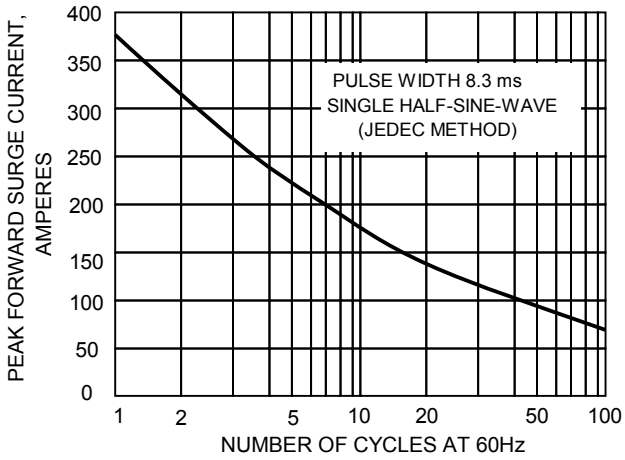


FIG.3-TYPICAL REVER CHARACTERISTICS

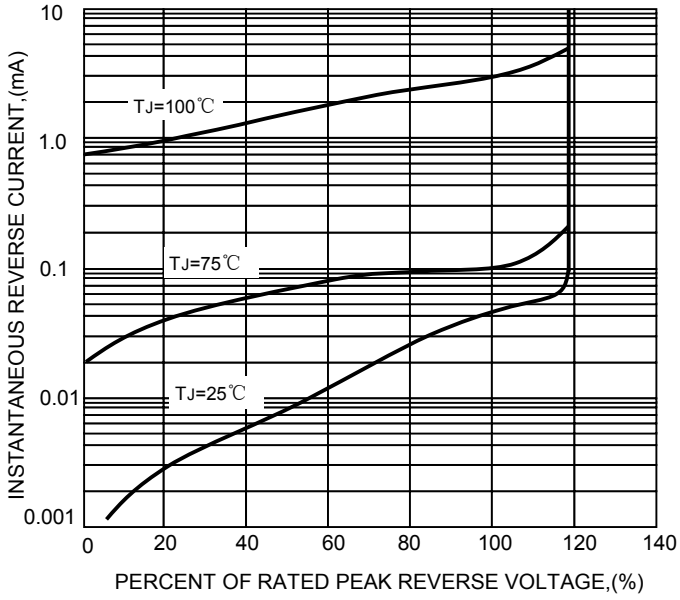


FIG.4-TYPICAL FORWARD CHARACTERISTICS

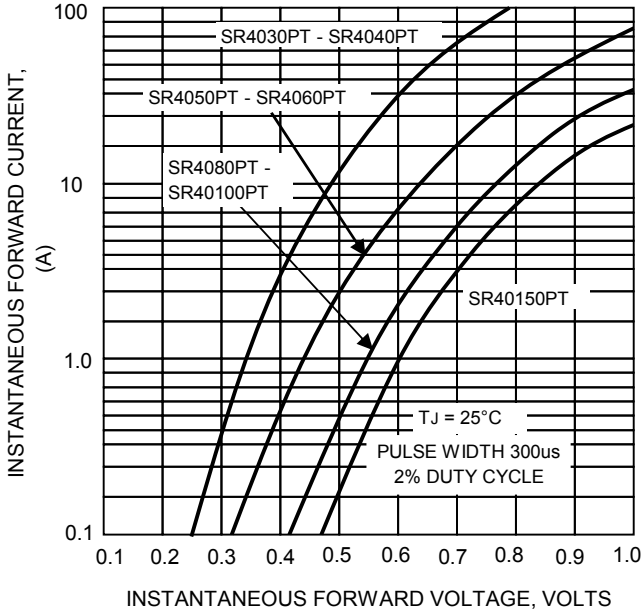


FIG.5 – TYPICAL JUNCTION CAPACITANCE